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Themes - Temas

Conservation of ecological processes and biodiversity in production forests

Conservación de procesos ecológicos y biodiversidad en bosques usados para el aprovechamiento de productos forestales

- Timothy C. Moermond, Zoologist and Chair of Conservation and Sustainable Development Program, UW-Madison
- Douglas Mason, Ph.D. candidate in Zoology, UW-Madison

Tenure systems for natural resources and their role in conservation

Sistemas de tenencia para recursos naturales y su papel en la conservación

- Theodore Macdonald, Anthropologist, Cultural Survival, Inc.
- Nancy Forster, Development Anthropologist, Latin American and Iberian Studies Program, UW-Madison
- Alberto Vargas, Ph.D. candidate in Forestry and Land Resources, UW-Madison

Integration of market-oriented production forestry with indigenous cultural, economic, and political structures

Integración de producción forestal comercial con estructuras culturales, económicas y políticas de comunidades indígenas

- Richard Chase Smith, Anthropologist, Oxfam America

Survival of community forestry enterprises in neoliberal economic systems

Sobrevivencia de empresas forestales comunitarias en sistemas económicas neoliberales

- E. Miguel Székely, Rural Sociologist, IIS/UNAM

Cases - Casos

Menominee Tribal Enterprises, Wisconsin, USA
- Marshall Pecore, Forester, Menominee Tribal Enterprises
- Paula Rogers Huff, Wildlife Ecologist, College of the Menominee Nation

New San Juan Parangaritcutiro, Michoacán, Mexico
- María Angélica Sanchez Pego, Rural Sociologist, IIS/UNAM
- Carlos Solano, Agronomist, IIS/UNAM

Oaxaca Forestry Communities, Mexico
- Francisco Abardía, Economist, IIS/UNAM

Quintana Roo Forestry Communities, Mexico
- Miguel Lanz, IIS/UNAM
- Alfonso Arguelles, Plan Piloto Forestal

Lomerio Forestry Project, Santa Cruz, Bolivia
- Amado Olivera, Forester, APCOB

Multiethnic Indigenous Territory, Chimanes Forest, Beni, Bolivia
- Zulema Lehm, Anthropologist, CIDDEBENI

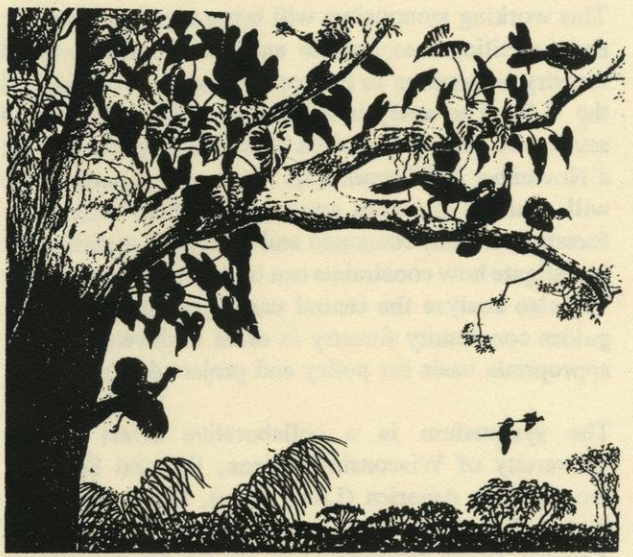
Yanesha Forestry Cooperative, Palcazu Valley, Peru
- Margarita Benavides, Anthropologist, Oxfam America
- Mario Pariona, Forester, Oxfam America

Discussion - Discusión

John Browder, Virginia Polytechnic Institute
Daniel Nepstad, Woods Hole Research Center
John Robinson, Wildlife Conservation Society

Forestry in the Americas: Community-Based Management and Sustainability

Symposium: February 3-4, 1995



University of Wisconsin-Madison
State Historical Society Auditorium

Coordinated by the Institute for Environmental Studies, the Land Tenure Center, and the Latin American and Iberian Studies Program, in collaboration with Cultural Survival, Cambridge, MA. Funded by the Ford Foundation and the University of Wisconsin Anonymous and Nave Funds.

Forestry in the Americas: Community-Based Management and Sustainability

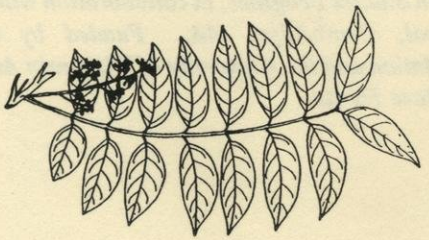
- Is community-based forestry a viable approach to sustainable development?

- How successfully do community forestry enterprises integrate with indigenous cultures?

- Is community-based forestry an effective tool for conserving forest ecosystems and their resources?

This working symposium will bring together academic and practitioner experts to analyze community-based forestry enterprises in the upper Amazon, Mexico, and the U.S. The analysis will focus on four themes and seven case studies (listed on back) initially discussed at a November 1994 workshop. Symposium participants will examine problem areas which affect community forestry's social, economic and ecological viability and investigate how constraints can best be overcome. They will also analyze the central paradigm which currently guides community forestry in order to develop a more appropriate basis for policy and project design.

The symposium is a collaborative effort of the University of Wisconsin-Madison, Cultural Survival, Inc., Oxfam America (Lima, Peru), the Coordinating Body of Indigenous Peoples Organizations for the Amazon Basin (Coordinadora de las Organizaciones Indígenas de la Cuenca Amazonía, COICA, Quito, Ecuador), and the Institute for Social Research, National Autonomous University of Mexico (Instituto de Investigaciones Sociales, IIS/UNAM). The symposium extends recent research coordinated by Oxfam/COICA and IIS/UNAM.



Manejo Forestal Comunitario en las Américas y su Sustentabilidad

- ¿Puede el manejo forestal comunitario promover el desarrollo sustentable?

- ¿Con qué éxito se integran las empresas forestales comunitarias con culturas indígenas?

- ¿Es el manejo forestal comunitario un mecanismo efectivo para conservar ecosistemas forestales y sus recursos?

La conferencia juntará expertos profesionales y académicos para analizar el manejo forestal comunitario en la cuenca alta de la Amazonia, México, y los Estados Unidos. El análisis enfocará en cuatro temas y siete estudios de casos (enumerados atrás) examinados primeramente en un taller que tuvo lugar en noviembre de 1994. Los participantes examinarán áreas problemáticas que afectan la viabilidad social, económica, y política del manejo forestal comunitario, y investigarán como se puede mejor superar los impedimentos. Además, los participantes analizarán los principios vigentes que guían el trabajo forestal comunitario para desarrollar una base más apto para la política forestal y la planificación de proyectos forestales.

La conferencia es un esfuerzo colaborativo de la Universidad de Wisconsin, Cultural Survival, Inc., Oxfam America (Lima, Perú), la Coordinadora de las Organizaciones Indígenas de la Cuenca Amazonia, COICA (Quito, Ecuador), y el Instituto de Investigaciones Sociales, Universidad Nacional Autónoma de México (IIS/UNAM). La conferencia extiende estudios recientes coordinado por Oxfam/COICA y IIS/UNAM.

Redefining the paradigm for community forestry management

Three general hypotheses currently guide policy and planning in community forestry.

(1) Increasing the economic worth of forest resources increases the extent to which people conserve forests.

(2) A high level of tenure security increases resource conservation.

(3) The culture and values of indigenous peoples promote forest use which maintains natural ecosystems.

Experience suggests we have been too optimistic in assuming these relationships will work almost automatically. Symposium participants will reexamine the guiding hypotheses and their linkages in the light of case studies to construct a stronger base on which to design, implement and operate community forestry projects.

Modificación de los principios vigentes guiando el manejo forestal comunitario

Tres principios actualmente guían la política y planificación del trabajo forestal comunitario.

(1) Un incremento en el valor económico de los recursos forestales aumenta el esfuerzo por parte de la gente para conservar los bosques.

(2) Un alto nivel de seguridad en la tenencia de los recursos aumenta la conservación de los mismos.

(3) La cultura y los valores de la gente indígena promueven el uso de los recursos forestales de manera que se mantienen los ecosistemas naturales.

Experiencia sugiere un optimismo excesivo en asumir que estas interacciones funcionarán casi automaticamente. Los participantes de la conferencia reexaminarán los principios vigentes y su articulación por medio de estudios de caso para formular una base más fuerte para planificar, implementar y manejar el trabajo forestal comunitario.

Forestry in the Americas:
Community-Based Management and Sustainability
February 3-4, 1995

Registration Form

Name _____

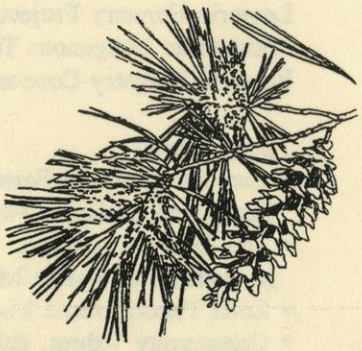
Affiliation _____

Mailing Address _____

City _____ State_____ Zip_____

Telephone(s)_____

email address _____



Fees: To guarantee your participation, please ensure that your completed registration arrives at the address below by Jan. 25, 1995. The fee covers all registration materials and the symposium papers. Day passes without symposium materials are available free of charge at the symposium. In addition, an optional buffet reception and dinner are scheduled Friday and Saturday nights, respectively.

___ General Registration Fee, $25.00 $_____

___ Student Registration Fee, $10.00 $_____

___ Buffet Reception, Friday Evening, $12.00 (cash bar separate) $_____

___ Dinner, Saturday Evening, $15.00 (cash bar separate) $_____

___ Day passes (without symposium materials)

Total Enclosed $_____

Make your check, payable in U.S. currency, to the **University of Wisconsin - Madison**. Please mail the check with the completed registration form (both sides) to:

Community Forestry Symposium
Institute for Environmental Studies
Room 1007 WARF Office Bldg.
Madison, WI 53705, USA.
Fax: (608) 262-0014

For more information, contact:
Doug Mason or Gigi Trebatoski
Institute for Environmental Studies
tel (608) 265-5296
fax (608) 262-0014
email: forests@macc.wisc.edu

Conference Materials Requested:

Case Studies (order English or Spanish versions).

Menomonie Tribal Enterprises, Wisconsin, USA	☐ English	☐ Spanish
New San Juan Parangaritcutiro, Michoacán, Mexico	☐ English	☐ Spanish
Oaxaca Forestry Communities, Mexico		☐ Spanish
Quintana Roo Forestry Communities, Mexico		☐ Spanish
Lomerio Forestry Project, Santa Cruz, Bolivia	☐ English	☐ Spanish
Multiethnic Indigenous Territory, Chimanes Forest, Beni, Bolivia	☐ English	☐ Spanish
Yanesha Forestry Cooperative, Palcazu Valley, Peru	☐ English	☐ Spanish

Theme papers

• Can We Have the Forest and Eat it Too: Maintaining the Ecological Basis for Forestry.	☐ English
• The Delicate Balance: Tenure Rights and Responsibilities in Sustainable Forest Management	☐ English
• Land Tenure, Land Use and Indigenous Politics in the 1990s.	☐ English
• Community Values, Ethical Choices, and Economic Development in Indigenous Amazonia	☐ English
• Sobrevivencia de Empresas Forestales Comunitarias en Sistemas de Mercado Abierto	☐ Spanish

Transportation to Madison.

The University of Wisconsin-Madison is accessible from three airports: (1) Madison, (2) Milwaukee (90 miles away, with ground transportation by Badger Bus, (608) 255-6771, $ 7.00 each way), and Chicago (150 miles away, with bus service available from Van Galder Bus Company, (800) 747-0994, $17.00 each way). Most major airlines serve the Madison area. Midwest Express offers discounted fares with a Friday or Saturday night stayover.

Hotel Information.

Blocks of rooms have been reserved at two Madison hotels. Both are conveniently located several blocks from the State Historical Society Auditorium (the site of the symposium), the University of Wisconsin Campus, and the State Street pedestrian mall. The Wisconsin Center Guest House has an indoor pool. **When you book your room, refer to the community forestry symposium.**

Wisconsin Center Guest House
Lowell Hall
610 Langdon Street
Reservations (608) 256-2621
Rates:
$38.00 / single
$48.00 / double

Madison Inn
601 Langdon, Madison, WI
Reservations (608) 257-4391
Rates:
$46.00 - 60.00 / single
$51.00 - 65.00 / double

Other Lodging Alternatives:

A **Howard Johnson Hotel** is located at 525 W Johnson, within walking distance of the symposium. Conference rates are $63.00 / single and $ 71 / double. Call (608) 251-5511 for reservations.

Dormitory-style rooms have also been reserved in **Jorns Hall** and **Humphrey Hall**, 650 Babcock Drive. Call Mary Vance at (608) 262-2270 for more information and to make reservations. She can find roommates for those who wish to share rooms.

$ 25.00 / single
$ 18.00 per person / double
$ 12.00 per person / triple

A service of the Institute for Environmental Studies

ENVIRONMENTAL EVENTS

at the University of Wisconsin-Madison

MAY 1-7, 2000

Please contact sponsoring departments/organizations for details about specific events.

MONDAY, MAY 1

Conservation Biology and Sustainable Development Student Research Presentations. "Managing Land Adjacent to a Protected Area: The Private Land Manager's Perspective," Erika Van Wie; "'Traditional' Communities and Industrial Market Expansion in Brazil's Atlantic Rainforest: Reconceptualizing Conservation in a Global Framework," Eve Kaplan; "Sustaining the Land Trust Community: Recommendations Based on a Regional Assessment of Need," Erin Oliver; "Communicating Biodiversity Conservation Across Audience Agenda: A Case Study of The Biodiversity Project and Media Outreach," Carina Bandle; and "Effects of Hydrology on *Spartina pectinata* and Implications for Stormwater Wetlands," Cristina Bonilla-Warford. 6191 Helen C. White Hall. 4-6 p.m. Refreshments provided. Contact: Cristina Bonilla-Warford, cmbonilla@students.wisc.edu.

May Day Concert (rescheduled from April 30) with local artist Vicki Guzman and Earth First! Ecofeminist troubadour Alice Di Micele. Special guest appearance by Green Party presidential candidate Ralph Nader. Memorial Union Terrace. 5 p.m. Contact: 262-9036.

TUESDAY, MAY 2

Forestry Research Seminar. "Deer, Shade, and Disease: The One, Two, Three Knockout Punch to *Quercus Rubra* Seedlings in Southern Wisconsin Mesic Forests." Darrin Kimbler, M.S. Student, Forest Ecology and Management, UW-Madison. 104 Russell Laboratories. 12:05 p.m. Contact: Department of Forest Ecology and Management, 262-9975.

WEDNESDAY, MAY 3

Food and Agricultural Systems Lecture. "Changing Nature of the Global Food System: Implications for Research." Dr. William Heffernan, Department of Rural Sociology, University of Missouri-Columbia. 1111 Biotechnology Center. Noon. Contact: Department of Rural Sociology, 262-1510.

Limnology Seminar. "Predators and Prey? Size-structured Interactions of Largemouth Bass and Yellow Perch." Jeff Hinke, Graduate Student, Center for Limnology, UW-Madison. 102 Water Science and Engineering Laboratory. 12:05 p.m. Contact: Jeff Houser, 262-3088, jnhouser@students.wisc.edu.

WEDNESDAY, MAY 3 CONT'D

Soil Science Seminar. "Utilization of Magnesium Peroxide to Accelerate the Natural Attenuation of Methyl Tertiary Butyl Ether (MTBE) in Soils and Aquifers." Brian Foley, Research Assistant, Soil Science, UW-Madison. 270 Soils Building. 3:30 p.m. Contact: Carol Duffy, cjduffy@facstaff.wisc.edu.

Arboretum Volunteer Activity. "Plant Propagation Session." Meet at McKay Visitor Center, Arboretum Drive. 6-8 p.m. Contact: 265-2540.

Food, Community, and Sustainability Discussion. "Pesticide Cocktails: The Perils of Endocrine Disruption." Warren Poter, Professor, Zoology/Environmental Studies, UW-Madison. Elizabeth Waters Dining Hall. 6:30 p.m. (Plus: Organic Dinner, 5:30-6:30 p.m.) Contact: Jack Kloppenburg, 262-6867.

THURSDAY, MAY 4

Land Tenure Brownbag Seminar. "Who Gets the Land in Matrilineal Societies?" Susana Lastarria-Cornhiel, Senior Researcher, Land Tenure Center, UW-Madison. Land Tenure Center Conference Room, 333 N. Randall Ave. Noon. Contact Chris Elholm, 262-3412 or caelholm@facstaff.wisc.edu.

Environmental Toxicology Research Seminar. "The Nuclear Localization Characteristics of Nucleolar Protein Homologues SMAK and MAK16." Tom Albert, Graduate Student, Environmental Toxicology, UW-Madison. 125 McArdle Laboratory. 4 p.m. Contact: Environmental Toxicology Center, 263-4580.

FRIDAY, MAY 5

Land Resources Forum. "Campus Greening Through Eagle Heights Community Gardens." David Shiffert, Graduate Student, Conservation Biology and Sustainable Development, UW-Madison. 64 Science Hall. Noon. Contact: kagreen2@students.wisc.edu.

Environmental Monitoring Seminar. Topic and speaker to be announced. 1209 Engineering Hall. 12:05 p.m. Contact: Tim Olsen, tpolsen@facstaff.wisc.edu, 263-2086.

PLEASE TURN PAGE FOR MORE EVENTS

PLEASE POST OR CIRCULATE

FRIDAY, MAY 5 CONTINUED

Water Chemistry Seminar. "Material Characterization of Sol-Gel Derived Manganese Dioxide Thin Film." Suk Fun Chin, Graduate Student, Water Chemistry, UW-Madison. 102 Water Science and Engineering Laboratory. 12:05 p.m. Contact: 262-2470.

SATURDAY, MAY 6

Arboretum Volunteer Work Day. "Wingra Oak Savanna Restoration." Meet at parking lot at Monroe Street and Arbor Drive. 9 a.m.-Noon. Contact: 263-7760.



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THANKS!

A service of the Institute for Environmental Studies

ENVIRONMENTAL EVENTS

at the University of Wisconsin-Madison

MAY 8-14, 2000

Please contact sponsoring departments/organizations for details about specific events.

This is the last issue of Environmental Events for the academic year. We will resume publication in the fall. Have a great summer!

TUESDAY, MAY 9

Forestry Research Seminar. "The Role of Forestland Tax Programs in Promoting Ecosystem Management." Greg Clendenning, M.S. Student, Forest Ecology and Management, UW-Madison. 104 Russell Laboratories. 12:05 p.m. Contact: Department of Forest Ecology and Management, 262-9975.

WEDNESDAY, MAY 10

Limnology Seminar. "Invasive Crayfish and Aquatic Macrophytes: Patterns and Processes." Karen Wilson, Graduate Student, Center for Limnology, UW-Madison. 102 Water Science and Engineering Laboratory. 12:05 p.m. Contact: Jeff Houser, 262-3088, jnhouser@students.wisc.edu.

Soil Science Seminar. "Wastewater Use in Irrigation in Israel: New Solutions for a Water Scarce Country." Jessica Sternfels, Research Assistant, Soil Science, UW-Madison. 270 Soils Building. 3:30 p.m. Contact: Carol Duffy, cjduffy@facstaff.wisc.edu.

THURSDAY, MAY 11

Sustainable Agriculture Seminar. "Recent Experience with the U.N. Commission on Sustainable Development." Elizabeth Bird, Outreach Specialist, Center for Integrated Agricultural Systems, UW-Madison; and Former Director, Consortium for Sustainable Agriculture Research and Education. 115 Taylor Hall. 3:30 p.m. *(Note: This event is tentative and may be rescheduled for a different date and time.)* Contact: Elizabeth Bird, 262-9997, eabird@facstaff.wisc.edu.

Environmental Toxicology Research Seminar. Topic to be announced. Maureen Bunger, Graduate Student, Environmental Toxicology, UW-Madison. 125 McArdle Laboratory. 4 p.m. Contact: Environmental Toxicology Center, 263-4580.

FRIDAY, MAY 12

Arboretum Volunteer Activity. "Plant Propagation Session." Meet at McKay Visitor Center, Arboretum Drive. 10 a.m.-Noon. Contact: 265-2540.

Urban Sprawl Film Presentation and Discussion. "Subdivide and Conquer," by Jeff Gersch, Filmmaker and Alumnus, Institute for Environmental Studies, UW-Madison. State Historical Society Auditorium, 816 State Street. 6 p.m. $5 donation requested. Contact: Brett Hulsey, 257-4994.

SATURDAY, MAY 13

Arboretum Volunteer Work Day. "Wingra Oak Savanna Restoration." Meet at parking lot at Monroe Street and Arbor Drive. 9 a.m.-Noon. Contact: 263-7760.

Campus Natural Areas Walking Tour. "Geology of the Campus." David Mickelson, Professor, Geology and Geophysics/Environmental Studies, UW-Madison. Meet on Observatory Hill. 10 a.m. Contact: Cathie Bruner, 265-9275.

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ENVIRONMENTAL EVENTS

at the University of Wisconsin-Madison

8-17 SEPTEMBER 2000

Please contact sponsoring departments/organizations for details about specific events.

FRIDAY, 8 SEPTEMBER

Zoology/Genetics Colloquium. "c-kit Dependent & Independent Pathways of Zebrafish Melanocyte Stripe Development & Regeneration." Stephen Johnson, Department of Genetics, Washington University Medical School, St. Louis, Missouri. 168 Noland Hall. 3:30 p.m. Contact: Francisco Pelegri, fjpelegri@facstaff.wisc.edu.

Food-for-Thought Forum. "The New Diet for a Small Planet: A Food-for-Thought Public Forum on Food and Democracy." Frances Moore Lappé, author, Diet for a Small Planet; José Bové, French farmer and activist; a local restauranteur; and a local farmer. 272 Bascom Hall. 7:30 p.m. Contact: Mark Stevens, 263-7940 or mstevens@facstaff.wisc.edu.

SATURDAY, 9 SEPTEMBER

Food-for-Thought Festival. A showcase of more than 50 organizations and businesses promoting sustainably grown and produced food. Wisconsin Avenue, off the square, Downtown Madison. 8:00 a.m. - 1:00 p.m. (Co-sponsored by UW-Madison, Institute for Environmental Studies). Contact: Mark Stevens, 263-7940 or mstevens@facstaff.wisc.edu.

WEDNESDAY, 13 SEPTEMBER

Yahara Lakes Forum. "Managing Yahara Lake Levels: Objectives, Opportunities, and Constraints." Kenneth Koscik, Director, Dane County Public Works Department; and William Krug, Hydrologist, U.S. Geological Survey. 1800 Engineering Hall. 7:00 p.m. Contact: Ken Potter, 262-0040, kwpotter@facstaff.wisc.edu.

THURSDAY, 14 SEPTEMBER

Land Tenure Brown Bag Seminar. "Issues in Wisconsin Forestland Management." Donald Waller, Professor, Botany/Environmental Studies, UW-Madison. Land Tenure Center Conference Room, 333 N. Randall Ave. Noon. Contact Chris Elholm, 262-3412 or caelholm@facstaff.wisc.edu.

FRIDAY, 15 SEPTEMBER

Zoology Colloquium. "Evaluating the Ecological Consequences of Fisheries: How Do We Get There From Here?" Tim Essington, Post-Doc, Center for Limnology, UW-Madison. 168 Noland Hall. 3:30 p.m. Contact: Jim Kitchell, 262-7259 or kitchell@mhub.zoology.wisc.edu.

Economics Presentation. "Is Free Trade Good for the Environment?" Scott Taylor, Professor, Economics Dept., UW-Madison. 206 Ingraham Hall. 9:30 a.m. Contact: WAGE (Center for World Affairs and the Global Economy), 262-2042.

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ENVIRONMENTAL EVENTS

at the University of Wisconsin-Madison

OCTOBER 2 - 8, 2000

Please contact sponsoring departments/organizations for details about specific events.

MONDAY, OCTOBER 2

Earth System Science Seminar. "Application of Remote Sensing to Environmental Issues: Current and Future Programs for Studying the Hydrologic Cycle." Steve Ackerman, Associate Professor, Atmospheric and Oceanic Sciences, UW-Madison. 811 Atmospheric Oceanic and Space Sciences Building. 1225 W. Dayton St. 12:05 p.m. Contact: Jon Foley, jfoley@facstaff.wisc.edu

TUESDAY, OCTOBER 3

Land Resources Forum. "The Mysterious Underground World of Restoration: Developing soils in Restoration Projects." Bob Speaker, Natural Resources Manager, Badger Army Ammunition Plant. 64 Science Hall. 12:00 noon. Contact: Katy Werner, 262-2593 or kjwerner@students.wisc.edu

WEDNESDAY, OCTOBER 4

African Studies Sandwich Seminar. "The Egyptian Village Under a New Land Tenure Policy." Dr. Ashraf Hussein, Visiting Scholar, Land Tenure Center, UW-Madison. 206 Ingraham Hall, 1155 Observatory Drive. 12 noon. Contact: 262-2380.

International Agriculture Seminar. "Taxonomy and Politics of Collecting Wild Potatoes in Latin America." David Spooner, Professor, Agronomy Department, UW-Madison. Room 351 Plant Sciences/Horticulture/Moore Hall. 12:05 p.m. Contact: Martha Rosemeyer, 265-9367 or merosemeyer@facstaff.wisc.edu; also Jerry Doll, jddoll@facstaff.wisc.edu.

Soil Science Seminar. "Current Issues in Soil Fertility: Progress in Predicting Optimum Nitrogen Rates for Corn." Larry Bundy, Professor, Soil Science, UW-Madison. 270 Soils Bldg. 3:30 p.m. Contact: Carol Duffy, cjduffy@facstaff.wisc.edu.

Arboretum Plant Propagation Session. Drop-in activity 5 – 7 p.m. Learn seed collecting, cleaning and planting, plant care and maintenance. No previous experience required. All training and equipment provided. UW Arboretum Laboratory. Contact: Brian Bader, 265-5214.

Book Reading/Discussion. "Fishing the Great Lakes." Madison author, Margaret Beattie Bogue reads from and discusses her book, Fishing the Great Lakes: An Environmental History, 1783-1933. The University Bookstore, 711 State Street. 6:00 p.m. Contact: 257-3784.

THURSDAY, OCTOBER 5

German and European Studies Lecture. "Strategic Approaches to Sustainable Development." Ulrich Goluke, World Business Council for Sustainable Development, Geneva, Switzerland. 1610 Engineering Hall. 5:30 p.m. Contact: Patrick Eagan, 263-7429 or eagan@engr.wisc.edu.

Ecology Lecture. "Costa Rica's Area de Conservacion Guanacaste: A Long March to Survival Through Non-Damaging Biodiversity Development." Daniel Janzen, Distinguished Professor of Biology, University of Pennsylvania. Wisconsin State Historical Society Auditorium. 7:00 p.m. Contact: Emily Steel, 265-6712 or ecsteel@students.wisc.edu.

FRIDAY, OCTOBER 6

Water Chemistry Seminar. "The Organic Complexation of Trace Metals in Estuarine Waters of Galveston Bay: The Importance of Reduced Sulfur Species." Deguie Tang, Post-Doc, Water Chemistry, UW-Madison. 102 Water Science & Engineering Laboratory, 660 N. Park St., 12:05 p.m. Contact: Marcia Wagner, mawagne2@facstaff.wisc.edu.

Wildlife Ecology Seminar: "The Nature and Value of Australia's Ecosystem Services." Steve Cork, Project Leader, CSIRO, Canberra, Australia. A228 Russell Labs. 12:05 p.m. Contact: Helen Thompson, 265-0588, or hethomps@facstaff.wisc.edu.

UW-Madison Ecology Group Sixth Annual Symposium. Ecology research presentations from 1:00-3:00 p.m. by six UW-Madison professors: "How Will Wisconsin's Forests Respond to Anticipated Changes in Atmospheric Chemistry?" Eric Kruger, Forest Ecology & Management; "Community-Based Wildlife Conservation in the Peruvian Amazon," Lisa Naughton, Geography; "Interpreting Diversity in Neotropical Lowland Forests," Paul Berry, Botany; "Physiology on a Landscape Scale," Warren Porter, Zoology; "Life's a Beach: The Dynamics of Adelie Penguin Colonies in the Antarctic," Christine Ribic, Wildlife Ecology; and "Chemical Signaling Among Trees, Insect Herbivores, and Predators: Landscape-Level Consequences and Management Implications," Kenneth Raffa, Entomology. Closing lecture, 3:30-4:30 p.m.: "Host Specificity of Costa Rican Caterpillars and Their Parasites," Daniel Janzen, Distinguished Professor of Biology, University of Pennsylvania. Wisconsin State Historical Society Auditorium. Contact: Emily Steel, 265-6712 or ecsteel@students.wisc.edu.

(continued on the other side)

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SATURDAY, OCTOBER 7

Arboretum Volunteer Work Day. The Wingra Oak Savanna Project. Drop in activity 9:00 a.m. – 12:00 noon. Meet at the parking lot at the intersection of Monroe St. and Arbor Dr.; the Madison city Bus Route 3 stops at the corner of Monroe St. and Glenway St., about 3 blocks west of the meeting location. Contact: 263-7760.

SUNDAY, OCTOBER 8

Open House on the Prairie. "Prairies Jubilee!" Walks, talks, live animal exhibits and storytelling for adults and kids. Horsedrawn wagon rides, food available. Birdwatching at Goose Pond Sanctuary. UW-Madison Arlington Agricultural Research Station, Arlington,WI. 1:00 – 5:00 p.m. Contact: Marsha and Peter Cannon, 608/251-1276

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ENVIRONMENTAL EVENTS

at the University of Wisconsin-Madison

OCTOBER 16 - 22, 2000

Please contact sponsoring departments/organizations for details about specific events.

MONDAY, OCTOBER 16

Urban and Regional Planning Brown Bag Seminar. "How Effective Is Your Environmental Planning System?" Geoff McDonald, Professor and Head, Geographical Sciences and Planning, University of Queensland, Brisbane, Australia. 208 Old Music Hall. 12 noon. Contact: Harvey Jacobs, 262-0552 or hmjacobs@facstaff.wisc.edu

Earth System Science Seminar. "Application of Remote Sensing to Environmental Issues: Remote Sensing of Forest Ecosystems – the Chequamegon Forest." Scott Mackay, Assistant Professor, Forest Ecology and Management/Environmental Studies, UW-Madison. 811 Atmospheric Oceanic and Space Sciences Building, 1225 W. Dayton St. 12:05 p.m. Contact: Jon Foley, jfoley@facstaff.wisc.edu

TUESDAY, OCTOBER 17

Forestry/Forest Products Colloquium. "Justice and New Zealand Forest Policy." Dr. Ted Bilek, Senior Lecturer, University of Centerbury, New Zealand. 104 Russell Labs. 12:05 p.m. Contact: Sandy Fowler 262-9975, or sfowler@facstaff.wisc.edu.

Political Geography/Havens Center Visiting Scholar Lecture. "Geographical Knowledge and Political Power." David Harvey, Dept. of Geography and Environmental Engineering, John Hopkins University. 206 Ingraham Hall. 3:30 p.m. Contact: 262-1420 or 262-0854; or stop by 8117 Social Science.

Audubon/Wildlife Ecology Lecture. "Population Growth, Biodiversity Loss, Technological Promise: How Dense Can You Get?" Hugh Iltis, Professor Emeritus, Botany, UW-Madison, Co-founder, The Nature Conservancy. Bolz Auditorium, 124 S. Brooks St., across from Meriter Hospital. 7:30 p.m. Refreshments at 7:00 p.m. Contact: 255-2473.

WEDNESDAY, OCTOBER 18

Agronomy Lecture. "Intermediate Technologies for Dry Bean Producers in Costa Rica: Can We Sustainably Integrate Traditional and Modern Technologies?" Martha Rosemeyer, Visiting Assistant Professor, Agronomy, UW-Madison. 473 Plant Sciences/Horticulture/Moore Hall. 12:05 p.m. Contact: Martha Rosemeyer, 265-9367 or merosemeyer@facstaff.wisc.edu; also Jerry Doll, jddoll@facstaff.wisc.edu.

WEDNESDAY, OCT. 18 (CONT'D)

Limnology Seminar Series. "Does Ancient Terrestrial Organic C Support Metabolism In The Hudson River?" Jon Cole, Scientist, Institute of Ecosystem Studies, Milbrook, NY. 102 Water Science and Engineering Laboratory. 12:05 p.m. Contact: Jeff Houser, 262-3088 or jnhouser@students.wisc.edu.

Political Geography/Havens Center Visiting Scholar Lecture. "Geographical Knowledge and Global Governance." David Harvey, Geography and Environmental Engineering, John Hopkins University. 8417 Social Science. 3:30 p.m. Contact: 262-1420 or 262-0854; or stop by 8117 Social Science.

Soil Science Seminar. "Current Issues in Soil Fertility: Histosols: Chemistry and Fertility." Angela Ebeling, Research Assistant, Soil Science, UW-Madison. 270 Soils Building. 3:30 p.m. Contact: Carol Duffy, cjduffy@facstaff.wisc.edu.

Arboretum Plant Propagation Session. Drop-in activity. Learn seed collecting, cleaning, and planting, plant care, and maintenance. No previous experience required. All training and equipment provided. UW Arboretum Laboratory. 5 – 7 p.m. Contact: Brian Bader, 265-5214.

THURSDAY, OCTOBER 19

Fellowship Information Session. Information session for international fellowships for the Population-Environment Fellows Program funded by USAID. 64 Science Hall. 12 noon. Contact: F.J. Cava, 734/763-9456 or popenv@umich.edu. See: www.sph.umich.edu/pfps.

Political Geography/Havens Center Visiting Scholar Seminar for Students and Faculty. "Geographical Knowledge, Political Power, and Global Governance." David Harvey, Geography and Environmental Engineering, John Hopkins University. 8108 Social Science. 12:20 p.m. Contact: 262-1420 or 262-0854; or stop by 8117 Social Science.

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FRIDAY, OCTOBER 20

Land Tenure Brownbag Seminar. "New Technology, Tenure Rights, and African Land Management Systems: Room for a Fit or Another Dark Alley?" Donna Hornby, Project Leader, AFRA (Association for Rural Advancement), Pietermaritzburg, South Africa. Land Tenure Center Conference Room, 333 N. Randall Ave. 12:00 noon. Contact: Christine Elholm, 262-3412 or caelholm@facstaff.wisc.edu.

Water Chemistry Seminar. "Photocatalytic Reactor Design." Paul Check, Graduate Student, Water Chemistry, UW-Madison. 102 Water Science & Engineering Laboratory, 660 N. Park St. 12:05 p.m. Contact: Marcia Wagner, mawagne2@facstaff.wisc.edu.

SATURDAY, OCTOBER 21

Arboretum Volunteer Work Day. Grady Tract Savanna. Drop in activity. Meet at the Grady Parking Lot south of the Beltline Highway, corner of Seminole Highway and the frontage road. 9:00 a.m. – 12:00 noon. Contact: 263-7760.

Arboretum Volunteer Steward Training. (Session 4 of 5). Help protect the Arboretum by teaching visitors appropriate ways to use it. Location: TBA. 9:00 a.m. – 2:00 p.m. Volunteers must attend all five session to become a steward. Contact: Judy Kingsbury, 262-1491.

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ENVIRONMENTAL EVENTS

at the University of Wisconsin-Madison

OCTOBER 23 - 29, 2000

Please contact sponsoring departments/organizations for details about specific events.

MONDAY, OCTOBER 23

Environmental Health Sciences Seminar. "The Role of Folic Acid in the Prevention of Environmentally Induced Birth Defects." Richard Finnell, Director of Human Genetics, Monroe Meyer Institute, University of Nebraska Medical Center. 1111 Genetics/Biotechnology Auditorium, Genetics/Biotechnology Center, 425 Henry Mall. 12 noon. Contact: 263-5557, or ehsadmin@ehscenter.wisc.edu.

Earth System Science Seminar. "Application of Remote Sensing to Precision Agriculture." John Norman, Professor, Soil Science/Environmental Studies, UW-Madison. 811 Atmospheric Oceanic and Space Sciences Building. 1225 W. Dayton St. 12:05 p.m. Contact: Jon Foley, jfoley@facstaff.wisc.edu.

TUESDAY, OCTOBER 24

Land Resources Forum. "Wildlife Tourism in Belize." Rebecca Grossberg, Graduate Student, Land Resources, UW-Madison. 64 Science Hall. 12 noon. Contact Katy Werner, 262-2593 or kjwerner@students.wisc.edu.

Arboretum Volunteer Steward Training. (Session 5 of 5). Help protect the Arboretum by teaching visitors appropriate ways to use it. LocationTBA. 6:00 p.m. - 9:00 p.m. Volunteers must attend all five session to become a steward. Contact: Judy Kingsbury, 262-1491.

WEDNESDAY, OCTOBER 25

Yahara Lakes Public Forum. "Water Management Begins in the Watershed." Carol Rumery Betz, Watershed Planner, Wisconsin DNR; Kevin Connors, County Conservationist, Dane County Land Conservation Dept. 1800 Engineering Hall. 7:00 p.m. Contact: Ken Potter, 262-0040 or kwpotter@facstaff.wisc.edu.

Limnology Seminar Series. "Quantifying Fish Predation on a Mixed Species Crayfish Assemblage." Brian Roth, Graduate Student, Center for Limnology, UW-Madison. 102 Water Science and Engineering Laboratory, 660 N. Park St. 12:05 p.m. Contact: Jeff Houser, 262-3088 or jnhouser@students.wisc.edu.

Population Discussion. Informal, drop-in discussion of population-related issues with Werner Fornos, President, The Population Institute, Washington, D.C. 64 Science Hall. 2:30 -3:30 p.m. Contact: Tom Sinclair, 263-5599 or tksincla@facstaff.wisc.edu.

WEDNESDAY, OCT. 25 (CONT'D)

Soil Science Seminar: Current Issues in Soil Fertility. "Effects of Green Manure on Soil Fertility." Ryosuke Fujinuma, Research Assistant, Department of Soil Science, UW-Madison. 270 Soils Building. 3:30 p.m. Contact: Carol Duffy, cjduffy@facstaff.wisc.edu.

THURSDAY, OCTOBER 26

Land Tenure Brown Bag Seminar. "Amenity Migrants to Forested Regions: Conflicts Between Timber Production and Recreation Users." David Marcouiller, Associate Professor, Urban and Region Planning, UW-Madison, and UW-Extension. Land Tenure Center Conference Room, 333 N. Randall Ave. 12 noon. Contact: Chris Elholm, 262-3412 or caelholm@facstaff.wisc.edu.

Global Studies Seminar. "This Water is Ours – the Grassroots Challenge to the World Bank and Neoliberalism in Bolivia." Oscar Olivera, machinist, Executive Secretary, Cochabamba Federation of Factory Workers, leader, "La Coordinadora de Defensa de Agua y de la Vida (Coalition for the Defense of Water and Life). 5:30 p.m. - Welcome/Reception, Main Lounge, Pres House, 731 State St.. 7:00 p.m. - Presentation and Video, Memorial Union (TITU). Contact: 262-9036.

FRIDAY, OCTOBER 27

Microbial Diversity Symposium. Twelve presentations in two sessions, 8:30 - 11:30 a.m. and 1:00 - 4:00 p.m., by scientists from throughout the United States. (For complete agenda, see http:www.bact.wisc.edu/.) Memorial Union Play Circle. Preregistration requested. Contact: Ken Todar, kgtodar@facstaff.wisc.edu.

Water Chemistry Seminar. "Effluent-Derived Chemical Contaminants in Recycled Water." Dr. David Sedlak, Civil and Environmental Engineering, University of California-Berkeley. 102 Water Science & Engineering Laboratory, 660 N. Park St. 12:05 p.m. Contact: Marcia Wagner, mawagne2@facstaff.wisc.edu.

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FRIDAY, OCTOBER 27 (CONT'D)

German and European Studies Lecture. "Sustainable Development, Culture and Industrial Ecology: An Environmentalist View of American Culture and the Environment." Susan Mudd, Citizens for a Better Environment, Milwaukee, Wisconsin. 1220 Grainger Hall. 1:05 p.m. Contact: Patrick Eagan, 263-7429 or eagan@engr.wisc.edu.

Arboretum Plant Propagation Session. Drop-in activity. Learn seed collecting, cleaning, and planting, plant care, and maintenance. No previous experience required. All training and equipment provided. 10 a.m. - 12 noon. UW Arboretum Laboratory. Contact: Brian Bader, 265-5214.

SATURDAY, OCTOBER 28

Campus Natural Areas (CNA) Volunteer Work Day. Major erosion repair work at Eagle Heights Woods. Meet at the Shady Lane entrance to Eagle Heights Woods (in Shorewood Hills). See http://www.ies.wisc.edu/cna for directions. Wear long pants and sturdy shoes (preferably boots), and bring work gloves (if you have them), drinking water, and lunch. Tools and treats provided. 9:00 a.m. - 4:00 p.m. RSVP requested but drop-ins are welcome. Contact: Jill Baum, 263-7771 or baum@students.wisc.edu.

Arboretum Volunteer Work Day. The "Marsh Connection." Drop-in activity. Meet at Margaret's Council Ring, near the west end of the McKay Center parking lot (enter from Seminole Highway). 9:00 a.m. - 12:00 noon. Contact: 263-7760.

Campus Natural Areas (CNA) Walking Tour. "Soils of the Campus Natural Areas." Kevin McSweeney, Professor, Soil Science/Environmental Studies, UW-Madison. Meet at Picnic Point Parking Lot. 9:30 - 11:00 a.m. Contact: Jill Baum, baum@students.wisc.edu.

SUNDAY, OCTOBER 29

Campus Natural Areas (CNA) Volunteer Work Day. Major erosion repair work at Eagle Heights Woods. Meet at the Shady Lane entrance to Eagle Heights Woods (in Shorewood Hills). See http://www.ies.wisc.edu/cna for directions. Wear long pants and sturdy shoes (preferably boots), and bring work gloves (if you have them) and drinking water. Tools and treats provided. 1:00 - 5:00 p.m. RSVP requested but drop-ins are welcome. Contact: Jill Baum, 263-7771 or baum@students.wisc.edu.

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ENVIRONMENTAL EVENTS

at the University of Wisconsin-Madison

OCTOBER 30 – NOVEMBER 5, 2000

Please contact sponsoring departments/organizations for details about specific events.

MONDAY, OCTOBER 30

Earth System Science Seminar. "Characterizing Global Land Use Activities from Space." Navin Ramankutty, Assistant Scientist, Center for Sustainability and the Global Environment, UW-Madison. 811 Atmospheric Oceanic and Space Sciences Building. 1225 W. Dayton St. 12:05 p.m. Contact: Jon Foley, jfoley@facstaff.wisc.edu

TUESDAY, OCTOBER 31

Land Resources Forum. "Habitat Use and Movement of Regal Fritillary Butterflies (*Speyeria Idalia*) in Dry Prairie Remnants in Southwest Wisconsin." Katie Beilfuss, Graduate Student, Land Resources, UW-Madison. 64 Science Hall. 12:00 noon. Contact Katy Werner, 262-2593 or kjwerner@students.wisc.edu.

WEDNESDAY, NOVEMBER 1

Agronomy Lecture. "Community Planning for Sustainable Livestock-based Forested Ecosystems in Latin America." Tim Moermond, Professor, Zoology, UW-Madison. 473 Plant Sciences/Horticulture/Moore Hall. 12:05 p.m. Contact: Martha Rosemeyer, 265-9367 or merosemeyer@facstaff.wisc.edu.

Limnology Seminar. "Predation by Juvenile Yellow Perch *(Perca Flavescens)* on Young-of-the-Year Largemouth Bass *(Micropterus Salmoides)* in Structural Refuges." Jefferson Hinke, Graduate Student, Center for Limnology, UW-Madison. 102 Water Science and Engineering Laboratory, 660 N. Park St. 12:05 p.m. Contact: Jeff Houser, 262-3088 or jnhouser@students.wisc.edu.

Soil Science Seminar: Current Issues in Soil Fertility. "Pathogen Attenuation in Wastewater by Sand Filter Treatment." John Oosterwyk, Research Assistant, Department of Soil Science, UW-Madison. 270 Soils Building. 3:30 p.m. Contact: Carol Duffy, cjduffy@facstaff.wisc.edu.

Arboretum Plant Propagation Session. Drop-in activity. Learn seed collecting, cleaning, and planting, plant care and maintenance. No previous experience required. All training and equipment provided. UW Arboretum Laboratory. 6:00 - 8:00 p.m. Contact: Brian Bader, 265-5214.

THURSDAY, NOVEMBER 2

German and European Studies Lecture. "Sustainable Development, Culture and Industrial Ecology: Understanding the Environmental/Legal Regulatory Framework in the Netherlands." Cees Moons, Directorate General for Environmental Protection, The Hague, Netherlands. 1610 Engineering Hall. 5:30 p.m. Contact: Patrick Eagan, 263-7429 or eagan@engr.wisc.edu.

FRIDAY, NOVEMBER 3

Water Chemistry Seminar. "Chemical Sensors Based on Semiconductor Luminescence." Art Ellis, Professor, Water Chemistry, UW-Madison. 102 Water Science and Engineering Laboratory, 660 N. Park St. 12:05 p.m. Contact: Marcia Wagner, mawagne2@facstaff.wisc.edu.

SATURDAY, NOVEMBER 4

Arboretum Volunteer Work Day. Wingra Oak Savanna Project. Drop in activity. Meet at the parking lot at the intersection of Monroe St. and Arbor Dr.; the Madison city bus route 3 stops at the corner of Monroe St. and Glenway St., about 3 blocks west of the meeting location. 9:00 a.m. - 12:00 noon. Contact: 263-7760.

SUNDAY, NOVEMBER 5

Campus Natural Areas (CNA) Volunteer Work Day. Drop-in activity. Trail maintenance work along Northshore Woods lake path. Meet at Frautschi Point parking lot. See http://www.ies.wisc.edu/cna for directions. 1:00 - 5:00 p.m. Please wear long pants and sturdy shoes (preferably boots), and bring work gloves and drinking water. Tools and treats provided. Contact: Jill Baum, baum@students.wisc.edu.

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NOVEMBER 13 - 19, 2000

Please contact sponsoring departments/organizations for details about specific events.

MONDAY, NOVEMBER 13

Earth System Science Seminar. "Application of Remote Sensing to Environmental Issues: Regional Earth Science Applications Center." George Diak, Senior Scientist, Space Science and Engineering Center, UW-Madison. 811 Atmospheric Oceanic and Space Sciences Building, 1225 W. Dayton St. 12:05 p.m. Contact: Jon Foley, jfoley@facstaff.wisc.edu

TUESDAY, NOVEMBER 14

Forestry Noon Seminar. "Biology and Status of the Iberian Lynx and Spatial Analysis of Its Habitat." Nestor Fernandez, Doctoral Student, Donana Biological Station, Seville, Spain. 104 Russell Labs. 12:05 p.m. Contact: 262-9975. Bring your lunch.

WEDNESDAY, NOVEMBER 15

International Agricultural Seminar. "Development of a Vegetable Research Network in Central America." Jim Nienhuis, Horticulture, UW-Madison. 473 Horticulture/Moore Hall. 12:05 p.m. Contact: 262-1271.

Limnology Seminar. "Is Biodiversity Enough? Complexity in Small Aquatic Systems." Linda Puth, Graduate Student, Botany, UW-Madison. 102 Water Science and Engineering Laboratory, 660 N. Park St. 12:05 p.m. Contact: Jeff Houser, 262-3088 or jnhouser@students.wisc.edu.

WEDNESDAY, NOV. 15 (CONT'D)

Soil Science Seminar: Current Issues in Soil Fertility. "Using Yield Monitor Data to Determine Profitability and Reduce Fertilizer Applications." Joseph Curless, Research Assistant, Department of Horticulture, UW-Madison. 270 Soils Building. 3:30 p.m. Contact: Carol Duffy, cjduffy@facstaff.wisc.edu.

Wildlife Ecology / Audubon Society Lecture. "Badger Army Ammunition Plant: A Chance to Make Conservation History in Southern Wisconsin!" Presented by members of The Conservation Community Coalition for Sauk Prairie. Bolz Auditorium, 124 S.Brooks St. (across from Meriter Hospital). 7:30 p.m. Contact: 255-2473.

Yahara Lakes Public Forum. "Who Controls the Future of the Yahara Lakes?" Kevin Connors, Dane County Land Conservation Department; Charles Dykman, Yahara Lakes Association; Brett Hulsey, Sierra Club; Henry Hart, Friends of Lake Wingra and UW Emeritus Professor, and Ruth Ann Schoer, Dane County Board. 1800 Engineering Hall. 7:45 p.m. Contact: Ken Potter, 262-0040 or kwpotter@facstaff.wisc.edu.

Arboretum Plant Propagation Session. Drop-in activity. Learn seed collecting, cleaning and planting, plant care and maintenance. No previous experience required. All training and equipment provided. UW Arboretum Laboratory. 6:00 - 8:00 p.m. Contact: Brian Bader, 265-5214.

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FRIDAY, NOVEMBER 17

World Affairs and Global Economy (WAGE) Lecture. "The World Trade Organization and the New Politics of GMOs: Will GMOs be the Achilles' Heel of the Globalization Regime?" Frederick Buttel, Professor, Rural Sociology / IES, UW-Madison. 206 Ingraham Hall. 9:30 a.m. Contact: 262-2042.

Water Chemistry Seminar. "The Contribution of Groundwater to Methyl Mercury Levels of a Small Stream in the Tahquamenon River Watershed of Lake Superior." Ric Stoor, Graduate Student, Water Chemistry, UW-Madison. 102 Water Science and Engineering Laboratory, 660 N. Park St., 12:05 p.m. Contact: Marcia Wagner, mawagne2@facstaff.wisc.edu.

Zoology Colloquium. "Evolutionary Analyses as a Molecular Assay: Using Phylogeny in Functional Genomics Studies." Douglas L. Crawford, Visiting Faculty, University of Missouri. 168 Noland Hall. 3:30 p.m. Refreshments served in Room 163 at 3:10 p.m. Contact: Carol Lee, 262-9225 or carollee@facstaff.wisc.edu.

SATURDAY, NOVEMBER 18

Arboretum Volunteer Work Day. At the Grady Tract Savanna. Drop in activity. Meet at the Grady Parking Lot south of the Beltline Highway, corner of Seminole Highway and the frontage road. 9:00 a.m. - 12:00 noon. Contact: 263-7760.

SUNDAY, NOVEMBER 19

Arboretum Talk and Tour. "Arboretum Geology." Learn firsthand about drumlins, moraines and other features of glacial geology in the Madison area. Meet at Margaret's Council Ring, just south of the visitor center at the edge of Curtis Prairie. 1:00 - 3:00 p.m. Contact: 263-7888.

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ENVIRONMENTAL EVENTS

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NOVEMBER 20 - 26, 2000

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MONDAY, NOVEMBER 20

EDARC Brown Bag Lecture. "Supporting Biodiversity Conservation Efforts in Latin America and the Caribbean: The MacArthur Foundation's Experience." Dr. Avecita Chicchon, Program on Global Security and Sustainability, MacArthur Foundation, Chicago. 206 Ingraham Hall. 12 noon. Contact: Eric Carter, 262-6523 or edcarter@students.wisc.edu.

Water Chemistry Seminar. "Consideration of Instabilities of Nonlinear Transport and Reaction in the Synthesis of Complex Chemical Process Systems." Kunio Kataoka, Professor, Kobe University, Japan. 102 Water Science and Engineering Laboratory, 660 N. Park St. 12:05 p.m. Contact: Marcia Wagner, mawagne2@facstaff.wisc.edu.

Earth System Science Seminar. "Application of Remote Sensing to Environmental Issues: Rain Gauges in Space: Monitoring Global Precipitation via Satellite." Grant Petty, Visiting Associate Professor, Atmospheric and Oceanic Sciences, UW-Madison. 811 Atmospheric Oceanic and Space Sciences Building,1225 W. Dayton St. 12:05 p.m. Contact: Jon Foley, jfoley@facstaff.wisc.edu.

TUESDAY, NOVEMBER 21

Water Chemistry Seminar. "The Origin and Measurement of Radioactivity in Various Wisconsin Groundwater Supplies." Dr. Michael Arndt, Wisconsin State Lab of Hygiene. 102 Water Science and Engineering Laboratory, 660 N. Park St. 12:05 p.m. Contact: Marcia Wagner, mawagne2@facstaff.wisc.edu.

TUESDAY, NOVEMBER 21 (CONT'D)

Forestry Noon Seminar. "Incorporation of Aldehydes into Lignins of Transgenic Plants." Hoon Kim, Doctoral Student, Forest Ecology and Management, UW-Madison. 104 Russell Labs. 12:05 p.m. Contact: 262-9975. Bring your lunch.

Madison Audubon/Wildlife Ecology Lecture. "The Big White Bird (the Trumpeter Swan) Returns." Speaker TBA. Bolz Auditorium, across from Meriter Hospital, 124 S. Brooks St., Madison. 7:00 p.m. refreshments. 7:30 p.m. general meeting and program. Contact: 255-2473.

WEDNESDAY, NOVEMBER 22

Zoology Lecture. "Animal Origins of Herbal Medicine: Searching the Past for Cures That Will Last." Dr. Michael Huffman, Professor, Primate Research Institute, Kyoto University. 338 Brogden Psychology Building. 12 noon. Contact: Liza Moscovice, 262-1884 or lrmoscovice@students.wisc.edu.

Limnology Seminar. "Lake Metabolism in Northern Wisconsin: Dissolved Gas Dynamics Reveal NetHeterotrophy." Paul Hanson, Graduate Student, Center for Limnology, UW-Madison. 102 Water Science and Engineering Laboratory, 660 N. Park St. 12:05 p.m. Contact: Jeff Houser, 262-3088 or jnhouser@students.wisc.edu.

(continued on the other side)

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SATURDAY, NOVEMBER 25

Arboretum Volunteer Work Day. The "Marsh Connection." Drop in activity. Meet at Margaret's Council Ring, near the west end of the McKay Center parking lot (enter from Seminole Highway). 9:00 a.m. - 12:00 noon. Contact: 263-7760.

SUNDAY, NOVEMBER 26

Arboretum Walk. "Preparing for Winter." Learn how small mammals, birds, and plants survive Wisconsin winters. Meet at Margaret's Council Ring, just south of the visitor center at the edge of Curtis Prairie. 1:00 - 2:30 p.m. Contact: 263-7888.

* *

Environmental Events is distributed weekly during the academic year by the Institute for Environmental Studies at UW-Madison. **To subscribe**, send your email address with your request to env_events@mail.ies.wisc.edu.

To list a UW campus event in an upcoming issue, send a brief description with the date, time, location, sponsor, and contact phone number/email address to Environmental Events, IES, 15 Science Hall. Submissions are also accepted by email (env_events@mail.ies.wisc.edu) and fax (262-0014.) For questions or further information, call 263-3185. **DEADLINE: Every Tuesday at 10 A.M. for events of the following week.**

The calendar is available 24 hours a day on the Web at http://www.ies.wisc.edu/e-events.

For a schedule of upcoming environmental conferences held locally, around the country, and around the world, check out IES's on-line newsletter, "InterView," at http://www.ies.wisc.edu/InterView/dates.htm.

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A service of the Institute for Environmental Studies

ENVIRONMENTAL EVENTS

at the University of Wisconsin-Madison

DECEMBER 4 - 10, 2000

Please contact sponsoring departments/organizations for details about specific events.

MONDAY, DECEMBER 4

Earth System Science Seminar. "Application of Remote Sensing to Environmental Issues: Geostationary Satellite Fire Detection and Applications." Elaine Prins, Honorary Fellow, Space Science and Engineering Center, UW-Madison. 811 Atmospheric Oceanic and Space Sciences Building, 1225 W. Dayton St. 12:05 p.m. Contact: Jon Foley, jfoley@facstaff.wisc.edu.

TUESDAY, DECEMBER 5

Land Resources Forum. "Natural History of Picnic Point Marsh." Jill Baum, Graduate Student, Land Resources, UW-Madison. 64 Science Hall. 12:00 noon. Contact: Katy Werner, 262-2593 or kjwerner@students.wisc.edu.

Geology and Geophysics Lecture. "Land Subsidence in the United States." Steve Ingebritsen, GSA Birdsall-Dreiss Lecturer, U.S. Geological Survey, Menlo Park, California. AB20 Weeks Hall. 3:30 p.m. Contact: Jean Bahr, 262-5513 or jmbahr@geology.wisc.edu.

Wisconsin's Environmental Decade (WED) Presentation. "Deadly Power: The Social and Environmental Impacts of the Proposed Arrowhead-Weston Transmission Line." Claire Schmidt, Program Assistant, WED; Ricardo Jomarron, Media Coordinator, WED. 3250 Law Building, 975 Bascom Hill. 6:00 p.m. Contact: Claire Schmidt, 251-7020 or decade@chorus.net.

WEDNESDAY, DECEMBER 6

International Agriculture Seminar. "Opportunities for International Research and Training: The Case of Biotech and Natural Resources in Thailand." Kenneth Shapiro, Associate Dean, International Agricultural Programs, UW-Madison; Tom German, Professor, Plant Pathology, UW-Madison; Kevin McSweeney, Director, School of Natural Resources, UW-Madison. 473 Plant Sciences/Horticulture/Moore Hall. 12:05 p.m. Contact: Martha Rosemeyer, 265-9367 or merosemeyer@facstaff.wisc.edu.

Soil Science Seminar: Current Issues in Soil Fertility. "Public Policy Aspects of Nutrient Management." Jenny Erickson, Research Assistant, Department of Soil Science, UW-Madison. 270 Soils Building. 3:30 p.m. Contact: Carol Duffy, cjduffy@facstaff.wisc.edu.

THURSDAY, DECEMBER 7

Urban and Regional Planning Brown Bag. "An Introduction to 1000 Friends of Wisconsin: The Organization, Programs, Success Stories (and professional challenges and opportunities in the non-profit world)." Andrea Dearlove and Dave Cieslewicz, 1000 Friends of Wisconsin's Land Use Institute. 208 Music Hall. 12:00 noon. No contact listed.

Environment and Development Advanced Research Circle Lecture. "Anti-democratic Environmental Decentralization and the Re-emergence of Chieftaincy in Africa." Jesse Ribot, World Resources Institute. 206 Ingraham Hall. 12:00 noon. Contact: Eric Carter, 262-6523 or edcarter@students.wisc.edu.

(continued on the other side)

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THURSDAY, DECEMBER 7 (CONT'D)

Botany Colloquium. "Evolution of Flower-Color Determining Genes in Morning Glories." Michael Clegg, University of California, Riverside. B302 Birge Hall. 4:00 p.m. Contact: Loraine Pilgrim, 262-1057.

FRIDAY, DECEMBER 8

Zoology Colloquium. "Interactions Among Multiple Environmental Drivers: Phytoplankton Responses to Changes in Colored Dissolved Organic Matter and Nutrient Input." Jen Klug, Graduate Student, Zoology, UW-Madison. 168 Noland Hall. 3:30 p.m. Refreshments served in Rm. 163 at 3:10 p.m. Contact: Tony Ives, 262-1519 or arives@facstaff.wisc.edu.

SATURDAY, DECEMBER 9

Arboretum Volunteer Work Day. Wingra Oak Savanna Project. Drop in activity. Meet at the parking lot at the intersection of Monroe St. and Arbor Dr.; the Madison city bus route 3 stops at the corner of Monroe St. and Glenway St., about 3 blocks west of the meeting location. 9:00 a.m. - 12:00 noon. Contact: 263-7760.

* *

Environmental Events is distributed weekly during the academic year by the Institute for Environmental Studies at UW-Madison. **To subscribe**, send your email address with your request to env_events@mail.ies.wisc.edu.

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News Releases

UNIVERSITY OF WISCONSIN MADISON

FOR IMMEDIATE RELEASE
May 24, 2000
CONTACT: John D. Lenters (608) 265-8720; jlenters@facstaff.wisc.edu (Note: Until June 6, messages for Lenters can be left at the following number: (608) 278-1680. He will be checking messages several times a day.)

SHIFT IN GREAT LAKES 'SEASONS' MAY REFLECT WARMING TREND

CORNWALL, Ontario - Scrutinizing a 139-year record of Great Lakes water levels, a University of Wisconsin-Madison scientist has discovered a dramatic shift in the seasonal changes in water levels on the Great Lakes.

The finding, reported here today, May 24, at a meeting of the International Association of Great Lakes Research by UW-Madison climatologist John D. Lenters, is further evidence that the effects of global warming on natural systems could be far reaching and significant.

"The bottom line is that over this 139-year period, the annual rising and falling of Lakes Ontario and Erie has gotten earlier" by about a month, Lenters says describing results of an analysis of long-term trends in Great Lakes water levels.

The findings, Lenters says, also show that the range of Lake Ontario's "annual cycle" increased from 17 to 22 inches, a change in volume equivalent to 90 billion cubic feet of water. While Lake Erie does not show the same increase, the one month early arrival of seasonal high and low water levels mirrors that of Lake Ontario.

In the Great Lakes, explained Lenters, there is an annual ebb and flow of lake levels influenced by such things as precipitation, snowmelt and evaporation over the Great Lakes basin. In the spring and summer, lake levels rise reflecting such things as precipitation and spring snowmelt. In the fall and winter, lake levels recede as a result of evaporation of the relatively warm lake water.

These shifts, says Lenters, are essentially hydrological representations of the seasons, and "what I am finding is a shifting of the seasons."

These shifts are independent, Lenters says, of annual variability in lake levels that may reflect, for example, a drought year, or a year when rainfall exceeds normal precipitation averages.

"At this time, the most likely explanation for the observed trends appears to be earlier spring snowmelt in association with higher springtime temperatures in the Great Lakes region," Lenters says. "Climate is almost definitely responsible, but exactly how it is responsible is unknown."

Lenters' analysis was made using records of monthly mean lake levels from 1860 to 1998 from four stations around the Great Lakes, including stations along Lakes Superior, Huron, Ontario and Erie. Lake Michigan is included in the study as part of Lake Huron since the two lakes are hydraulically connected.

Large shifts in the water cycles of Lakes Superior and Michigan-Huron were also found, but for fewer months of the year. The result is a different and less dramatic seasonal shift for those lakes, says Lenters.

"It is not clear why Lakes Superior and Michigan-Huron are behaving differently, but it may be

related to differences in regional climate, or the fact that Erie and Ontario are the furthest downstream lakes.

"If warming continues, we may begin to see the same consequences in Lakes Superior, Michigan and Huron," he says. "For example, following the warm El Niño winter of 1997-1998, all five Great Lakes reached their annual maximum nearly two months earlier than normal."

It is likely that the changes observed in the lakes are part of a larger systemic change spurred by increased levels of carbon dioxide in the atmosphere and resulting warming trends, according to the Wisconsin climatologist. Similar long-term shifts in lake ice and river flow in the Great Lakes and Upper Mississippi basins have already been observed by scientists.

Lenters is a staff scientist in the Climate, People and Environment Program of the UW-Madison Institute for Environmental Studies. His work was supported by a grant from NASA's Upper Midwest Regional Earth Science Application Center.
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Terry Devitt, 608/262-8282, trdevitt@facstaff.wisc.edu

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1984

Geographic Analysis Center for

IES Center for Geographic Analysis

James L. Clapp, Director

Concern in North America about the quality of our information about the land and the effectiveness with which our public institutions acquire and use this information has been voiced since the middle of the last century. But awareness of the magnitude of economic and social costs incurred by continued public and private reliance on outmoded arrangements has surfaced only in the last two decades.

Although these costs have been felt in many areas of human activity, they are most evident in the processes of land transfer, property assessment, land use regulation, and, perhaps of overriding importance, in the quest for a better understanding of the land tenure institution itself. These issues were specifically identified by the National Research Council Panel on a Multipurpose Cadastre in 1980.

Multipurpose Cadastres

The IES Center for Geographic Analysis (CGA) has begun to address the complicated technical and institutional problems associated with the development of multipurpose cadastres. The Institute for Environmental Studies sponsored a semester-long seminar in 1984 that brought engineers, lawyers, foresters, urban planners, economists, conservationists, cartographers, administrators from a variety of federal agencies, and other specialists to campus from throughout North America to share their perspectives on cadastral issues with the university community.

Faculty affiliated with CGA have joined colleagues in the Departments of Landscape Architecture, Civil and Environmental Engineering, and Geography; the Law School and Land Tenure Center; and other parts of the university to address, in depth, the issues raised in the seminar.

Land and Water Interactions

CGA's interests extend beyond cadastres to embrace all geographic aspects of the man-environment system, particularly land and water interactions. One of the center's first projects was a complex investigation of nearly every public concern in the Lake Superior region of Wisconsin and neighboring states. That project produced more than 15 reports and papers on the region's forestry, mining, recreation, shoreland property use, regional economics, cultural heritage, and other topics.

The center also has studied historical fluctuations of Great Lakes water levels, the sensitivity of major United States watersheds to changes in climate, economic aspects of U.S.-Canadian efforts to improve the water quality of the Great Lakes, and economic forces influencing wheat producion in the northern Great Plains since 1950.

Faculty Affiliated with the Center for Geographic Analysis

Professors James L. Clapp, James C. Knox, and Bernard J. Niemann Jr.; Associate Professor Waltraud Brinkmann; and Assistant Professor Nicholas R. Chrisman

For More Information

Contact the IES Publications and Information Office, 120 WARF Building, 610 Walnut St., Madison, WI 53705, (608) 263-3185

IES Factsheet 4 January 1985
Institute for Environmental Studies
University of Wisconsin-Madison

Settlement turned northwest sands into forest

Ecology

Findings provide frame of reference for Wisconsin ecosystem management

George Gallepp

A study of vegetation changes in Wisconsin's northwest sand country reveals a dramatic decline in pine barrens, pines and open habitats, and an increase in oak and aspen forests over the past 140 years.

David Mladenoff and Volker Radeloff of UW-Madison and Mark Boyce, formerly with UW-Stevens Point, studied the region, which covers 1,700 square miles that stretch northeast from Polk County almost to Bayfield. The forest scientists documented changes in the region, once an enormous island of prairie, savanna and pine forests on very poor soil surrounded by a sea of dense forests on better soils.

"We believe wildfires created a unique ecosystem and areas of open habitat in the northwest sands before settlement," says Mladenoff, a forest landscape ecologist in the College of Agricultural and Life Sciences.

"The Wisconsin Department of Natural Resources has made the northwest sands one of its first projects for managing an entire ecological region," says Gerald Bartelt, chief of the DNR's wildlife and forestry research section. Pine barrens are found in only a few places across the country and contain a rare mix of ecological communities that are disappearing because of fire suppression and settlement, according to Bartelt. Many of the species that are adapted to the habitat and landscape patterns that fires once created are declining. In Wisconsin, those animals include the sharp-tailed grouse, many grassland birds, and the endangered Karner blue butterfly.



University forest scientists documented changes in the 1,700 square miles that stretch northeast from Polk County almost to Bayfield. Areas like this in the Chequamegon National Forest, once were an enormous island of prairie, savanna and pine forests on very poor soil. Wildfires created a unique ecosystem and areas of open habitat in the northwest sands before settlement brought changes. Photo © Jeff Miller 1995

The U.S. Environmental Protection Agency has funded a project to involve area citizens, interest groups, forest managers and scientists in a series of meetings to decide how best to manage the region to meet economic and conservation goals.

"Our findings provide an important frame of reference for ecosystem management in the northwest sands," says Mladenoff. "They are one source to consider as resource managers meet with the public and landowners in northwestern Wisconsin to discuss management of the region."

The researchers based their assessment of pre-settlement vegetation on surveyor records from the U.S. General Land Office. During the surveys, completed between 1847 and 1859, surveyors established survey posts at corner locations on a grid at half-mile intervals. They marked and recorded the species, location and size of two to four "witness" trees near each post. The ecologists analyzed those data and compared the results to the makeup of the forests in 1987, which they determined by analyzing satellite information.

Before settlement, the northwest sands were prone to drought, frequent fires and epidemics of the jack pine budworm, an insect that can kill thousands of acres of trees during an outbreak, Radeloff explains. Those conditions produced a shifting mosaic of grasslands, shrubs, and pine and oak species that are adapted to fires.

Loggers began removing the region's white and red pine for timber in the 1860s. Farmers settled soon after that. The loggers returned to harvest the jack pine for pulp about 1910. During the Great Depression, much of the land was abandoned when former owners couldn't pay their tax bills. Large areas were reforested with jack pine plantations and became county, state, federal or industrial forests. Today the northern portion of the northwest sands is part of the Chequamegon National Forest; the central portion contains extensive county forests and private industrial forests; small private holdings and county forests are common in the southern section.

"Although jack pine remains the most abundant species in the northwest sands, it has decreased by 30 percent despite widespread jack pine reforestation in the 1930s," Radeloff says. "Red pine has decreased by 80 percent, while oak abundance increased by 360 percent and aspen by 570 percent." The trends are likely to continue, he says, unless people agree on actions aimed at restoring the mix of vegetation types once present.

"One of our goals was to consider management options that might restore those communities," Mladenoff says. "We know how to manage for dense forests by suppressing fires and we know how to create prairies with prescribed fires. The really tricky question is how do we include management alternatives for the types of open forests and savannas that were present in the northwest sands at settlement."

For his research on the northwest sands, Radeloff will receive an Outstanding Doctoral Research Award from the International Union of Forestry Research Organizations. He will receive the award — one of only seven presented every four years — during the opening ceremony of the organization's meeting in Malaysia in September. ■

Seeds of growth: Book describes UW's role in high-tech firms

Terry Devitt

From compounds for gene therapy to promising new drugs for treating cancer and osteoporosis, the commercial prodigies of the university's research enterprise have altered the state's economic landscape, creating jobs and wealth that rival the contributions of Wisconsin's most important industries.

Technology transfer — whether in the form of patents, companies spun off of university laboratories or products or processes that are the result of faculty invention — is nothing new at UW-Madison, having taken place in one form or another for more than 100 years.

But over the past 40 years, the phenomenon has blossomed into what may be the state's biggest single source of high-tech companies, according to a new study published by the Office of University-Industry Relations. Moreover, the rate of growth of UW-Madison-inspired companies reflected in the study has increased sharply over the past 15 years with an average of 13 new firms being founded each year for the last five years.

"This is a significant growth rate. The question is, can we sustain it and what can we do to encourage those companies to grow," says Philip Z. Sobocinski, the author of the study released this month in the form of a book, "Creating High-Tech Business Growth in Wisconsin."

The book documents the rise of university technology transfer as an economic force in Wisconsin, dissecting the complicated process of moving ideas from the lab to the private sector. Moreover, it provides intriguing profiles of 178 state companies that sprang from the fertile minds of university faculty, staff, students and alumni.

Some of the companies, like Red Dot Foods, are long gone, bought up by competitors, but many have demonstrated remarkable staying power and others, especially those in the area of biotechnology, are poised to become economic forces that promise to shape the state's economy for the next 100 years.

The new book from UIR provides the most insightful and complete picture of the technology transfer enterprise at the state's largest research institution, according to Provost John Wiley. "Moving ideas and new knowledge from university laboratories to the private sector is no longer a side show," he says. "It is a routine part of the way we do business now, and this study provides ample documentation that we're doing it very well."

Wiley says Sobocinski's book is a valuable work that helps to better depict the full scope of research at a modern university. "Not everyone could do something like this," he says. "We're fortunate to have someone who knows the university research landscape so well, and how that all feeds into the private sector where the research can be developed into products and processes that benefit society."

Sobocinski is an associate director of UIR and a well-connected observer of the movement of new technology from the lab to the private sector. His observations, backed by impressive sources of data and careful statistical analysis, portray an economic force that is born in the seemingly arcane and impenetrable world of basic academic science. What Sobocinski's analysis shows, in fact, is an accelerating trend of convergence, with basic science increasingly fueling our economic well being and shaping many critical industries.

"It all starts with basic research," says Sobocinski. "It's the wellspring of knowledge" and its influence on our modern economy is undeniable.

Take, for example, the world of vitamins. One hundred years ago vitamins were unknown. Following their discovery at UW-Madison and elsewhere, industry was quick to capitalize on the new knowledge to fortify foods and, in the process, eliminate a raft of diseases that were the result of diets deficient in vitamins.

Today at UW-Madison, scientists like biochemist Hector DeLuca continue to pry loose the secrets of vitamins. From DeLuca's lab alone, a flood of discoveries related to vitamin D has yielded not only new drugs to treat such diseases as osteoporosis, psoriasis and cancer, but also more than 150 patents and two Wisconsin spin-off companies, Bone Care International, Inc. and Tetrionics, Inc.

It is companies like these, according to Sobocinski's study, that now employ nearly 7,000 people in Wisconsin in high-paying, technically demanding jobs. That number, says Sobocinski, could grow dramatically in the next few years as Wisconsin's biotechnology industry matures and some companies experience dramatic, near exponential growth. ■

5/18/88 Enviro Stud

-- D. DAVID MOYER, adjunct associate professor of agricultural economics and environmental studies, is president-elect of the Urban and Regional Systems Association. He will chair the organization's conference in Los Angeles this summer.

-- HOWARD D. WEINBROT, Vilas and Ricardo Quintana Professor of English, was awarded a John Simon Guggenheim Memorial for 1988.

Guggenheim awards are made on the basis of unusually distinguished achievement in the past and exceptional promise for future accomplishment. Weinbrot is studying the rise of British literature from Dryden to Ossian.

-- DONALD. W. KERST, professor emeritus of physics, has been named recipient of the 1988 Robert R. Wilson Prize. The $5,000 prize was awarded by the American Physical Society.

Kerst was cited for his pioneering work that led to many of the most important developments in the field of accelerator physics in the 1950s.

-- GINNY MOORE KRUSE, director of the Cooperative Children's Book Center, has won the Christopher Lathem Sholes Award from the Council for Wisconsin Writers, Inc.

She was honored for her outstanding service to writers and readers and her support and encouragement of Wisconsin authors who write for young people.

-- ALI A. SEIREG, professor of mechanical engineering, has been awarded the 1987 Kuwait Prize for his work in the area of applied sciences.

The award, considered the most prestigious in the Middle East, includes a gold medal, commemorative plaque and a $38,000 cash prize. Seireg was cited for his work in the fields of mechanical engineering and biomechanical science.

-- AMY E. LINSKY and MICHAEL J. CHAPMAN are winners of two of the most prestigious awards presented to undergraduates at UW-Madison, the Theodore Herfurth Awards.

The awards are made each year to a senior man and a senior woman. Winners

SHORTCUTS

To report news

Faculty and staff members are encouraged to report honors, awards and other professional achievements. Coverage suggestions and feedback also are welcome.
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LEADERSHIP

Finalists named for diversity position

Three finalists have been named for the position of assistant vice chancellor for workforce equity and diversity:

Luis A. Piñero, interim assistant vice chancellor/director of the Equity and Diversity Resource Center. Piñero joined the EDRC in 1982, when it was known as the Office of Affirmative Action and Compliance.

Andrea L. Turner, executive director for the University of Minnesota Board of Regents. Turner was previously employed as a special assistant to the chancellor and also as executive director of multicultural affairs at UW-Stevens Point.

Vicki C. Washington, director of Equal Opportunity and Diversity Programs and assistant to the chancellor, University of Wisconsin-Extension. Washington held several affirmative action-related positions in the public and private sector in North Carolina before joining UW-Extension.

The assistant vice chancellor for workforce equity and diversity promotes increased employee diversity throughout the university; oversees the Equity and Diversity Resource Center; and ensures campus compliance with affirmative action/equal employment opportunity regulations.

The opening was created when Greg Vincent accepted a position last summer as vice provost for campus diversity at Louisiana State University.

University officials expect to fill the position in late January or early February.

LEARNING

IES starts student exchange

New study-abroad opportunities are in the works for next fall, when the Institute for Environmental Studies will offer its first trans-Atlantic exchange program.

The U.S. Department of Education has awarded IES a three-year, $179,598 grant to promote student exchanges in comparative ecosystem studies between three American universities and three in Europe.

The European institutions are the University of Bayreuth, Germany; the Autonomous University of Barcelona, Spain; and the Technical University of Lisbon, Portugal. The other two American schools are the University of Missouri-Columbia and San Diego State University.

Enhancing interdisciplinary education in sustainable ecosystems management is the primary goal of the exchange program. Among other things, it will help students learn to work across agency and organizational lines, bridge academic disciplines and bring cultural sensitivity to their career endeavors in environmental fields.

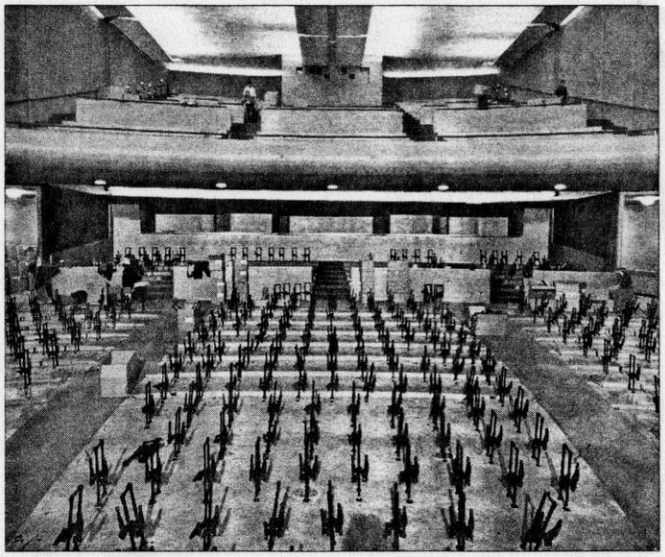
Why Files launches course online


Banfield

A new university online science course in geology is based on the content of the popular Why Files Web site, http://whyfiles.news.wisc.edu. The new course, Geology 115, The Science Behind the News — The Universe Around Us, will be taught for the first time next semester.

Intended for non-science majors, the course is the brainchild of Jill Banfield, a professor of geology and geophysics and the recent recipient of a prestigious MacArthur fellowship or "genius award." Banfield says mining the content of The Why Files — a site that has sought to demystify for popular audiences everything from cloning to earthquakes — would provide a natural matrix for an online science course.

"It's important that people are introduced to science and that content is accessible to the average person," Banfield says. "The Why Files does make science accessible in a very friendly way."



Take our seats, please
Workers began reinstalling Wisconsin Union Theater seats in the first complete renovation of seating since the theater opened in 1939. The 1,300 chairs were removed last month and taken to a Michigan company for restoration. Workers will be working feverishly to reinstall the seats before the first performance scheduled later this month. The original color of the seats, called Titian, will be maintained to preserve historical accuracy.
Photo: Jeff Miller

OUTREACH

Anti-smoking effort reaches out statewide

A five-part plan, including a toll-free stop-smoking helpline and a program to prevent smoking among adolescent girls, will send $2 million in state tobacco settlement money to communities around Wisconsin, Medical School officials say.

The school's Center for Tobacco Research and Intervention (CTRI), a national leader in research efforts to help people stop smoking, received $2 million in the recently passed state budget for tobacco-control efforts. The funds are part of the settlement negotiated with major tobacco companies, which were sued by Wisconsin and many other states.

The five-part plan includes an annual statewide survey tracking tobacco use in Wisconsin; a statewide partnership with the Wisconsin Women's Health Foundation to help prevent smoking among young women; a statewide educational and outreach program that includes Milwaukee, Green Bay, Rhinelander, La Crosse and Madison; a "mini-grant" program that will support local research efforts in smoking cessation and prevention; and a toll-free helpline offering counseling to smokers trying to quit.

Adds Director Michael Fiore: "CTRI will work collaboratively with the Wisconsin Department of Health and Family Services, the new state Tobacco Control Board and other entities committed to these efforts."

RESEARCH

NASA satellite technology to be developed here

Building on a tradition that dates back 35 years to the first geostationary weather satellite, UW-Madison's Space Science and Engineering Center (SSEC) has been selected to help NASA develop a new generation of satellite technology that promises to greatly improve weather forecasting and the monitoring of atmospheric pollutants.

NASA selected SSEC as a key partner to help design and build an instrument known as GIFTS (Geostationary Imaging Fourier Transform Spectrometer).

SSEC will receive $10 million over five years from NASA to design and calibrate GIFTS and to write the software codes that will make the instrument's data useful to forecasters and scientists. Based in part on technology developed at UW-Madison, GIFTS will be a part of NASA's Earth Observing Mission 3 and will be launched into orbit sometime in 2003.

GIFTS, according to SSEC Interim Director Hank Revercomb, will be capable of dissecting the atmosphere in a far more detailed way than current geostationary weather satellites by looking at the weather across a wide swath of the spectrum of energy that the Earth radiates into space. GIFTS also will permit forecasters to greatly hone the accuracy of three-day weather predictions and extend the duration of forecasts up to five days.

COMMUNITY

Y2K OK: No problems reported

Campus facilities and utility systems did not experience any known Y2K problems, the Physical Plant reports.

Thirty Physical Plant employees and staff members worked overnight Dec. 31 monitoring various campus systems, building equipment, power



on Campus

October 7-October 21, 1999

Campus CALENDAR



Takacs Quartet opens series
Recognized as one of the world's leading string quartets, the Takacs Quartet (pronounced TAH-kahsh) performs at Wisconsin Union Theater Friday, Oct. 8, at 8 p.m.

Since its founding in 1975, the Takacs Quartet has embodied the central European quartet tradition and is closely identified with the works of Haydn, Mozart, Beethoven and Bartok. Tickets: $27 ($26 for union members and $13 for UW-Madison students), available at the Union Theater Box Office.

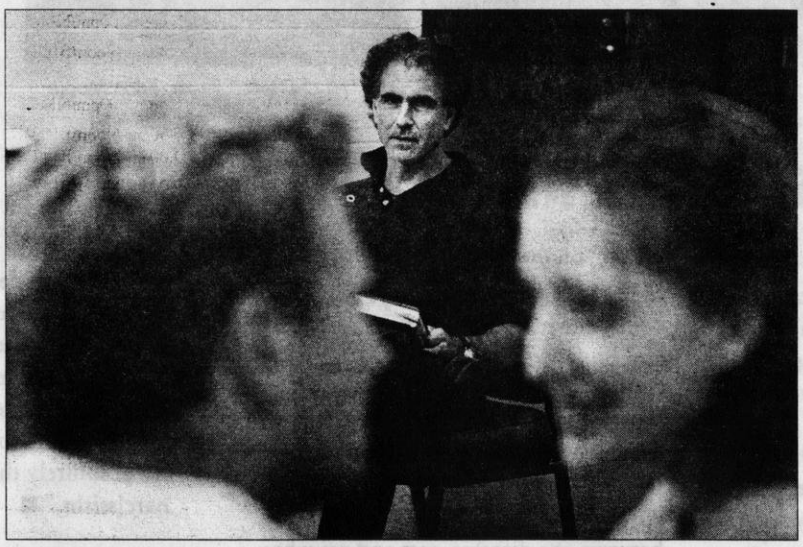


Oboist, friends to perform
University oboist Marc Fink and friends will appear Friday, Oct. 15, in Mills Concert Hall, Humanities, starting at 8 p.m. The performance is part of the Faculty Concert series that continues throughout the semester. Tickets: $7 general, $5 seniors/non-UW-Madison students. Free to UW-Madison students with valid university ID.

Guitarist is guest artist
Guest artist Stephen Robinson will play a guitar concert for free in Morphy Hall, Humanities, starting at 7:30 p.m. Thursday, Oct. 14. The performance is part of the Guest Artist Series sponsored by the School of Music.



listings begin on page ten



Larry Lane, artist in residence, directs two cast members during rehearsals of Arthur Miller's "All My Sons." Photo: Brian Moore

Director personifies life in the theater

Barbara Wolff

As the University Theatre cast of "All My Sons" embarks upon another week of rehearsal, the actors are engaged in discovering exactly where their characters stand in relation to one another.

"There's a lot of subtext here. Often it's what's between the lines that creates the meaning," says guest director Larry Lane. By way of example, he cites a passage in which the wife of a morally ambiguous manufacturer talks around what she really thinks and feels to justify her husband's arguably unintentional shipment of defective airplane parts during World War II.

"It's almost a mad scene," Lane says. "The lines seem like nonsequiturs, but on examination you realize that the character, Kate, is protecting herself and her family. It presents quite a challenge for the actor."

In this case, the actor grappling with those challenges is Patricia Boyette, UW-Madison associate professor of theatre and drama, who will be playing the role in the UT production. She says that working with Lane has given her fresh insights and professional growth.

"It allows me to stretch my craft, as an artist and as a teacher. The more I hone my own skills, the more I have to share with my students. 'All My Sons' is a strong ensemble piece, and the collaboration between the director, cast and crew has been electric. The opportunity the university affords us to combine the professional and the academic results in some of the richest and most rewarding work we can do," she says.

There are seven students in the "All My Sons" cast. Lane credits their strong theatrical background for generating a great deal of the aforementioned electricity.

"They are extremely well-trained. They know how to collaborate," he says. "I haven't found the kind of competitiveness you sometimes see in some of the other drama schools."

Lane comes to Wisconsin from New York, where he is now a freelance writer and director. Before that, he spent 12 years as the founding artistic director of the New Repertory Theatre outside Boston. His 1996 adaptation of the Herman Melville novella "Bartleby the Scrivner" earned rave reviews in London and Edinburgh.

Lane is the first to admit his success hasn't made him wealthy or famous. Nonetheless, it has made him happy: "Life in the theater is good. Each day in rehearsal you get to enter the mind of a Chekhov or a Shakespeare, and live and work there for a while. The process always demands that you look more acutely and feel more deeply."

Lane adds that the artist must be willing to share those sensations.

"Good theater is generous," he says. "We all have a responsibility to others in the production and the audience. It's absolutely the opposite of narcissism." ■

The University Theatre production of Arthur Miller's "All My Sons" opens Friday, Oct. 15, and runs through Saturday, Oct. 30, at 7:30 p.m. in Mitchell Theatre. Tickets: $12 general/$9 students. Vilas Hall Box Office: 262-1500.

European delegate to speak about trade conflicts

Ronnie Hess

John B. Richardson, deputy head of delegation in the U.S. for the European Commission, plans to discuss recent trade disputes between the U.S. and the European Union in an upcoming speech.

Richardson replaces Hugo Paemen, the European Commission ambassador to the United States, who will be unable to make his previously announced appearance. Richardson will speak at 4 p.m. Tuesday, Oct. 19, in the Biotechnology Center auditorium, 425 Henry Mall. Information: 262-5590.

While the EU is a leading trade partner of the United States, trade tensions between the two have increased recently. Earlier this year, the U.S. retaliated against an EU ban on imports of hormone-treated American beef, imposing a punitive tariff on imports of foie gras and other European-made products.

Richardson is no stranger to trade disputes. He is part of the negotiating team who works with Congress and the White House on a wide range of issues and meets regularly with other European ambassadors to Washington.

While in Madison, Richardson will meet with state and university officials, including faculty, staff and students associated with European Studies programs. His visit is being co-sponsored by the European Union Center, the Center on German and European Studies, the European Studies program, and the Center on World Affairs and the Global Economy (WAGE). ■



Larry Lane, artist in residence, directs two cast members during rehearsals of Arthur Miller's "All My Sons." Photo: Brian Moore

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Environ.

Who knew?

Eileen Gilligan

Q. Where does our school song, "Varsity," come from and why does everyone wave at the end?

A. A UW-Madison music instructor, Henry Dyke Sleeper, arranged the music (composed by Gounod, who also composed the opera "Faust"), wrote the lyrics and published the hymn just over 100 years ago. It was then known as "Toast to Wisconsin" or "Varsity Toast," and through the years has been shortened to "Varsity," according to Robert Gard, a former UW professor who wrote the book, "University Madison U.S.A."

It actually can be shouted as a cheer, notes Art Hove, another UW historian. (The "U rah rah! Wisconsin!" makes a lot of sense as a cheer, too.) The wave came courtesy of longtime band director Ray Dvorak, now retired. He witnessed a University of Pennsylvania crowd waving their hats as they sung their alma mater after a particularly painful defeat to the University of Illinois' football team. Then an assistant to Illinois' band director, Dvorak said he took the idea and "stuck it in my back pocket."

In 1934 at Madison, Dvorak cued the students to wave their hats during the end of "Varsity" after a speech by then-President Glenn Frank. And the wave caught on.

By the way, "varsity" actually means "university." According to Gard's book, "It comes from the English pronunciation of 'Uni-var-sity.'" Check your dictionaries.

Q. What does the university's official seal mean?

A. Well, no one knows for sure.

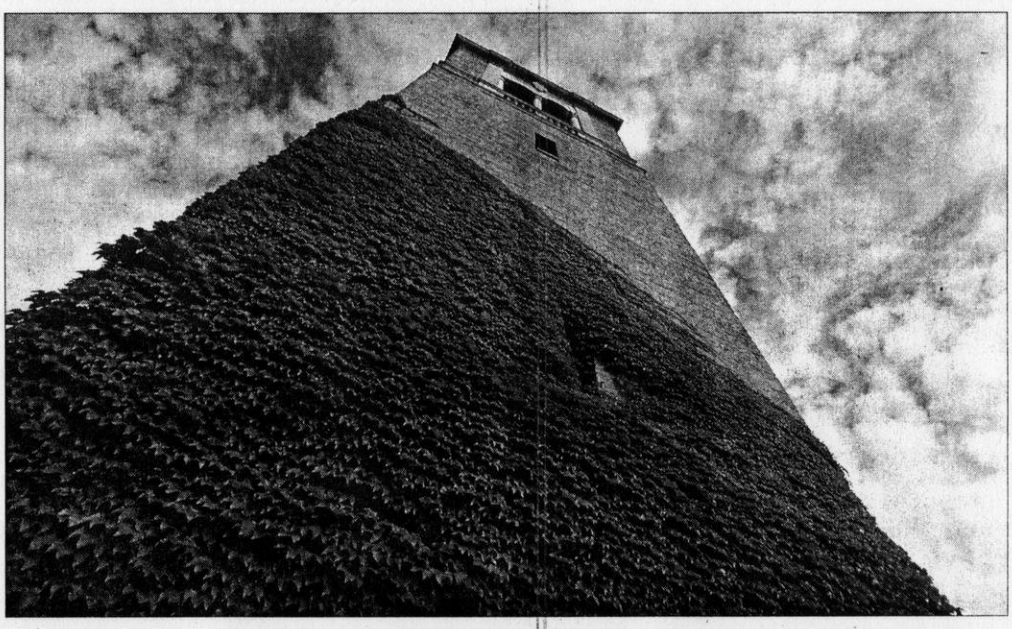
According to Art Hove, retired historian extraordinaire, the president who commissioned the seal never explained what its parts meant. Shortly after taking the job in 1849, John H. Lathrop was ordered by the Regents to create a university seal. While they waited, the American eagle side of the quarter was designated the official corporate seal.

In 1854, the Regents adopted its own seal. But Lathrop never explained what the seal meant, specifically the eye and the rays.

Much debate has ensued in the last 145 years about it, according to Hove's book, "The University of Wisconsin: A Pictorial History."

One theory is that the eye represents a Roman god, Hove says. But the rays? "Everywhere in the universe there's a manifestation of some spirit. From those spirits around us, we derive the light which we call knowledge," he adds.

The phrase "Numen Lumen," which sounds like it could have been uttered by Jerry Seinfeld on his TV sitcom, literally means god, our light, Hove says.



Ivy tower

Shoots climb Carillon, swath other sites

Jeff Iseminger

This ballerina arches and soars and swoops over walls, showing with slow-motion elegance how graceful it can be. This star of brick and mortar can change a building from a box to a structure with botanical character.

By performing with such élan over centuries, it has climbed into the American public's image of old English universities. Aptly enough, the root of its name is Old English, "ifig." From there it is just an etymological hop to the Middle English "ivi" and then a mere skip to the modern English "ivy."

Most of the ivy you see on UW-Madison buildings is either Boston or English ivy. Both typically have glossy green leaves with three to five lobes and inky-black berries. At UW-Madison, the leaves turn a soft burgundy in autumn and in milder climes stay evergreen.

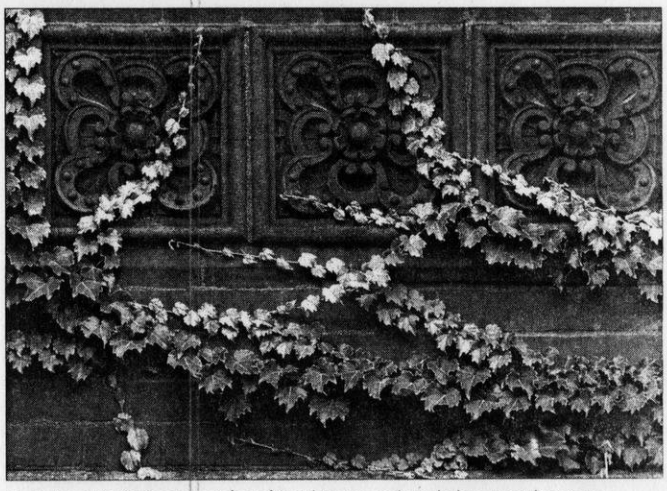
As it grows, ivy inches across a wall every which way. These fingers of ivy are freed by the wall from worrying about uprightness, so they roam in search of unclaimed bricks and sunlight.

Ivy has roamed through history, too. It was a favorite of Dionysus (also known as Bacchus), the god of wine and an orgiastic religion in ancient Greece and Rome. Paintings of bacchanalian feasts show guests wearing wreaths or garlands of ivy.

But the same plant venerated by debauchees was worn by early Christians to celebrate the birth of Jesus. And the poet Byron called it "the garland of eternity." Ivy, it seems, is what you make of it.

It was planted by Thomas Jefferson at his Monticello home in Virginia and by founders of early American universities (later prompting the name Ivy League). But it really began to get a grip on America in the 1870s, when tourists came back from Britain with photos of ivy-covered campuses and castles.

Today ivy abounds in the United States, gracing everything from china to wallpaper to book jackets. And since this is America, there's a group for it, too: the American Ivy Society (http://www.ivy.org).



Ivy clinging to the Carillon Tower in front of Social Science ripples in the late summer breeze, top, and shoots weave across terra cotta tiles at Science Hall, above. Photos: Jeff Miller

Though UW-Madison isn't as ivy-covered as some other campuses, you can find some fine effusions here. For example, ivy blankets much of Memorial Carillon in front of the Social Science Building. On a sunny day when a breeze is blowing, stand in front of the magnificent patch on the carillon's west side.

This pulsing organism shimmers in the sun and ripples in the wind. Like quaking aspen, ivy is easily animated by air — a green excitability that somehow soothes the observer, a tremor that somehow calms.

Then walk downhill to the south side of Science Hall, where a single young ivy plant has started its climb. Luminous light green shoots curve over terra cotta tiles and the pinkish-gray foundation of volcanic rhyolite, creating a palette as rich as it is rare. The pairing of ivy and rhyolite shows what quiet visual glory comes from combining the botanical and the geological.

Ivy on walls is indeed a ballet, and the curtain is constantly up. ■

A single young ivy plant looks deceptively delicate as it starts its initial upward creep. But left unpruned, it can evolve into a lattice of vines that gives a building a big horticultural hug.

Too rough a hug, say some. Grounds Supervisor Gene Turk knows of no official policy on ivy, but his staff has at times been asked to tear it out from buildings.

One reason for this ivy-antipathy is vine vigor, which can lead to occluded windows and smothered air conditioners. That problem is prunable, but ivy is disliked by some for another reason: how it hangs on for dear life.

The climbing shoots put out small rootlets to help them adhere to the wall. They especially love the texture of bricks and rocks, which offer up tons of microscopic handholds.

Ay, there's the hug, some contend, because the rootlets penetrate mortar in an overly enthusiastic embrace. Even if the rootlets don't weaken mortar, they pull some of it out if the plants are torn from the wall. In short, walls and ivy don't mix.

Not so, says Peter Q. Rose, author of the book "Ivies." He flatly asserts that the rootlets have no penetrative power. "On sound walls [without flaking bricks or crumbling mortar]," he writes, "ivy is harmless, indeed beneficial, keeping them dry in winter and cool in summer — an economical form of insulation."

Environ Studies, Inst. for

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University of Wisconsin-Madison

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For Immediate Release
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bniemann@facstaff.wisc.edu

DANE COUNTY EXEC ANNOUNCES LAND USE PLANNING PROJECT

The kickoff of an innovative project—"Shaping Dane's Future: Community Based Land Use Planning Demonstration Project"—will take place at 1:30 p.m. Sept. 8 in Verona, which has been selected as the pilot site for the project. The project will explore ways to engage Dane County citizens in the land use planning process.

The press conference, to be held at Verona City Hall, will outline how community-based information technologies will support land use decision-making in a real-world setting. One such technology is a newly developed suite of tools called "Planning Analyst," which was developed by UW-Madison's Land Information & Computer Graphics Facility, in conjunction with the College of Agricultural and Life Sciences, Departments of Urban & Regional Planning and Soil Science, and Institute for Environmental Studies.

Planning Analyst is a series of modules that help visualize alternative development patterns, evaluate impacts of proposed development, and combine desired planning outcomes with relevant ordinances and standards.

With the ability to better understand, forecast and visualize alternative land use scenarios, the citizens of Dane County will have a stronger voice in the decision-making process. The goal is to help communities make informed land use choices.

-more-

LAND USE PLANNING PROJECT – add one

Dane County Executive Kathleen Falk will introduce the project's partners, which include Dane County, LICGF, Environmental Systems Research Institute (California), the USDA Natural Resources Conservation Service, and the Federal Geographic Data Committee. The project is an outgrowth of Dane County's recent "Design Dane!" action plan for growth management, and the county's subsequent selection by Vice-President Al Gore as one of six demonstration sites nationwide for providing innovative solutions to urban and rural growth management.

The multi-faceted project will also include:

- training for Dane County and Verona staff in the use of the planning tools
- a planning guide and technical documentation
- an evaluation report of the pilot project and subsequent recommendations.

For additional information, contact Prof. Ben Niemann, (608) 263-5534.

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land use planning project 9/99
writer: Bill Keenan

Enviro Studies

BRIEFS

WIS WEEK ON SUMMER HIATUS
This is the last printed edition of Wisconsin Week until Wednesday, Aug. 25. During the summer, look for updates at the campus news Web site www.news.wisc.edu, and for occasional updates through the Wisconsin Week Wire e-mail newsletter. Not signed up? Go to: www.news.wisc.edu/wire/about.html

STAFF DIRECTORY UPDATES
If you need to change individual information for next year's staff directory, such as your office location, e-mail or home address, submit a Person Information Form to Employee Compensation and Benefits before Friday, June 11.

Updates and corrections to the front section of the staff directory will be handled electronically for the first time this year. Instructions will arrive via e-mail to department administrators/secretaries. Information: Barbara Ziemer, 100 Bascom Hall, 263-2467; orbarb.ziemer@mail.admin.wisc.edu.

KRAVITZ CAPS LECTURE SERIES
Professor Edward A. Kravitz of Harvard University will discuss "Fighting Lobsters: From Genes to Behavior," Friday, May 14, at 4 p.m. in B1118 Biochemistry as part of the Distinguished Neuroscience Lectures.

Kravitz's research interests have centered on neurotransmitters and neuromodulators. Kravitz's studies now focus on the action of amines (serotonin and octopamine) in aggressive behavior, using behavioral, physiological and molecular methods to examine the formation and maintenance of dominance relationships in a lobster model system.

MAX KADE LECTURE SET
The Max Kade Institute is sponsoring a lecture, "German-American Collections of the Milwaukee County Historical Society: Stories Waiting to be Told," by Robert T. Teske, director of the Milwaukee County Historical Society. The free lecture is Thursday, May 13, at 8 p.m. in the Alumni Lounge, Pyle Center, 702 Langdon St. Information: 262-7546.

MILESTONES

Douthitt named interim dean of School of Human Ecology


Douthitt

Robin Douthitt, professor of consumer science, has been named interim dean of the School of Human Ecology.

Douthitt has been on the UW-Madison consumer science faculty since 1986. In 1989 she founded the Women Faculty Mentoring program and continues to serve on its advisory committee.

In its first decade of existence, the program has improved the university's retention rate for female faculty in all departments and has become a model for other institutions.

Douthitt's research ranges from child support policy analysis to consumer attitudes toward rBGH dairy products and to methods of assigning value to unpaid labor. Last year, the YWCA named Douthitt one of its Women of Distinction. In February, she became the Vaughn Bascom Professor of Women in Philanthropy.

Douthitt's appointment follows Hamilton McCubbin's decision to step down as dean July 1. Douthitt will begin her new duties immediately to insure a smooth transition. McCubbin plans to rejoin the Department of Child and Family Studies and the School of Social Work following a year of independent research.

Faculty elect members of University Committee

Faculty have elected three new members to the University Committee, the panel that sets the agenda for the Faculty Senate.

Joining the committee Tuesday, June 1, will be Linda S. Greene, professor of law; Thomas D. Sharkey, professor of botany; and Patricia L. Wolleat, professor of counseling psychology. Greene and Wolleat will serve three-year terms; Sharkey will serve a two-year term.

The new members succeed Christopher Kleinhenz, professor of French and Italian; Brent H. McCown, professor of horticulture; and Stephen M. Robinson, chair of the University Committee and professor of industrial engineering and computer science.

Continuing on the committee are Mary Behan, professor of veterinary medicine; Richard R. Burgess, professor of oncology; and Bernice Durand, professor of physics. Durand will chair the committee.

GOVERNING

Senate resets tenure clock

Campus departments will have more flexibility to determine the length of tenure clocks under a proposal approved by the Faculty Senate.

The measure gives department executive committees and deans the ability to evaluate whether the service of untenured professors hired from other institutions is equivalent to UW-Madison service.

The change, recommended by the University Committee, is designed to help UW-Madison remain competitive in recruiting new faculty.

Stephen M. Robinson, chair of the University Committee, told the Faculty Senate Monday, May 3, that the new policy would not be retroactive, although departments may seek rule waivers for probationary faculty hired under the previous policy.

"There will be some requests for adjustments of tenure clocks," Robinson, professor of industrial engineering and computer science, told the senate. "The University Committee will evaluate such requests."

Under the old policy, UW-Madison automatically subtracted up to three years of previous service at another institution from its seven-year tenure clock. The policy mirrored the guidelines established in 1940 by the American Association of University Professors.

But many universities routinely turn the tenure clock back to zero when they hire a new assistant professor from another institution, which puts UW-Madison at a disadvantage when recruiting new faculty.

Library report gets attention

The 1998-99 report of the University Library Committee is attracting national attention for its focus on scholarly communication, says Kenneth Frazier, director of the General Library System.

Among its recommendations, the report calls for support from faculty and university administration to maintain the concepts of fair use and public domain in the current age of electronic communication. The report also encourages professors who are editors of journals to "challenge" the escalating subscription costs of these publications.

In addition, the report recommends that UW-Madison libraries continue working with other libraries to license electronic databases and journals, which will counteract the rising subscription costs charged by commercial publishers.

Frazier told the Faculty Senate that the Association of Research Libraries would distribute the report nationally in the near future.

Discipline language changed

The Faculty Senate has amended a faculty policy related to the amount of evidence necessary to discipline a professor.

Section 9.11.A of Faculty Policies and Procedures reads, "A finding of cause for the imposition of discipline or cause for dismissal must be based on a clear preponderance of the evidence in the hearing record."

The senate approved an amendment by Mathematics Professor Anatole Beck to replace the phrase "a clear preponderance of the" in the section with "clear and convincing." Beck maintains the higher standard is more in line with principles of academic freedom.

The senate defeated a motion to refer the amendment to the University Committee, which is examining other discipline policies. The UW System Board of Regents must now approve the new language.

LEARNING

Students show the way with campus green projects

An environmental studies course follows the philosophy that little victories are the route to big changes. The Environmental Studies Certificate Seminar uses the campus as a test bed for small-scale student projects to improve the environment.

Evelyn Howell, a landscape architecture professor and IES 600 instructor, says the class had three solid projects under way this semester. One group looked at "natural landscape design" as an alternative to manicured lawns on some parts of campus. They proposed converting a grassy area near Muir Knoll into a native perennial flower garden.

A second project explored ways for the UW-Madison Housing Food Service to buy more dairy products and produce from local farmers. And a third project studied a proposal to pave the lakeshore path to determine its impact on path users. There are concerns that pavement, while helping bicyclists, would hurt the solitude of the path.

Since the early 1990s, Howell says IES 600 students have produced dozens of small improvements that have endured on campus.

COMMUNITY

Faculty salaries still lag

In the past year, salaries for full and associate professors rose slightly compared to UW-Madison's peer institutions, while the pay level for assistant professors maintained its same position among the 11 peer universities, according to the Faculty Senate's Commission on Faculty Compensation and Economic Benefits. The senate discussed the report Monday, May 3.

Overall, UW-Madison faculty salaries still lag behind the median of their peers by 6 percent, compared to 7.2 percent last year, the report says.

To reach the median of their peers by 2001, the report adds, UW-Madison faculty must receive 5.2 percent raises in each of the next two years — the level recommended by the UW System Board of Regents as part of the 1999-2001 state budget. The Joint Committee on Employment Relations is scheduled to take action on state pay plans this summer.

Concerning health insurance, the report urges the state to immediately contribute its share of the cost for coverage of new faculty. Currently, new state employees must wait six months before the state begins contributing toward their health insurance premiums.

Students take measure of Lake Wingra's value

A mere pond compared to its neighbors Mendota and Monona, Madison's Lake Wingra is nonetheless a hot resource for thousands of boaters, anglers and nature lovers. A graduate student project wants to keep it that way by exploring ideas to improve water quality.

The students, part of the Water Resources



Photo by Brian Moore

Two students from UW's College of Engineering paddle a concrete canoe across Monona Bay off Brittingham Park. They were among about 250 participants from regional engineering schools who raced concrete canoes they designed as part of an event sponsored by the American Society of Civil Engineers Great Lakes Regional Conference, Saturday, May 10

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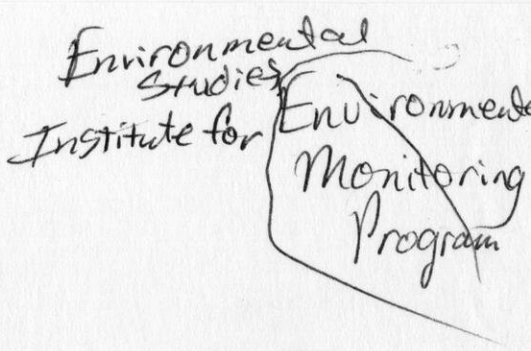

THE WISCONSIN WEEK WIRE - June 1, 1999
for UW-Madison faculty and staff
(issue on Web at http://www.news.wisc.edu/wire/i060199/)

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Wisconsin Week's print edition is on vacation until Wednesday, Aug. 25, but the Wire will continue to keep you updated through the summer.

TOP NEWS
- o Microsoft grant establishes Data Mining Institute
- o Environmental monitoring degree planned
- o Rediscovered native history notebooks donated to Oneida
- o Campus budget advances through first legislative round

RESEARCH
- o Herb no remedy for tobacco grower woes
- o Researchers find bacteria that "eat" dynamite

ON CAMPUS
- o Babcock dairy store to be renovated
- o Conference keys on university role in economic growth
- o Historical atlas in second printing
- o Video meant to heal wounds in the north
- o Events calendar: http://calendar.news.wisc.edu

NEWS IN BRIEF
- o Technology: ISIS expected to be back online soon
- o Capitol report: Health coverage bill advances
- o Pay plan: Action expected in July
- o Milestone: Artist James Watrous dies at 90
- o Appointment: Sheppard named assistant dean of students
- o Appointment: Kornblatt named associate humanities dean
- o Tune in: PBS special features UW aging experts
- o Award: Babcock Institute wins export achievement award
- o UW-Elsewhere: News from around the system

TIP
o Understanding your benefits

(issue on Web at http://www.news.wisc.edu/wire/i060199/)
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Top news

MICROSOFT GRANT ESTABLISHES DATA MINING INSTITUTE
The almost infinite capacity of computers to collect and store information poses a practical dilemma: How does one find the gems in this mountain of raw data? Research on that question received a boost this month from Microsoft Corp., which awarded the Computer Sciences Department a four-year grant estimated at $720,000 to establish a Data Mining Institute to research the hidden potential of huge databases.
(Full story: http://www.news.wisc.edu/wire/i060199/data.html)

ENVIRONMENTAL MONITORING DEGREE PLANNED
Advancements in the technologies of remote sensing, geographic information systems, and global positioning systems will give us powerful new tools to do everything from mapping Wisconsin's wetlands to guiding land use planning. Faculty and staff of the Environmental Monitoring Program plan to launch a professional master's degree to meet the growing demand for expertise in the geospatial sciences. If they can clear the necessary hurdles, the program may be in place as early as this fall.
(Full story: http://www.news.wisc.edu/wire/i060199/emgp.html)

REDISCOVERED NATIVE HISTORY NOTEBOOKS DONATED TO ONEIDA
Due to some anthropological sleuthing on campus, the Oneida Nation near Green Bay now holds copies of 167 long-lost notebooks filled with descriptions of Oneida life during the first half of this century. The notebooks, written by Oneida Indians in 1940-41 – many wholly or partly in the Oneida language -- may be the largest body of written work extant in Oneida or any other Iroquoian language.
(Full story: http://www.news.wisc.edu/wire/i060199/oneida.html)

CAMPUS BUDGET ADVANCES THROUGH FIRST LEGISLATIVE ROUND
University leaders pledge to continue their effort to persuade lawmakers to provide the financial support and management flexibility necessary to keep the UW System a world-class institution. The Legislature's Joint Finance Committee narrowly rejected the governor's proposed management flexibility for the UW System in a vote Tuesday, May 25.
(Full story: http://www.news.wisc.edu/wire/i060199/budget.html)

Research

HERB NO REMEDY FOR TOBACCO GROWER WOES
University researchers say tobacco growers should think twice before switching land into production of Echinacea, a popular herbal supplement. Despite reports of high profits, price swings and marketing challenges make the switch risky.
(Full story: http://www.news.wisc.edu/wire/i060199/crop.html)

RESEARCHERS FIND BACTERIA THAT "EAT" DYNAMITE
University researchers have identified two enzymes that enable bacteria to degrade both the explosives nitroglycerin and TNT. The scientists have sequenced the genes that code for the two enzymes. The findings may lead to biologically based methods for cleaning up sites contaminated with toxic residues left from manufacturing explosives. There are an estimated 10,000 U.S. sites contaminated with explosives and related compounds.
(Full story: http://www.news.wisc.edu/wire/i060199/tnt.html)

On Campus

BABCOCK DAIRY STORE TO BE RENOVATED
A $350,000 gift to the UW Foundation will finance renovation of the dairy store in Babcock Hall.
(Full story: http://www.news.wisc.edu/wire/i060199/babcock.html)

CONFERENCE KEYS ON UNIVERSITY ROLE IN ECONOMIC GROWTH
An international conference June 9-12 will target the expanding role of university research parks in spurring economic development. The Association of University Related Research Parks will hold its 14th annual conference for a membership of more than 230 research parks that are affiliated with a college or university. Highlights of the meeting include keynote addresses from Health and Human Services Secretary Donna Shalala and Internet II development leader Douglas Van Houweling.
(Full story: http://www.news.wisc.edu/wire/i060199/urp.html)

HISTORICAL ATLAS IN SECOND PRINTING
The Wisconsin Cartographers' Guild's "Wisconsin's Past and Present: A Historical Atlas," is now available in its second printing. The 9" x 12" atlas contains more than 120 pages of maps, text, and visual aids that tell the story of Wisconsin as a state at the intersection of natural and cultural regions. For map samples, visit:
http://www.wisconsin.com/wibook.
(Full story: http://www.news.wisc.edu/wire/i060199/atlas.html)

VIDEO MEANT TO HEAL WOUNDS IN THE NORTH
Barbara Borns and Tim Tynan of the Institute for Environmental Studies hope a new educational video they have produced about the Chippewa Flowage in northwestern Wisconsin will help heal deep wounds among the Lac Courte Oreilles (LCO) band of Ojibwe Indians. At the same time, they hope the video will help prevent future harm to the flowage.
(Full story: http://www.news.wisc.edu/wire/i060199/heal.html)

News in brief

TECHNOLOGY: ISIS EXPECTED TO BE BACK ONLINE SOON
UW-Madison's Integrated Student Information System is expected to be back online no later than Monday, June 7, after a team finishes an upgrade that will provide a smoother-running system with increased functions. The upgrade team will provide notice online when the system is up and running again. If you have questions about the upgrade, please visit the ISIS web site at: http://www.wisc.edu/isis/.

CAPITOL REPORT: HEALTH COVERAGE BILL ADVANCES

Newly hired faculty may not have to wait six months before the state starts helping out with their health insurance costs. A legislative measure would make employees eligible for state contributions to their health insurance as soon as they were hired. Endorsed by a key committee, the bill still needs approval from the Senate and Assembly.

PAY PLAN: ACTION EXPECTED IN JULY

The Board of Regents has requested a 5.2 percent increase in each of the next two years for all faculty and academic staff. It is not yet known what the state pay plan will be or what will be approved for faculty and staff. It is likely that the Joint Committee on Employment Relations will not take up the pay plan for faculty and academic staff until July.

MILESTONE: ARTIST JAMES WATROUS DIES AT 90

Artist James Watrous, who was associated with UW-Madison for nearly seven decades, died Tuesday, May 25, at the age of 90. Watrous may be best known for his murals of scenes featuring mythical logger Paul Bunyan that adorn the walls of the Memorial Union. He also led a campaign to create the Elvehjem Museum of Art and taught popular art history courses until 1976. "He was a mentor in the best sense of the word," said John Wilde, an emeritus art professor who kept close ties with Watrous over 61 years.

APPOINTMENT: SHEPPARD NAMED ASSISTANT DEAN OF STUDENTS

Janice Sheppard, who has served as interim assistant dean of students since 1997, has been named permanently to the post, Dean of Students Mary Rouse announced Thursday, May 13. As an assistant dean, Sheppard will manage the university's response to student academic and nonacademic misconduct issues , and supervise the new lesbian, gay, bisexual, transgender issues coordinator who will be hired this summer. She will share some general administrative responsibilities as well, Rouse said.

APPOINTMENT: KORNBLATT NAMED ASSOCIATE HUMANITIES DEAN

Judith Deutsch Kornblatt, an expert on Russian religious philosophy and 19th and 20th century Russian literature, has been named associate dean for the humanities in the Graduate School. Kornblatt received interim appointment to the post last September following the death of Fannie LeMoine in August. Kornblatt says that along with developing research opportunities in the humanities, enhancing teaching and outreach will be a priority.

TUNE IN: PBS SPECIAL FEATURES UW AGING EXPERTS

A three-hour, three-part PBS series, "Stealing Time: The New Science of Aging," airs Wednesday night, June 2, at 7 p.m. Central Time. Watch for coverage of dietary restriction studies by UW Primate Center scientists Richard Weindruch and Joe Kemnitz in the program's second hour.

AWARD: BABCOCK INSTITUTE WINS EXPORT ACHIEVEMENT AWARD

The Babcock Institute for International Dairy Research and Development received a 1999 Governor's Export Achievement Award at the 35th annual Wisconsin International Trade Conference May 12 in Milwaukee. The Babcock Institute builds ties between the Wisconsin dairy industry and worldwide dairy industries through education and training programs, world market and trade analysis, and research collaboration and scientific partnerships.

UW-ELSEWHERE: NEWS FROM AROUND THE SYSTEM

* Milwaukee: The campus is on track to get $850,000 from the state to develop a bachelor's degree program in global studies.

* Whitewater: John W. "Jack" Miller, professor and dean of the College of Education at Florida State University, has been named chancellor, effective July 1.

* Superior: The Library Science Program has been approved by the Wisconsin Department of Public Instruction to offer coursework leading to the Instructional Library Media Specialist license.

* Stevens Point: Historian Charles E. Clark, who has been the state coordinator of Wisconsin History Day in addition to teaching, has been appointed special assistant to the chancellor and to the provost.

* Parkside: A recent agreement will make it easier for College of Lake County (Ill.) students to transfer to Parkside.

Tip

UNDERSTANDING YOUR BENEFITS

Employee Compensation and Benefits Services will offer a workshop Thursday, June 10, called "Understanding Your Wisconsin Retirement System Statement." The mini-course will be presented over the lunch hour, 11:45 a.m.-1 p.m., in the Memorial Union. Check TITU for the room. No registration is required, but a second session, 1-2:15 p.m., may be held if too many employees want to attend the first session.

The Wisconsin Week Wire: Vol. III (No. 10)

Others working to improve the environment

Center for Climatic Research seeks to understand the impact of climate on ecosystems. The Center's research goals are to diagnose and model the behavior of past and present climates and to strengthen the ties between climate science and earth system science.

Phone: 262-2839
Web: plum.meteor.wisc.edu/

Center for Integrated Agricultural Systems brings together farmers, researchers, policymakers and others to study farming practices, farm profitability, the environment and rural vitality.



Phone: 262-5200
Web: www.wisc.edu/cias/

Center for Limnology conducts and facilitates freshwater research and aims to apply that research to resource management and environmental issues.

Phone: 262-3014
Web: limnology.wisc.edu/

Climate, People and Environment Program collaborates with scientists across the globe to study current global challenges that stem from the intricate links among human activities, global climate and ecological systems and the Earth's natural resources.

Phone: 262-2839
Web: rainforest.meteor.wisc.edu

Environmental Remote Sensing Center applies remote sensing and geographic information system (GIS) methods to landscape analysis, environmental monitoring and natural resource assessment activities.

Phone: 262-1585
Web: www.ersc.wisc.edu/ERSC

Environmental Toxicology Center promotes research on suspected and known environmental toxicants; facilitates the exchange of information relating to environmental toxicology; and provides scientific input to help legislators and government agencies formulate and enforce legislation that addresses environmental agents released by human activity.

Phone: 263-4580
Web: www.wisc.edu/etc

Kickapoo River Valley Project in the School of Natural Resources features multifaceted research and service programs designed to help valley residents achieve sustainable development. Highlights include Wisconsin's first solar village, an action plan for a sustainable regional economy, forest regeneration and water conservation research and a geographic information system and computerized economic modeling system tailored to the valley.

Phone: 262-6968
Web: www.cals.wisc.edu/sm/kick.html

Partnership for Environmental Stewardship is a tri-national collaboration among the Universities of Wisconsin-Madison, Guelph, Canada and Guadalajara, Mexico. Current research and action-oriented projects focus on the Sierra de Manatlán Biosphere Reserve in Mexico.

Phone: 265-5296
Web: www.ies.wisc.edu/part-eng.htm

Small Scale Waste Management Project is an interdisciplinary research group that develops methods to treat and dispose of wastewater in unsewered areas.

Phone: 265-6595
Web: www.wisc.edu/ssswmp

Solar Energy Lab seeks to educate students through research experiences in solar and conventional energy use and to remain on the competitive edge of new developments in solar heating and cooling, photovoltaics, desiccant and absorption cooling, control of HVAC systems, air quality in buildings, thermal storage and food processing.

Phone: 263-1589
Web: sel.me.wisc.edu/

University of Wisconsin Sea Grant Program is a statewide program of basic and applied research, education and technology transfer dedicated to the wise stewardship and sustainable use of the Great Lakes and ocean resources.



Phone: 262-0905
Web: www.seagrant.wisc.edu/index.html

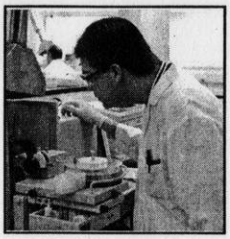
Water Resources Center has developed a broadly-based research, training, communications and public service program that carries out its mission of finding solutions for present and emerging water resource problems.

Phone: 262-3577
Web: www.wri.wisc.edu

Wisconsin Public Utility Institute advances understanding of public policy issues in the electricity, gas and telecommunications industries by providing information, communication programs, education and other services that aid in examining and developing appropriate public policies for those industries.

Phone: 263-4180
Web: wiscinfo.doit.wisc.edu/bschool/wpui/index.html

Wisconsin State Laboratory of Hygiene (WSLH) has served as the state's public and environmental health laboratory since 1903. Working with public and private-sector partners, the WSLH conducts research, performs analytical services and leads outreach programs that benefit the citizens and environment of Wisconsin, the nation and the world.



Phone: 262-1293
Web: www.slh.wisc.edu

Workshop for Native American Students is a precollege program offered each summer by the Institute for Environmental Studies. The program consists of an intensive two-week exploration of nature and the environment for young Native Americans from Wisconsin and elsewhere.



Phone: 263-4373
Web: www.ies.wisc.edu/outreach.htm#precollege

Updating the Wisconsin Idea

March 1999, Number 6

This publication tells stories of faculty and staff who are working in partnerships with businesses, civic organizations, government agencies, schools and other community-based groups to improve our state, nation and world. We hope these stories motivate other faculty and staff to seek community partners to create knowledge that will benefit society in the 21st century.

Updating the Wisconsin Idea is a joint effort between UW-Madison's Office of Outreach Development in the Office of the Provost and the Wisconsin Food System Partnership funded by the Kellogg Foundation and administered by the College of Agricultural and Life Sciences.

Future inserts will focus on the following topics: new technology, the humanities, child and family welfare and government. To share story ideas or to comment on this issue, contact:

Judy Reed, phone: 262-5421
Email: jcreed@facstaff.wisc.edu

Project Directors: Margaret Geisler and Kenneth Shapiro

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Editing: Al Abramson and Alex Hancock

Design and Layout: Lesa Langan

Photos:
Courtesy of Water Resources Mgmt., p 1
Courtesy of Lin Compton, China, p 2
Bob Rashid, Environmental policy, p 3
Elizabeth Knox, History lessons, p 3
Others working in the environment, p 4
Courtesy of CIAS, CIAS
William Karasov, Sea Grant Program
Jan Schneider, WSLH
Courtesy of IES, Native Americans

March 1999, Number 6
Supplement to Wisconsin Week
March 31, 1999

Environ. Studies

FOR IMMEDIATE RELEASE 5/5/99

NEWS BRIEFS FROM THE UNIVERSITY OF WISCONSIN-MADISON
- o Library friends to hold recordings sale May 19-20
- o Seniors receive Herfurth-Kubly awards
- o Holstrom environmental scholarship recipients named

LIBRARY FRIENDS TO HOLD RECORDINGS SALE MAY 19-20
CONTACT: Don Johnson, (608) 262-0076; djjohns5@facstaff.wisc.edu

MADISON -- The Friends of the University of Wisconsin-Madison Libraries will sponsor a sale of recorded material in 124 Memorial Library May 19-20 from noon to 7 p.m. each day.

Records, cassettes, CDs and miscellaneous print music materials have been donated for the sale. Some 78 rpm records also will be available.

Proceeds from the sale of the donated music items will go to the friends group, which supports activities at campus libraries.

The sale will be in held on conjunction with the national conference of the Association of Recorded Sound Collections, hosted by the UW-Madison Mills Music Library, May 19-22.

For information about the Friends group and the record sale, write the Friends of the UW-Madison Libraries, 976 Memorial Library, 728 State Street, Madison, WI 53706, or call (608) 265-2505; or e-mail: Friends@macc.wisc.edu

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SENIORS RECEIVE HERFURTH-KUBLY AWARDS

MADISON -- Two University of Wisconsin-Madison seniors have received the Herfurth-Kubly Award based on their academic achievements, degree of self-support, extracurricular activities, communication skills and contribution to the community.

Kimberly Noble, a communicative disorders major from Madison, and Ryan Westergaard, a bioethics major from Delavan, will receive $1,000 each as top winners.

Nicole St. Clair, a nutrition, health and healing major from McFarland, and Victoria Maile, an actuarial science major from Brillion, tied for runner-up in the women's category. Bradley Anderson, an engineering major from Eau Claire, is the men's runner-up. The runners-up receive $500 each.

Considered the most prestigious award a senior can earn, the Herfurth-Kubly awards have been given for 71 years.

HOLSTROM ENVIRONMENTAL SCHOLARSHIP RECIPIENTS NAMED

MADISON -- Three University of Wisconsin-Madison undergraduates and their faculty/staff advisers have won Holstrom Environmental Scholarships.

The scholarships are provided by a generous grant from Carleton and Mary Beth Holstrom of Pipersville, Pa. Each student will receive $3,000 and each adviser $1,000 to work together on a project relating to environmental issues.

The student winners, their advisers and their departments are: Michelle L. Milbauer, Paul Zedler/Mark Leach, Institute for Environmental Studies; Anders C. Olson, Anthony R. Ives, zoology; and Jane K.W. Peterson, Stanley Dodson, zoology.

###

Environmental Studies, Inst. for

April 19, 1999

TO: Editors, news directors
FROM: Brian Mattmiller, (608) 262-9772
RE: Earth Day story ideas

With the 29th annual Earth Day coming up Thursday, April 22, environmental issues will be in the national spotlight. Along with local events coverage, reporters might consider some UW-Madison research that focuses on environmentally friendly practices.

o Students show the way with campus green projects
o Wisconsin-style recycling: New uses for cow manure
o Environmental study takes a leap into orbit
o Solar power: Renewable energy on the cusp of renewal?
o Keeping an eye on the mercury
o Measuring the value of Lake Wingra

STUDENTS SHOW THE WAY WITH CAMPUS GREEN PROJECTS

A UW-Madison environmental studies course follows the philosophy that little victories are the route to big changes. The Environmental Studies Certificate Seminar uses the campus as a test bed for small-scale student projects to improve the environment.

Evelyn Howell, a landscape architecture professor and IES 600 instructor, says the class has three solid projects underway this semester. One group is looking at "natural landscape design" as an alternative to manicured lawns on some parts of campus. They have proposed converting a grassy area near Muir Knoll into a native perennial flower garden.

A second project is exploring ways for the UW-Madison food service to buy more dairy products and produce from local farmers. And a third project will study a proposal to pave lakeshore path, and try to determine its impact on path users. There are concerns that pavement, while helping bicyclists, would hurt the solitude of the path.

Since the early 1990s, Howell says IES 600 students have produced dozens of small improvements that have endured on campus. For more information about classes, contact Howell at (608) 263-6964; or by email at eahowell@facstaff.wisc.edu
###

WISCONSIN-STYLE RECYCLING: NEW USES FOR COW MANURE

Aside from an annual cow chip toss, the world hasn't stumbled on too many alternative uses for cow manure. But UW-Madison researchers have a couple new ones: water filters and particle board.

The biological systems engineering scientists are using separated and cleaned fibers from cow manure to make high-quality hardboards. Those fibers also have an uncanny ability to filter heavy metals from water. Richard Koegel, a professor of biological systems engineering, says the researchers use a retaining press on a Prairie du Sac farm to separate the manure fibers from liquid waste. The captured material had been used as bedding for farm animals until the researchers explored new ideas.

They teamed with a Chicago consultant to make steam pressure-treated hardboard from manure fibers. They are also working with Forest Products Laboratory researcher Jim Han, who specializes in creating biofilters to clean up water pollution. Han has installed a system that will use the manure fibers to filter storm water at Mount Horeb's Stewart Lake.

Koegel says odor is removed in the separation process. But whether the public ever catches wind of the material might depend on the wood market, where shortages in wood and paper pulp are predicted.

"People should know the research is preliminary," adds Koegel. "Otherwise, I'll get phone calls from 500 farmers asking where they can drop off their manure."

Koegel can be reached at (608) 264-5149, or rgkoegel@facstaff.wisc.edu; Han at (608) 231-9423.
###

ENVIRONMENTAL STUDY TAKES A LEAP INTO ORBIT

In July of this year, if all goes according to plan, the first of NASA's Earth Observing Satellites (EOS) will sweep into a polar orbit 900 miles above the Earth. Aboard will be MODIS, the Moderate-Resolution Imaging Spectroradiometer, a device whose capabilities are now being tested at UW-Madison's Space Science and Engineering Center.

MODIS will enable scientists to study such things as ocean currents, clouds and land formations from space. Measuring clouds and the energy they reflect back into space or help trap in the atmosphere, for example, is an essential element in the study of climate change and global warming. MODIS will provide a new long-term record, in unprecedented detail, of such phenomena.

To learn more about MODIS and the insight it may provide on issues of climate, contact Paul Menzel at (608) 263-4930, or Steve Ackerman at (608) 263-3647.
###

SOLAR POWER: RENEWABLE ENERGY ON THE CUSP OF RENEWAL?

Whatever happened to solar power? After a burst of interest in the 1970s, solar energy applications have never reached more than a fraction of their potential in America.

William Beckman, director of UW-Madison's Solar Energy Laboratory, says the relative cheapness of fossil fuels through the 1980s and '90s has reduced interest in renewable energy sources. But it shouldn't: Beckman says that increasing solar usage could have a greater impact on reversing global warming than almost any other remedy.

For example, Beckman says a third of the country uses electricity for home water heaters. If those homes switched to a combination electric-solar water heating source, it would produce more carbon dioxide-reduction than it would to double the gas mileage of every American car.

Beckman says the UW's Solar Energy Lab, opened in 1954, is the oldest such center in the country. For more information, contact Beckman at (608)263-1590; or beckman@engr.wisc.edu
###

KEEPING AN EYE ON THE MERCURY

UW-Madison's Water Chemistry Program is studying why some watersheds are more vulnerable than others to mercury contamination. The research team is comparing notes from two diverse landscapes: Rivers of the Lake Superior Basin and the Florida Everglades.

Program director David Armstrong says researchers are finding that watersheds with a high proportions of wetlands and forest tend to be more vulnerable to mercury moving downstream. In the Everglades, they are studying how management practices affect mercury's accumulation in the food chain. Mercury pollution, primarily from burning fossil fuels and deposited by air onto the landscape, has been linked to neurological problems and is a frequent culprit in fish advisories.

For more information, contact Armstrong at (608) 262-0768; or colleague James Hurley at (608) 262-1136.
###

GETTING INDUSTRY WASTE OUT OF THE LANDFILL

Heavy industry generates millions of tons of solid waste every year, and UW-Madison engineers would like to keep it out of already-swelling landfills.

A group of civil engineers has recently created the Beneficial Reuse Program, a research campaign designed to find alternative uses for foundry sand, fly ash, reclaimed pavement, shredded tires and paper sludge–most of which gets entombed in landfills.

Civil engineer Craig Benson says dumping industrial waste in landfills is very costly. But the waste makes good, cheap and abundant materials for the construction and transportation industries. For example, the UW-Madison researchers found that foundry sand makes effective barriers for landfills, embankments and retaining walls for highways, and supplements for asphalt. They are also exploring road construction applications for shredded tires and plastic.

For more information, contact Benson at (608) 262-7242; or doctoral student Tarek Abichou at (608) 262-6281.
###

MEASURING THE VALUE OF LAKE WINGRA

A mere pond compared to its neighbors Mendota and Monona, Madison's Lake Wingra is nonetheless a hot resource for thousands of boaters, anglers and nature lovers. A graduate student project wants to keep it that way by exploring ideas to improve water quality.

The students, part of UW-Madison's Water Resources Management program, are polling residents about their usage of and attitudes toward the lake. They are also looking for a consensus on what management steps to take to improve Wingra.

Kenneth Potter, a civil and environmental engineer who oversees the project, says Wingra is nothing like what it was a century ago. It used to be primarily spring-fed, but now is fed mostly by surface runoff. The change has caused a big increase in sediment and algae blooms. The students will look into new methods to increase groundwater flow and making bank improvements around the lake.

For more information, contact Potter at (608) 262-0040; or student Diane Stocks at (608) 262-8960.
###

JES



on Campus

January 13–January 26, 1999

Campus CALENDAR

For more information:
- Vilas Hall Box Office: 262-1500
- Union Theater Box Office: 262-2201
- Film Hotline: 262-6333
- School of Music ConcertLine: 263-9485
- Elvehjem Museum of Art: 263-2246
- TITU: http://www.wisc.edu/union/

Entertainment

Arts - Performances - Movies

January

16 Saturday

THE MADISON MARIMBA QUARTET
Free. Mills Hall, 2 p.m.

17 Sunday

SUNDAY AFTERNOON LIVE FROM THE ELVEHJEM
The Lawrence Chamber Players of Appleton. A free, weekly chamber music series. Brittingham Gallery III, Elvehjem Museum, 12:30 p.m.

22 Friday

FACULTY CONCERT SERIES
Karlos and Melinda Moser, piano. $5 senior citizens and students; $7 others. Music Hall, 8 p.m.

23 Saturday

FACULTY CONCERT SERIES
John Chappell Stowe, organ. $5 senior citizens and students; $7 others. Eastman Hall, 8 p.m.

24 Sunday

SUNDAY AFTERNOON LIVE FROM THE ELVEHJEM
Steven Bjella, violin. Michael Keller, piano. A free, weekly chamber music series. Brittingham Gallery III, Elvehjem Museum, 12:30 p.m.

25 Monday

TRAVEL ADVENTURE FILM SERIES
"Galapagos!" Wisconsin Union Theater, 7:30 p.m.

26 Tuesday

HUUN-HUUR-TU: THE THROAT SINGERS OF TUVA
Traditional and modern Tuvan music, including throat-singing (khoomei), in which up to four overtones are produced simultaneously by one voice. Music Hall, 7:30 p.m. $10. For more information, call 242-0102.

TRAVEL ADVENTURE FILM SERIES
"Galapagos!" Wisconsin Union Theater, 7:30 p.m.

Ongoing

WUD FILM COMMITTEE
Choose movies, create brochures, invite directors and filmmakers to Madison. 507 Memorial Union, Mondays, 6:30-8:30 p.m. For information, call 262-1143.

WUD MEMORIAL UNION MUSIC AND ENTERTAINMENT COMMITTEE
Gain experience in all areas of the music business: Book bands, create promotional campaigns, meet new people. 507 Memorial Union, Tuesdays, 6-8 p.m. For information, call 262-2215.

NOONERS
Free live acoustic/classic music to lunch by. Martin Luther King Lounge, Union South, Wednesdays, noon-1:30 p.m.

listings continue on page eight



Photo courtesy UW-Madison Archives

Students plant pines at the Grady Tract at the Arboretum in 1943, one of the many enviromental restoration projects at a key parcel of the campus environment, the UW Arboretum. Now the world's oldest center for restoring lost landscapes, the Arboretum's mission to reconstruct and understand the prairies, forests, savannas and wetlands of presettlement Wisconsin reflects the collective dreams of Aldo Leopold, John Curtis, Henry Greene and others. And through its work, the much-loved Arboretum has become a model not only for healing the land, but also for restoring our relationship with nature.

Series focuses on campus environment

What natural and human forces have shaped the landscape of the UW-Madison campus?

How has the campus's physical setting influenced social and intellectual life at the university?

What are the challenges of managing the campus environment today, and what will they be in the future?

These are some of the questions to be taken up in a discussion series at Union South this semester organized by the Institute for Environmental Studies and inspired by the university's sesquicentennial.

"A Landscape for Learning: The Environmental History and Future of the UW-Madison Campus" is the theme.

Each discussion will feature two to four faculty and staff panelists, with occasional guests from beyond the campus. All discussions are free and open to the campus community and public.

"The campus environment is a subject of growing interest in many corners," says Tom Sinclair, IES's public information manager.

"Not long ago, for example, UW-Madison hired its first environmental management coordinator, Daniel Einstein. He has worked both with the people who maintain the facilities and with students and professors from many departments on some very creative projects," Sinclair says. Now, on another front, a campus committee is grappling with long-term plans for the campus natural areas, like Picnic Point and Muir Woods, which have suffered, until lately, from benign neglect. A lot is happening here."

Organizers of the discussion series say that directing more attention to UW-Madison's environment is a fitting way to celebrate the university's sesquicentennial. The campus is, after all, a microcosm of the larger environment, but most of us take it for granted.

"That's unfortunate," Sinclair says. "This is a remarkable place with an interesting history. And like many places, it is constantly changing. We should take full advantage of opportunities to make the campus itself a focus of environmental learning and innovation, not just a platform for studying other environments."

The series opens at noon Tuesday, Jan. 26, at Union South with a discussion of "The State of the Campus Environment," presented by Sinclair and David Eagan, assistant researcher in IES.

The series then goes back in time to consider the natural and human histories of the campus, eventually returns to the present for closer examination, and finally takes a speculative look at the future. ■

A LANDSCAPE FOR LEARNING

The series begins Tuesday, Jan. 26, at noon in Union South (see Today in the Union for the room assignment) and continues for 10 more Tuesdays at the same time and place.
Here are the topics:

Jan. 26	The State of the Campus Environment
Feb. 2	Our Climatological and Geological Heritage
Feb. 9	Pre-Campus Ecology and Limnology
Feb. 16	Cultures of the Past
Feb. 23	Origins and Growth of the Campus
March 2	The Land, the Lake, Campus Life and Campus Lore
March 23	The Campus as Classroom and Laboratory
April 6	Campus Management and the Environment
April 13	Visions of the "Built" Campus
April 20	Visions of the "Natural" Campus
April 27	The Campus as a Learning Environment

For more information, including names of panelists for each discussion, visit: http://www.ies.wisc.edu/campus.htm

IES

FOR IMMEDIATE RELEASE 1/19/99
CONTACT: Tom Sinclair, (608) 263-5599

SESQUICENTENNIAL SPEAKERS FOCUS ON CAMPUS ENVIRONMENT

What natural and human forces have shaped the landscape of the UW-Madison campus?

How has the campus's physical setting influenced social and intellectual life at the university?

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LECTURE SERIES DETAILS

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IES

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Announcing a Sesquicentennial Discussion Series featuring faculty, staff, and guest experts. Free. Everyone welcome!

A Landscape for Learning

The Environmental History and Future of the UW-Madison Campus

INTRODUCTION

January 26	The State of the Campus Environment

I. THE FORMATIVE MILLENNIA: A NATURAL HISTORY

February 2	Our Climatological and Geological Heritage
February 9	Pre-Campus Ecology and Limnology
February 16	Cultures of the Past

II. A BRIEF HISTORY OF OUR TIME: THE FIRST 150 YEARS

February 23	Origins and Growth of the Campus
March 2	The Land, the Lake, Campus Life and Lore
March 23	The Campus as Classroom and Laboratory
April 6	Campus Management and the Environment

III. STEWARDS FOR THE FUTURE: OPPORTUNITIES & RESPONSIBILITIES

April 13	Visions of the "Built" Campus
April 20	Visions of the "Natural" Campus
April 27	The Campus as a Learning Environment

Tuesdays ✳ 12 Noon
Union South (See "Today in the Union" for Room)

Sponsored by the Institute for Environmental Studies
See web page at www.ies.wisc.edu/campus.htm or call 263-5599

PLEASE POST OR CIRCULATE

UNIVERSITY OF WISCONSIN MADISON 150 YEARS

Environment Studies

FOR IMMEDIATE RELEASE 11/9/98
CONTACT: Tom Sinclair, Institute for Environmental Studies, (608) 263-5599

NATURALIST-AUTHOR TO SPEAK AT UW-MADISON

Peter Matthiessen, a naturalist, explorer and award-winning author, will give a free public lecture about writing Tuesday, Nov. 17 as part of the University Lectures Committee series.
"The Craft of Writing About Place" begins at 7:30 p.m. in 145 Birge Hall.

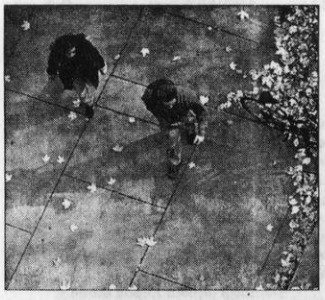
Matthiessen has published seven novels, including "Lost Man's River" (1997); "Killing Mister Watson" (1990); "At Play in the Fields of the Lord," which was nominated for the National Book Award; and "Far Tortuga," as well as the collection, "On the River Styx and Other Stories."

A naturalist and international explorer, Matthiessen also has written numerous books of nonfiction, among them "The Tree Where Man Was Born," which was nominated for the National Book Award, and "The Snow Leopard," which won it.

Michael Viney of the New York Times recently reviewed a large-format reissue of 1972's "The Tree Where Man Was Born," noting: "Matthiessen's intense observation and the quality of his descriptive prose certainly are classic. His travels by Land Rover and his sojourns in the bush feed the imagination with marvelously cumulative word-pictures, some with all the raw excitement of adventure stories."

Matthiessen's visit is sponsored by the University Lectures Committee; Institute for Environmental Studies; Chadbourne Residential College; International Institute; Departments of English, Geography, and Wildlife Ecology; Creative Writing Program; African, Southeast Asian, and Latin American and Iberian Studies Programs; and Center for Russia, Eastern Europe, and Central Asia.
###
-- Tom Sinclair (608) 263-5599

Environ. Studies



on Campus

November 5–November 19, 1998

Campus CALENDAR

Entertainment

Arts - Performances - Movies

For more information:

- Vilas Hall Box Office: 262-1500
- Union Theater Box Office: 262-2201
- Film Hotline: 262-6333
- School of Music ConcertLine: 263-9485
- Elvehjem Museum of Art: 263-2246
- TITU: http://www.wisc.edu/union/

November

5 Thursday

SCHOOL OF MUSIC CONCERT
"Black Music Ensemble." Richard Davis, director. Free. Morphy Hall, 6:30 p.m.

STUDENT CHOREOGRAPHERS SHOWCASE
$8 students and seniors, $10 general public. Margaret H'Doubler Performance Space, Lathrop, 8 p.m. For more information, call 262-1691.

6 Friday

UW-MADISON CINEMATHEQUE
"Studies I-V," "Antejeanterior" and "Hagringen." Peter Weiss. Free, limited seating. 1070 Vilas, 7:30 p.m.

STUDENT CHOREOGRAPHERS SHOWCASE
See Nov. 5 listing.

7 Saturday

HUDDLE WITH THE FACULTY
"Origins of Paul Bunyan." Jim Leary, folklore. Union South, 9 a.m.

WISCONSIN YOUTH SYMPHONY ORCHESTRAS
Evelyn Steenbock Fall Concert series. Sinfonietta, Mark Leiser, conductor. Concert Orchestra, Lygia Topolovec, conductor. Brass Choirs, Percussion Ensemble. Mills Hall, 2 p.m. $5 adults; $2 children.

UW-MADISON CINEMATHEQUE
"Beijing Bastards." Beijing Underground. Free, limited seating. 4070 Vilas, 7:30 p.m.

STUDENT CHOREOGRAPHERS SHOWCASE
See Nov. 5 listing.

DMF HOSTS SWING NIGHT
Featuring DJs juju and n.y.m. Dressy duds encouraged. Free. Union South, 10 p.m.-2 a.m. For information, call 262-2215.

8 Sunday

MADRIGAL SINGERS
Timothy Stalter, conductor. Gallery #3, Elvehjem Museum, 3 p.m.

UNIVERSITY THEATRE
"Fefu and Her Friends." Fefu's eight guests gather to plan a program for the educational society to which they belong. By Maria Irene Fornes. $11 general public, $8 students, University Club, 3 p.m.

WISCONSIN YOUTH SYMPHONY ORCHESTRAS
Evelyn Steenbock Fall Concert series. Philharmonia, Thomas Buchhauser, conductor. Youth Orchestra, James Smith, conductor. Mills Hall, 4 p.m. $5 adults; $2 children.

UNIVERSITY CHORUS AND WOMEN'S CHORUS
Rebecca Winnie, conductor. David Erb, conductor. Mills Hall, 7:30 p.m.

listings continue on page ten



Photo by Brent Nicastro

To reiterate the wisdom of every Realtor who ever lived, "Location, location, location." Starting last weekend, the University Theatre took that advice to heart in the UT's new production of Maria Irene Fornes' "Fefu and Her Friends." Director Patricia Boyette, associate professor of theatre and drama, is staging the production in the University Club on Library Mall. Boyette says the action will take place in the drawing room, foyer and other spaces in the building as the characters meet to plan a big event. Fornes will be in residence to meet with students and discuss her work the first week of November. "Fefu and Her Friends," which opened Oct. 30, runs through Nov. 24. See the *Wisconsin Week* calendar for dates and times.

Naturalist Matthiessen to speak on writing

Peter Matthiessen, a naturalist, explorer and award-winning author, will give a free public lecture about writing this month as part of the University Lectures Committee series.

Matthiessen has published seven novels, including *Lost Man's River, Killing Mister Watson, At Play in the Fields of the Lord,* which was nominated for the National Book Award; and *Far Tortuga,* as well as the collection, *On the River Styx and Other Stories.*

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DETAILS

"The Craft of Writing About Place" begins at 7:30 p.m., Tuesday, Nov. 17, in 145 Birge Hall. It's free.

Here's a sample from that novel set in Africa, as Matthiessen stalks elephants with George Schaller, the field biologist: "Then the bull scented us — the hot wind was shifting every moment — and the dark wings flared, filling the sky, and the air was split wide by that ultimate scream that the elephant gives in alarm or agitation, that primordial warped horn note out of oldest Africa."

His other nonfiction works include *The Cloud Forest* and *Under the Mountain Wall* (which together received an Award of Merit from the National Institute of Arts and Letters), *The Wind Birds, Blue Meridian, Sal Si Puedes, San Rivers, In the Spirit of Crazy Horse, Indian Country, Nine-Headed Dragon River* and *Men's Lives.*

Matthiessen has received the John Burroughs Medal, African Wildlife Leadership Foundation Award, the Gold Medal for Distinction in Natural History from the Academy of Natural Sciences in Philadelphia, and a Global 500 Environmental Achievement Award from the United Nations Environment Program.

His visit is sponsored by the University Lectures Committee; Institute for Environmental Studies; Chadbourne Residential College; International Institute; departments of English, Geography and Wildlife Ecology; Creative Writing Program; African, Southeast Asian, and Latin American and Iberian Studies programs; and Center for Russia, Eastern Europe and Central Asia. ■

To submit an event for Calendar or Bulletin

Wisconsin Week lists events sponsored by UW-Madison departments, divisions and programs. We must receive your listing **AT LEAST 10 DAYS BEFORE PUBLICATION.**

Campus mail: **19 Bascom Hall**

E-mail: **wisweek@macc.wisc.edu**

RESEARCH DIGEST

UW HOSPITAL JOINS MRI STUDY

Diagnosing some suspicious breast tumors could become simpler and more reliable using a new magnetic resonance imaging (MRI) approach being tested at University Hospital and Clinics as part of an international study.

The approach developed in Israel uses existing technology in a novel way, according to Frederick Kelcz, a breast-imaging specialist who will direct the study locally.

Under the study plan, women with suspicious breast tumors requiring biopsy — where breast tissue is removed and examined for signs of cancer — will first have MRI breast scans using the new technique. MRI interpretations and biopsy results then will be compared.

The study is expected to involve 250 women, including 50 locally. Kelcz agreed to conduct clinical tests after being "impressed by the excellent results" achieved in a preliminary test of 30 University Hospital patients.

A new, reliable MRI approach could prevent unnecessary biopsies and aid in detecting cancers early, Kelcz said. "Too often, women with ambiguous scans are told to come back in six months to be rechecked. Yet this decision can result in delayed diagnosis and treatment of breast cancer," Kelcz said. "A woman deserves a reliable answer in a timely fashion."

RESEARCH AGENDA TO BE SET

The third Issues Forum for UW-Madison's College of Agricultural and Life Sciences will look at future research directions and options for funding needed projects and programs.

The audience is invited to participate in panel discussions on the future of research at CALS. Two afternoon panels will examine the college's research agenda and how it will be funded. The panels will include CALS and Extension faculty and administrators as well as industry leaders.

Morning sessions will review past accomplishments and future challenges. The forum will run from 10 a.m. to 4:30 p.m. Tuesday, Nov. 10, at the Monona Terrace Convention Center in Madison. A $10 registration fee covers lunch, break refreshments and materials. Pre-registration by Nov. 4 is encouraged. For registration information, call CALS Outreach Services, 263-1672.

SOCIAL WORK TEAM GETS GRANT

A million dollar, two-year federal grant will help an interdisciplinary team of UW-Madison researchers join forces with community organizations in Dane County to identify the service needs of women with substance abuse and mental health problems who are victims of violence.

According to social work professor Joy Perkins Newmann, assessing needs will form the first phase of the $1.2 million study, funded by the Substance Abuse and Mental Health Services Administration. Research shows that health care systems are neither designed nor prepared to address often-related problems of substance abuse, mental illness and violence.

The 10-state, $8.5 million project is expected to gain valuable information about the pivotal role violence can play in the lives of women with substance abuse and/or mental disorders.

Newmann says she hopes the study will lead to new treatment and service delivery strategies, including new models of service integration. "We are very excited about this project because it will provide a vehicle for the many people who care about these women to forge an alliance with them on their behalf," she says. "It's a project very much in keeping with the Wisconsin Idea."

Exploring the roots of bias

Professor finds that, in shirts as well as skin, color matters

Brian Mattmiller

Prejudice strikes most people as a learned behavior, but a study of grade school kids exposes prejudice as a much cagier beast, waiting to rear its head at the slightest provocation.


Rebecca Bigler

Rebecca Bigler, a visiting psychology professor at UW-Madison, has used the idyllic setting of a summer-school classroom in St. Cloud, Minn., to study fundamental questions about bias. Through the subtle prompts of a controlled study, Bigler measures whether children will become biased about something seemingly trivial: the colors of their assigned T-shirts.

"We have this view that you have to teach children to be biased," she says. "This research shows that they'll do it even if you don't teach them."

Bigler's work begins with a six-week, half-day summer program for elementary school children sponsored by St. Cloud State University. It looks like any other summer school, except kids in each class are randomly assigned one of two different colors of T-shirt — their "work shirt" for the next six weeks.

In a control classroom, teachers ignore the blue and yellow shirts. But in another classroom, they make extensive use of the shirt colors to organize their class, from seating charts to special events, and frequently mention color groups when addressing students. But they do not favor one group over another nor promote any competition between colors.

In tests done after the summer session, Bigler compared differences between the two classes. She found that kids in the experimental class consistently assigned more positive traits to their "color group" than to those wearing another color. They also saw far less variation among individuals in their group than did the control class.

And overall, kids from the experimental classes were more likely to say that "all" of the children of their shirt color had positive traits and that "none" had negative traits than were kids from the control group.

This happened, Bigler says, without teachers ever suggesting any value differences between the two color groups. But the mere existence of this visible difference in the class, coupled with a teacher making use of that difference, set the wheels of bias in motion.

"Kids started to think the blue was different from the yellow," Bigler says. "What comes very quickly after that is, 'the blues are better than the yellows.'"

"What we say to kids about some of these organizational things is, if the adult world is calling attention to them, there must be something important about them," she says.

A classroom study this past summer dealt with a more potent dynamic, that of majority and minority. In the experimental class, most of the class was given one color shirt, and only two students had shirts with a different color. In wrap-up interviews with the kids, Bigler says those in minority shirts frequently said they were unhappy and wanted to change shirt colors. The two kids in the same-colored shirts also became friends at an almost clockwork rate.

Bigler says this should not suggest any fatalism about bias. Instead, she says parents and teachers need to be more diligent in talking about the differences children see, and more careful about how they organize activities.

At the end of each summer session, the researchers explain to the kids the underlying point of the T-shirts. "We always try to link it to the greater lesson, something they could use for the rest of their lives," she says. "People who have been through some sort of prejudice will understand how tough it can be." ■

UW engineers design bike for disabled cyclists

Brian Mattmiller

What started as a challenge to improve disabled access for a local outdoor recreation club put a team of campus engineers on the road to a better bike.

Since 1993, a succession of graduate students in the mechanical engineering department have developed a new style of hand-powered cycle designed for people who use wheelchairs. The three-wheeled bike's power train, unlike anything else on the market, employs a downward arm motion that gives the rider more power and control over the bicycle.

Craig Conner, a 1994 master's degree graduate of mechanical engineering, built the first prototype and has a patent pending on the power-train invention. And three graduate students since Conner have perfected a second prototype of the bike that is road-tested and ready for the next step of commercial development.

"We're at a really good time to start working with bike companies," says Conner, who plans to contact industry leaders such as TREK Bicycles of Waterloo, Wis., and Cannondale Inc. of Connecticut. "Making these bikes available to people has always been a big hope, especially if we can prove all the benefits we intended."

The major benefit is giving people with disabilities a more natural way to ride. Conner says current bikes make the arms replicate the pedaling motion of feet, rather than allowing for a more natural motion. Conner developed a four-bar linkage under the bike seat, which moves the bike forward when the rider pushes down and pulls up on the handlebars.

This motion uses much stronger arm and upper-body muscles, Conner says, which allows the rider to get more power with less fatigue.

Conner, a bike enthusiast himself, got the idea in 1993 from Hoofers, an outdoor recreation club run by UW-Madison. The club was looking for university-based ideas to make their recreational pursuits more accessible to the disabled.

Conner spent an entire year researching the concept. "The more you understand the problem, the more self-evident the solution becomes," he says.

More than 350,000 Americans have lost the use of their legs through either spinal cord injury or amputations. But there is a growing core of people dedicated to staying active through adaptive sports such as wheelchair basketball and biking.

The bike project has had amazing staying power in the mechanical engineering department, with new graduate students keeping it alive. David Pringle, a 1995 master's graduate, developed the steering and controls for the first bike. Kurt Ramsey, a master's graduate in May 1998, built the second prototype, which made a number of improvements on the original.

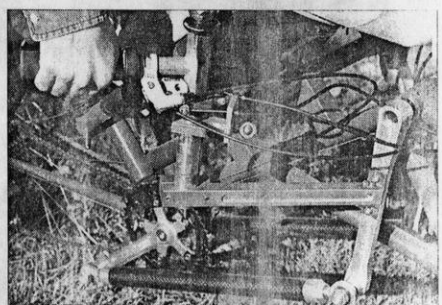
Now a fourth mechanical engineering graduate student, Chris Egle, is "debugging and fine-tuning" the prototype to make the bike ride more smoothly.

Frank Fronczak, a mechanical engineering associate professor and advisor for the project, says the multi-year aspect of the project is not unique with his students.

"A lot of my projects work this way because we design and build stuff here," Fronczak says, noting that combination of skills is becoming a lost art. "The work here is essentially never finished."

Fronczak says the goal of this project "is doing good for the sake of doing good, rather than trying to make money." But he is excited by the prospect of seeing a student design developed and marketed by a bicycle company. ■


Photos by Jeff Miller



Top: Craig Conner, a 1994 master's degree graduate of mechanical engineering, sits on a hand-powered prototype bicycle for people who have lost the use of their legs. His professor, Frank Fronczak, right, continues to advise students who are fine-tuning the project. Above: Connor's power train design allows the rider to get more power with less fatigue.

Enviro. Stud

FOR IMMEDIATE RELEASE 11/10/98
Contact: Paul Zedler, (608) 265-8018

'REWILDING' ADVOCATE TO SPEAK AT UW-MADISON

MADISON -- Conservation biologist Michael Souli, a leading proponent of wilderness protection and restoration, will speak Wednesday, Nov. 18, at the University of Wisconsin-Madison.

His free public lecture, "Rewilding: The Theory of Regional Wildlands Networks," is scheduled at 3 p.m., 165 Bascom Hall. A reception follows in the lobby of Birge Hall.

Souli recently retired as a professor and chair of the Department of Environmental Studies at the University of California, Santa Cruz. He was a founder of the Society for Conservation Biology and The Wildlands Project, of which he is president. He will visit UW-Madison as a Brittingham Visiting Scholar and guest of the university's Institute for Environmental Studies and Madison Ecology Group.

Born and raised in San Diego, Souli spent much of his youth in and around canyons, seashores, and deserts and at the San Diego Natural History Museum. He graduated from San Diego State University and earned his Ph.D. at Stanford University, where he studied population biology and evolution under Paul Ehrlich. He helped found the first university in Malawi and also taught in Samoa and at the University of California, San Diego, and the University of Michigan before joining the faculty at UC Santa Cruz in 1989.

His fieldwork has taken him to Mexico, the Adriatic, the West Indies, and Colorado. He has written and edited a variety of books on biology, conservation biology, and the social context of contemporary conservation. He has published more than 100 articles on subjects including population and evolutionary biology, population genetics, island biogeography, environmental studies, biodiversity policy, and ethics. He continues to conduct research on the genetic basis of fitness and viability in natural populations, on the impacts of "keystone" species, and on the social causes of the worldwide destruction of nature.

Souli was elected a fellow of the American Association for the Advancement of Science, has received a Guggenheim Fellowship, and is the sixth recipient of the Archie Carr Medal.

Now living in Colorado, Souli spends his time learning about the land, working with many conservation organizations, advising Ph.D. students, conducting research with a variety of collaborators, and writing about biology, ethics, and conservation.
###
-- Tom Sinclair (608) 263-3185

Program and the Ronald E. McNair Scholars Program.

Both students and faculty members can benefit from early research opportunities, says Doug Henderson, associate professor of engineering physics.

"Depending on the time a faculty member is willing to invest, the interaction with these students can be very beneficial," Henderson says. "The students often times formulate new research ideas, and it is nice to have some extra hands to initiate research."

UW-Madison's program is modeled after the University of Michigan's Undergraduate Research Opportunities Program. UROP began in 1989 with 14 students, and it now has 800 beginning undergraduates engaged in research with faculty. Forty percent of UROP participants are students of color.

Elowson hopes to reach out to underrepresented students through URS as well, especially students of color, first-generation college students and female students in math and science.

"If I am not able to incorporate a large number of these types of students into the program, then I will have not done my job well," says Elowson.

As part of URS, Elowson is already working with campus colleagues to organize two Undergraduate Research Symposiums, which would highlight and reward top research by beginning students. She also wants to create a campus-wide Undergraduate Research Council, which would encourage the sharing of resources and ideas and develop partnerships among faculty and staff to seek more public and private grant money for research projects.

Many large research universities are warming to the idea of offering research opportunities to first- and second-year undergraduates, says Elaine Hoagland, national executive officer of the Council of Undergraduate Research in Washington, D.C.

Hoagland says the benefits of early undergraduate research can be long lasting. She knows a college professor who used research he conducted as a freshman at Harvard in his doctoral dissertation.

"A student can start and continue research at any time," Hoagland says.
###
-- Erik Christianson, (608) 262-0930; echristi@facstaff.wisc.edu.

A UNIQUE EXCHANGE PROGRAM: STUDY WATERSHED MANAGEMENT IN CANADA OR MEXICO

Study Abroad and Gain Professional Experience

If you are a *graduate or an upper-level undergraduate at the UW-Madison*, then this exchange program presents an exciting new way for you to study environmental management and protection. It is grounded in the emerging and rapidly growing field of watershed management. The program will enable you to learn about the tools and processes critical to managing natural resources through this integrative and adaptive approach. It will provide you with academic *and* real-world training, so that you may work as a watershed manager either at home or abroad. Through University study and an internship with a professional agency, you'll build your knowledge of the concepts and language of watershed management, boost your skills in environmental management at the watershed level, and deepen your understanding of the unique issues, problems and successes of watershed management in a different culture.

Where Can You Go?

The Universities

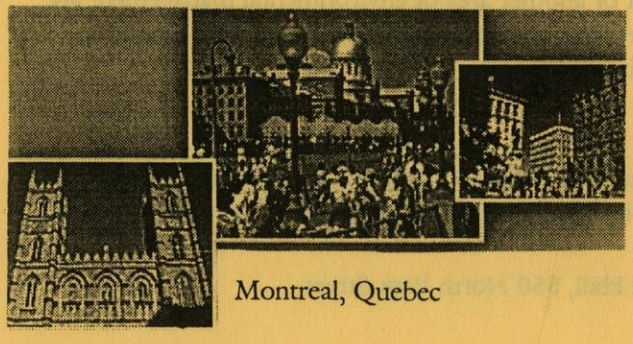
Six North American universities are participating in this program, along with ten professional watershed management agencies. Each university has its own academic strengths. And each watershed agency deals with a unique set of issues in its watershed – from hydrology to resource use, community development, conservation, economic and policy issues. Whether you choose to study in Mexico or in Canada, you'll gain academic expertise, learn about environmental management in a different culture, and put your experiences to professional use.

Along with the UW-Madison, the universities and their partner agencies are:

In Canada

The University of Guelph, Ontario, partnered with the *Credit Valley Conservation Authority* in the Credit River watershed

Concordia University, Montreal, Quebec, partnered with *Aboriginal government Resources, Economy, Environment* in the James Bay area of Quebec

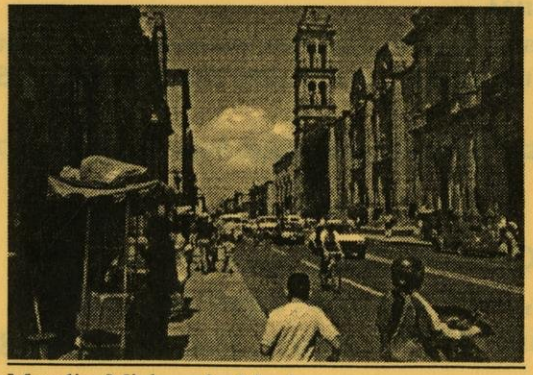


Montreal, Quebec

In Mexico

Universidad de Guadalajara at Autlán, Jalisco, partnered with the *Instituto Manatlán de Ecología y Conservación de la Biodiversidad* in the Rio Ayuquila watershed

Universidad Michoacana de San Nicolás de Hidalgo in Morelia, Michoacán, partnered with the *Instituto Nacional de Investigaciones Agropecuarios Forestales* in the Cupetitzio watershed, and the *Centro de Investigaciones y Desarollo del Estado de Michoacán* in the Cuitzeo watershed



Morelia, Michoacán, Mexico

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What You'll Do...

A Look at the Program

Watershed management relies on both academic principles and action-oriented processes. The exchange program has four components that will deepen your understanding of, and hone your skills in, various aspects of watershed management. They are:

A semester (or two) of classes at a consortium institution in Canada or Mexico

In coordination with your advisor at UW-Madison, you can tailor one or two semesters of study to your interests in watershed management while satisfying your academic program requirements. At the institution you decide to attend, you may choose to focus on one particular discipline of watershed management, or do a basic, broad-based survey of the field, or round out your academic background in this area of study.

A distance education seminar on watershed management

This course, specially designed by watershed management experts for participants in this program, will give you a broad-based knowledge of the watershed management approach. The course is action-oriented, so you can take what you learn and put it into professional practice. You'll be able to gain an understanding of the watershed approach, learn about different components of watershed management, and explore critical processes involved in watershed planning.

An internship with a partner watershed management agency or organization

One of the special aspects of this exchange program is its focus on *professional development* as well as academic development. As an intern, you will get that professional experience working with one of the partner watershed management agencies. Whether you want to develop your professional abilities in a specific area of watershed management, gain experience coordinating different components of a watershed management project, or work on an issue that is particularly intriguing, you can work in an internship that suits your needs, abilities, and career goals.

Courses and Credits

You will be able to select from a broad range of classes at the university where you choose to study. The courses you take abroad, and the credits and grades you receive, will count toward your degree program here at UW-Madison. *Consult with your advisor (and committee) to ensure that you can meet your degree requirements while you study abroad, and to arrange course equivalencies and transfer of credits.*

Eligibility

This program is open to graduate students and upper-level undergraduates (Junior or Senior status at the time of study abroad). No previous experience or academic training in watershed management is necessary. Students who are interested in pursuing a career in the field of watershed management or another area of environmental management are especially encouraged to apply. Students with a background in natural sciences *or* in social sciences are encouraged to apply. Proficiency in Spanish is required to study at the Mexican universities.

Questions?

To learn more about the program, including the universities and watershed agencies involved, funding, and other aspects of the program, contact Amy Sloane at (608)-265-5296, or by email at alsloane@students.wisc.edu.

Application forms are available from IES in Room 70, Science Hall, 550 North Park Street

APPLICATION DEADLINE:
for Fall, 1998 semester: April 15, 1998
for Spring, 1999 semester: October 1, 1998



Environmental Studies.

FOR IMMEDIATE RELEASE 4/28/99
CONTACT: Judith Kornblatt, (608) 262-9762

TEACHING ASSISTANTS RECOGNIZED FOR EXCELLENT INSTRUCTION

MADISON -- For performance that went above and beyond their job title, eight University of Wisconsin-Madison teaching assistants were honored this month with Graduate School Excellence in Teaching Awards.

Graduate students were nominated by their departments and evaluated by a faculty committee, chaired by Associate Dean Judith Kornblatt. Each winner received a $1,000 award.

"We look at a number of criteria some of which were innovation and mostly initiative-people who would take the initiative to do different projects to improve their teaching, help the class in ways that might not have been in mind- as well as leadership and mentoring other TAs," Kornblatt says. Also considered were the variety of teaching assignments, and the written comments and numerical scores from undergraduates' evaluations, she says.

This year's recipients are:

Thomas A. Brandner, a dissertator in botany, who has taught four courses and created new assignments, exercises and a course web page for his students. His adviser, professor Timothy Allen, says: "There is no room to be better than Tom Brandner."

Jonathan Ward Chipman, a doctoral student in environmental monitoring, who comes from a family of teachers. After tackling five courses at UW-Madison as a TA, he is known for his passion and ability for teaching.

Robert F. Darcy, a dissertator in English, who made students sad to leave his sections at the end of each semester, according to their evaluations. Teaching such classes as "Revolution, Rebellion and Restraint," Darcy received a rating of Excellent+ in more than one semester from his adviser, professor Susanne Wofford.

James Franciscus Gilhooly, a zoology dissertator, who used his teaching experiences to contribute to the department's planning for new lab facilities. He has taught more than 850 students over six semesters and is a volunteer in community outreach for biology education.

Pilar Gonzalez-Doupe, a doctoral student in counseling psychology, who also volunteers in community outreach education. As a TA, however, she did an impressive job co-teaching with a professor as a model for co-leading counseling groups.

David T. Kung, a mathematics dissertator, who won his department's teaching award in 1997 and was a Letters and Science Teaching Fellow in 1998. Kung was praised for his mentoring of other TAs, receiving a grant to design a Web page for sample math exams, and for organizing "Sidewalk Math" on the Van Vleck plaza.

Buffy Smith, a dissertator in sociology where she also won the 1998 teaching award, creates an inclusive classroom environment even in difficult classes, such as "Race and Ethnic Relations." She is so beloved by her students that they "talk about her as if she were a member of their family," says her adviser, professor Gary Sandefur.

L. Fernando Tejedo-Herrero, a doctoral student in Spanish and Portuguese, who is used as a model for new TAs in the department, according to Sarah Fritz, director of basic language. One student notes: "His enthusiasm is contagious, which is very important at 7:45 a.m."

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-- Eileen Gilligan, (608) 265-5359

Environmental Studies, Institute Sci

Science Report

Agricultural and Consumer Press Service
440 Henry Mall
Madison WI 53706 (608) 262-1461

College of Agricultural and Life Sciences
Research Division
University of Wisconsin-Madison

For Immediate Release
For More Information:
Stan Temple
(608) 263-6827

HABITAT FRAGMENTATION MAY HASTEN SPRING PEEPERS' DISAPPEARANCE

by Bob Cooney, CALS Agricultural and Consumer Press Service

The annual wetland opera is underway, as Wisconsin's frogs and toads return to their breeding ponds to sing for prospective mates. But the music has diminished in recent years, as frog populations throughout the state have declined over the last decade. In the case of spring peepers, one reason may be habitat fragmentation, according to researchers at the University of Wisconsin-Madison.

Frogs and other amphibians are extremely sensitive to isolation, explains Stan Temple, a wildlife ecologist at the College of Agricultural and Life Sciences. Amphibians occupy two types of habitat on a seasonal basis — breeding habitat and non-breeding habitat. They need wetlands to reproduce. Human activity can easily isolate wetlands, because they are discrete patches on the landscape.

"Frogs are physiologically very sensitive to microclimatic conditions," Temple notes. They dry out easily, and hot, dry conditions quickly kill them. For example, a tree frog needs moist, shaded forests for most of the year, and a pond or other standing water during the breeding season. When you put a hot, dry area in between these habitats, at some critical distance, the frog can't survive the annual migration.

The spring peeper is a perfect example of a woodland tree frog, Temple says. It spends the non-breeding season in the woods and migrates to wetland breeding areas each spring. The tiny frog (it can perch on a dime) is very vulnerable to isolation, he says. Small size equals high surface-to-volume ratio, meaning the peeper dries out quickly.

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SPRING PEEPERS--add one

Two groups of spring peepers make migrations. Adults trek from woods to breeding areas and back in the spring, when it's often cool and moist. Tadpoles emerge as new frogs in the middle of summer. If they have to migrate back to the woods through hot, dry conditions, many won't make it. If the migration is long enough, they all die. You eventually have a localized extinction when all the adults die and there are no young frogs to replace them, Temple expains.

The Wisconsin Department of Natural Resources' Wisconsin Frog and Toad Survey has shown a steady drop in the numbers of most frog species in recent years. Spring peepers, once very abundant, now seem to be declining.

Laura Tate, a graduate student at UW-Madison's Institute for Environmental Studies, studied whether habitat fragmentation is killing off spring peepers. She visited more than 400 wetlands in south-central Wisconsin during the spring peeper breeding season, listening for the peepers' calls ("like the jingling of sleighbells"). On follow-up visits she measured the distance from the wetland to the nearest woodland habitat, and classified the surrounding land use and wetland type (ponds, marshes, wet meadows, seasonally flooded basins, wooded swamps, and ditches).

The distance from the wetland to the nearest woods made a big difference. Peepers sang in 60 percent of the wetlands in contact with woods, but only in about one-third of wetlands that were 1 to 175 yards from woods. No wetland more than 175 yards from a woods was occupied. Wetlands with wooded surroundings were most likely to have spring peepers; those with row crops or pasture were less preferred.

She found that the presence of spring peepers wasn't influenced by wetland size or the presence of other frogs or toads. However, wetland types differed greatly in "peeper-friendliness." Wooded swamps were best; ditches were worst.

Tate found several ponds that still had spring peepers, but had been recently cut off from their nearby woodlands. Will this isolation lead to extinction of breeding populations? Temple will monitor these ponds over the next few years to see how long it takes a population to disappear in this situation.

Temple suspects that the fragmentation scenario applies to other amphibians with similar habitat needs. Declines in amphibians have been documented worldwide, he notes. Other factors linked to the declines include pollution, acid rain, increased ultraviolet light caused by ozone depletion, introduced predators (especially fish that eat tadpoles), and global warming.

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rjc peeper decline 4/96

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NEWS

UNIVERSITY OF WISCONSIN–MADISON

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Office of News and Public Affairs
28 Bascom Hall • 500 Lincoln Drive
Madison, Wisconsin 53706-1380

FOR IMMEDIATE RELEASE 2/16/96

UW-MADISON NEWS BRIEFS

ANNUAL VARSITY BAND CONCERT TICKETS TO GO ON SALE

Tickets for the 1996 Varsity Band Concert will go on sale Monday, Feb. 19.

Excerpts from George Gershwin's "Porgy and Bess" and Andrew Lloyd Webber's "Sunset Boulevard" will highlight the concert, April 11-13. In addition to pieces from "Porgy" and "Boulevard," this year's show will include traditional UW favorites, rock and music from the Big Band era. Director Michael Leckrone also promises some musical remembrances of the marching band's past season, as well as appearances by surprise guest artists.

During its 22-year history, the event has evolved from a modest presentation to a sophisticated multimedia extravaganza, often featuring rock-star-caliber technology such as lasers, video back projections, electronic effects and even fireworks.

Each concert will begin at 7:30 p.m. in the UW Field House. Tickets, $10, are available beginning Monday, Feb. 19 at the Vilas Hall box office, 821 University Ave., (608) 262-1500. UW students can receive a $2 discount on tickets for the April 11 performance by showing valid university identification. For more information, contact Gail Johnson in the UW Bands office, (608) 263-1896.

— Barbara Wolff, (608) 262-8292

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DICKEY TO CHAIR STATEWIDE TASK FORCE

Walter Dickey, professor of law at the UW-Madison Law School, has been appointed by Gov. Tommy Thompson to chair a new statewide task force that will be taking an in-depth look at the state's corrections system.

Dickey, former state corrections chief and a nationally recognized expert on criminal law and corrections, will head the Governor's Task Force on Corrections. The 10-member

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Environmental Studies, Institute for

task force will study ways of making the corrections system more efficient and cost-effective. It is expected to deliver a preliminary report to the governor sometime this summer.

While other parts of the state budget are being trimmed, Wisconsin's corrections budget is growing at a breakneck pace. The corrections budget increased by 13 percent in 1994 and by 10 percent in 1995. The state's inmate population at the end of 1995 was 11,274 — in a system designed for 7,499 inmates.

— Bill Arnold, (608) 262-0930

###

UW'S ENVIRONMENTAL PROGRAMS GIVEN NATIONAL RECOGNITION

UW-Madison's innovative environmental management programs have received some national recognition.

In January, Renew America, a Washington D.C.-based coalition of environmental, government, business and community organizations, selected the university's Environmental Management office and Campus Ecology Research Project for inclusion in its "Environmental Success Index," a database of more than 1,600 outstanding programs nationwide.

UW-Madison's environmental management programs are supported by the university's Division of Facilities Planning and Management and the Institute for Environmental Studies.

Specifically, the achievements of two initiatives were recognized by Renew America: the Solid Waste Alternatives Project (SWAP), which promotes the procurement of recycled products, re-use of previously discarded items, and recycling of non-traditional materials by university departments; and the Transportation Demand Management Project, an effort to reduce the number of faculty and staff who commute alone to campus by vehicle.

Renew America describes itself as the only national organization that specializes in identifying, verifying and promoting examples of successful environmental programs.

The organization will host a satellite teleconference entitled "Environmentally Sustainable Communities National Town Meeting" on Feb. 26. The live, 90-minute teleconference will feature: David Brower, chair, Earth Island Institute; Henry Cisneros, secretary, U.S. Department of Housing and Urban Development; Emanuel Cleaver, mayor, Kansas City, Mo.; Christine Ervin, assistant secretary, energy efficiency and renewable

energy, U.S. Department of Energy; Al Weed, chair, sustainable economic development working group, Thomas Jefferson Sustainability Council, Charlottesville, Va.; and Deborah Potter, national broadcast journalist.

The teleconference will start at 2:30 p.m. and will be followed by a one-hour panel discussion on sustainability sponsored by the Institute for Environmental Studies. The viewing and panel discussion will be held in 3070 Grainger Hall. The event is free and open to the public.

For more information, contact Renew America at (202) 232-2252, or via email at renewamerica@igc.apc.org.

Campus Environmental Management has a web site at http://env.fpm.wisc.edu.

— *Bill Arnold, (608) 262-0930*

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UW–MADISON'S SUMMER BULLETIN/TIMETABLE AVAILABLE NOW

The 1996 UW–Madison Summer *Bulletin/Timetable* is currently available at all major campus information centers including both Unions, the Campus Assistance Center, and the Peterson Building Information Desk, as well as the Summer Sessions Office at 905 University Ave.

In addition to class schedules for more than 1,600 credit courses in a variety of one- to 14-week sessions, the publication features dozens of special focus programs, both credit and noncredit, such as a *Windows on the World* program on Russia and two *University Summer Forums* on families and the 1996 elections. The *Bulletin/Timetable* also contains information on housing, fees, services and facilities, and touch-tone registration which begins April 8. Two of the major sessions this summer are the Three-Week Early Session, May 28-June 16, and the Eight-Week General Session, June 17-Aug. 11.

Persons interested can pick up a free copy of the '96 Summer *Bulletin/Timetable* at one of the information centers listed above, or request a copy by mail by calling the Summer Sessions Office at (608) 262-2115 (evenings and weekends, (608) 262-4352); fax (608) 265-2901.

###

Environmental Studies, Institute for

Institute for Environmental Studies

25 YEARS

INTERDISCIPLINARY STUDY OF PEOPLE AND THE ENVIRONMENT

Vital, Dynamic, and Committed to the Future

Degradation of the earth's physical and biological environment poses a grave problem for mankind. This degradation has serious social, cultural, economic, and esthetic consequences, and there is growing evidence that these consequences could reach catastrophic proportions. We must have deeper understanding of the physical and biological effects of the natural and man-made environment upon man. We must have a deeper understanding of the relationship of all living things to their physical and biological surroundings. The university, as the foremost instrument for the advancement of knowledge in our society, has a clear moral as well as a social responsibility to mobilize its resources to aid in the solution of this problem.



Those words, written 25 years ago by an interdisciplinary faculty committee at UW–Madison, still ring true. Humanity has made significant strides since then to control pollution, conserve energy and natural resources, safeguard human health, and protect nature. But many environmental problems persist, and new ones have emerged. The more we learn about the environment and our interactions with it, the clearer it becomes that simple solutions are rare.

The university in 1970 heeded the faculty committee's recommendation to establish a free-standing Institute for Environmental Studies (IES) devoted to *interdisciplinary* environmental scholarship. In an institution built upon the bedrock of traditional academic disciplines, the idea was controversial. Nevertheless, its advocates, themselves products of the disciplines, contended that many environmental problems could not be addressed solely within the boundaries of conventional academic fields. The university, they said, needed a mechanism to enhance collaboration across disciplines.

For this purpose IES was born. It was given the dual role of developing its own interdisciplinary instruction, research, and outreach programs as well as aiding environmental programs within the colleges and departments. This unique mission frequently takes IES into uncharted territory. Its efforts during the past 25 years have yielded disappointments as well as successes, but the institute has learned from and built upon all of these experiences.

IES begins its second quarter century as a vital, dynamic part of the university with faculty, staff, and students as dedicated as ever to the goals set for them in 1970. Here is a portrait of the institute at 25.

Educating for the Environment

Instruction is the lifeblood of the Institute for Environmental Studies. Year-round, IES offers more than 70 different courses, some independently and others in conjunction with UW–Madison's schools and colleges. Together, these courses attract thousands of students each year. The range of subjects is extraordinary: from environmental health to environmental ethics, from natural resources to natural hazards, and from climates of the past to energy sources of the future. The emphasis, especially in courses developed by IES, is interdisciplinary. The object is to blend the wisdom of many academic fields.

For students seeking environmental careers, or for those who simply wish to understand environmental matters in more depth, IES offers several distinct *degree programs* and optional *curricula*. Further information about each is available from the IES Academic Programs Office in 70 Science Hall.

Undergraduate Programs

Environmental Studies Certificate Program

This interdisciplinary program introduces students to environmental problems from the humanistic, social, and scientific perspectives. Any UW–Madison undergraduate can earn a Certificate in Environmental Studies through IES. Each student takes at least 26 credit hours of courses recommended by the institute to complement his or her academic major. Students who satisfy the requirements receive IES certificates with their degrees, and completion of the program is noted on their transcripts. Undergraduates in more than 40 different majors, from economics to civil engineering, have taken part in the certificate program.

International Study in Environmental Sciences

UW–Madison undergraduates interested in the environment can expand their horizons by studying for a semester or two at the University of Guelph in Ontario, Canada, under a student exchange program established in 1994 by IES and the University of Guelph's Faculty of Environmental Sciences.

Graduate Degree Programs

Conservation Biology and Sustainable Development Program

(Degree offered: M.S.) Understanding the complex interactions between natural ecosystems and human societies is essential for ecologically sustainable development that meets the growing needs of humanity while protecting the integrity of nature. The Conservation Biology and Sustainable Development Program, established in 1990 in cooperation with the College of Letters and Science and College of Agricultural and Life Sciences, promotes this kind of understanding. Its unique interdisciplinary curriculum combines studies of the nature and value of biological diversity with studies of the economic and social dimensions of development.

Environmental Monitoring Program

(Degrees offered: M.S., Ph.D.) Remote sensing and geographic information systems (GIS) offer sophisticated and powerful tools for monitoring the environment on large geographic scales over time. Students in the Environmental Monitoring Program learn to employ these technologies in fields of their choice, from forestry to urban planning. They emerge as interdisciplin-

continued on page 2

IES at 25

continued from page 1

nary specialists who can apply remote sensing and GIS methods to problems in environmental and natural resources management. The Environmental Monitoring Program is one of the oldest and largest graduate programs of its kind in the United States.

Land Resources Program

(Degrees offered: M.S., Ph.D.) Half a century ago, conservationist Aldo Leopold proposed adoption of a "land ethic" encompassing not only land but also air, water, and the associated biomes. Inspired by Leopold's interpretation of "land," this interdisciplinary graduate program accommodates students who wish to broaden their understanding of land resources or pursue special education in technical, social, or management aspects of these resources. The program provides opportunities for interdisciplinary study and research outside the realms of traditional academic departments. It encourages independence and creativity in the development of curricula; however, every student is expected to enter the program with a specific area of interest that will lead to a thesis or dissertation. At the master's level, students also may elect either of two special curricula in air resources management or energy analysis and policy (see *Optional Graduate Curricula*).

Water Resources Management Program

(Degree offered: M.S.) Careful management of water resources requires knowledge of the biological and physical sciences (to identify and evaluate resource problems), engineering (to define technological alternatives) and law and the social sciences (to determine needs and potential for institutional response). Students in the Water Resources Management Program become familiar with each of these academic areas while also pursuing an elective specialty. The curriculum concludes with a group practicum in which student teams grapple with actual public water management problems.

Environmental Studies and Law Dual Degree Program

(Offered at the M.S. and Ph.D. levels in all IES graduate degree programs.) Environmental problems frequently raise legal issues whose resolution demands knowledge of law *and* the environment. The need for professionals with this combination of expertise is growing. The Environmental Studies and Law Dual Degree Program enables UW–Madison students to combine studies in law with *any* IES graduate degree program.

Optional Graduate Curricula

Air Resources Management Curriculum

(Offered at M.S. level in the Land Resources Program.) This curriculum combines study in science, economics, health, engineering, ecology, and policy to address air management issues at the local and ecosystem scales. It was introduced in 1993 to meet a growing demand in both the public and private sectors for professionals in air quality management. Students who complete the curriculum earn a master of science degree in land resources with an emphasis in air resources management.

Energy Analysis and Policy Curriculum and Certificate

(Offered at the M.S. level in IES's Land Resources Program, the La Follette Institute of Public Affairs, and the Department of Urban and Regional Planning.) This interdisciplinary curriculum integrates the study of technical, environmental, economic, political, and social factors that shape energy policy formulation and decision-making. It is designed to prepare students for professional work with governments, utilities, energy companies, consulting firms, and other organizations concerned with energy.

Faculty and Staff

The heart of IES's academic programs is its faculty and staff. More than 150 professors teach courses for the institute, advise its students, and oversee its undergraduate and graduate programs. Virtually all IES faculty members are based in traditional departments. These professors represent roughly 35 different disciplines in the natural, social, and health sciences, engineering, the humanities, business, and law. (See *Faculty Profiles* and *IES Faculty*.)

IES's professional and classified staff works in close partnership with the faculty. Because most faculty members can devote only a limited portion of their time and energy to IES, the staff plays a crucial role in maintaining its academic programs and activities.

Students and Alumni

Interest in environmental studies at UW–Madison has never been greater.



About 200 *undergraduate* students are enrolled in the Environmental Studies Certificate Program. An additional 260-plus students are enrolled in IES's *graduate* programs. All of the graduate programs limit enrollment, and admission is increasingly competitive.

The emphasis is interdisciplinary... the object is to blend the wisdom of many academic fields.

IES attracts students from throughout the United States and around the world. Many come with both outstanding academic records and years of professional experience related to their chosen fields of study. Over the years, more than 1,100 people have earned certificates or graduate degrees through IES. They now live and work in most U.S. states and more than 20 other countries. By 1995, approximately 250 students had earned IES undergraduate certificates since they became available in 1979. At the graduate level, water resources management, the oldest IES program, listed almost 500 graduates; land resources, roughly 265; environmental monitoring, about 60; and conservation biology and sustainable development, nearly 20. More than 50 students had earned certificates in energy analysis and policy.

In a survey of graduate-level IES alumni conducted in the late 1980s, 94 percent of the respondents said their first jobs after graduation were related to their graduate study. Seventy-three percent found jobs in their preferred geographic locations, and 71 percent found permanent employment. Thirty-three percent secured jobs before they graduated; another 48 percent were hired within six months of completing their degrees. Sixty-eight percent said they were either satisfied or very satisfied with their first jobs.

At the time of the survey, 47 percent of IES graduate-program alumni were employed by state governments, 22 percent by private businesses (primarily consulting firms, public utilities, and high-technology companies), and 12 percent by the federal government. Smaller percentages were employed by private, not-for-profit organizations and by academic institutions.

Advancing Environmental Knowledge

Much is already known about the environment, but every new problem or issue raises new questions. Only careful research can answer those questions. The Institute for Environmental Studies encourages and enables researchers from all corners of the university to collaborate on common concerns.

The variety of basic and applied research conducted by IES over the years is impressive. So, too, is the roster of agencies, foundations, and businesses that have awarded the institute more than $45 million in research grants since its inception. Recent topics of study include:

- climate change and its potential impacts
- uses of new technology in environmental monitoring
- local and regional water management
- effects of pollution on human health
- restoration of disturbed ecosystems
- ecological sustainability and economic development
- energy production, consumption, and conservation.

Within IES, several centers, programs, and units serve as focal points for research in climatology, environmental remote sensing and geographic information systems, and ecology.

Research Centers

Center for Climatic Research

Understanding the causes, mechanisms, and evolution of world climate patterns and the impact of climate on ecosystems is the concern of the Center for Climatic Research (CCR). Its researchers attempt to diagnose and model the behavior of past and present climates and to strengthen the ties between climate science and earth system science.

CCR plays a leading role in the Cooperative Holocene Mapping Project, an international consortium of scientists from more than 20 institutions who are attempting to reconstruct and understand the history of climate and environmental change over the past 18,000 years.

The center also participates in multi-institutional studies of climates dating back to much earlier periods in the Earth's history.

continued on back page

From the Director

Our University and Environmental Stewardship

By Thomas M. Yuill

Is it too late? Human well being, even survival, depends on maintaining a supportive environment. We must become better environmental stewards if we are to preserve the resource base that supports us all.

Our planet will be called upon to support double or triple today's population by the end of the next century. Burgeoning human populations and a consumptive lifestyle are altering and degrading the environment that sustains us. We have many serious problems to solve, and soon:

Loss of genetic resources. "The diminishing of the earth's biological diversity has consequences far more profound than other, sometimes more widely recognized, environmental dilemmas." So begins a 1992 report, *Conserving Biodiversity*, by a National Research Council panel on science and technology for international development. The extinctions we cause essentially throw away the genetic building blocks of ecosystems and limit their ability to meet the environmental changes that surely will come. Extinctions in inadequately studied ecosystems such as tropical rain forests also eliminate life forms of potential utility for humankind, often before we even know that these species exist.

Loss of soil and water. "Just keeping up with world population growth for one day requires an additional 83,000 tons of grain," writes Lester Brown of the World Watch Institute in *Vital Signs 1994*. Soil erosion or degradation reduces agricultural production in many parts of the world. Depletion of aquifers and pollution reduce water availability for production, drinking and industry. Competition for limited water supplies becomes an increasing cause of national and international conflict. Incidence of water-borne diseases increases due to poor sanitation.

Desertification. Deserts encroach on formerly productive lands in many places around the world.

Air pollution. The industrialized nations are improving air quality through monitoring and emission-prevention measures. But air pollution in emerging megacities in developing countries increases respiratory disease among urban dwellers and has adverse impacts on more distant agricultural and forest ecosystems.

Ecosystem deterioration. Damaged ecosystems do not provide the "services" they once did. Loss of forests and wetlands, for example, reduces the capacity of watersheds to regulate and purify water, recycle nutrients, and sustain a variety of life forms.

Energy scarcity. The global energy crisis returns if no cheap, clean substitutes for fossil fuel become available soon. Declining petroleum supplies will adversely affect the supply and price of food produced by energy-intensive agricultural systems, with particular impact on the poor. Continued deforestation exacerbates the current third world rural energy crisis as fuel wood becomes more scarce.

Of all institutions, universities potentially are best equipped to understand, prevent, and solve environmental problems.

Emerging plagues. Ecological changes are favoring the spread of diseases of people, animals, and plants. Some of these diseases are familiar; others have not been seen before. Aggressive animal and plant pests are inadvertently introduced into new areas, where they spread rapidly, causing economic loss and displacing native species.

Rapid global climate change. "Among global environmental threats, climatic changes are most likely to affect international politics, especially between the industrialized North and the developing South," contends Peter Gleik of the Pacific Institute for Studies in Development, Environment, and Security in a 1993 book, *Taking Sides*. The earth's climate has continuously changed and affected ecosystems and human activity in the past. It is difficult to predict how much and how rapidly precipitation and temperature patterns will be affected by discharge of greenhouse gasses into the atmosphere. Nor is it clear that contemporary intensive agriculture will be able to adapt rapidly enough to climatic shifts to avoid massive famine, given the energy, soil, and water problems that also will be prevalent.

What will it take to solve or prevent these environmental problems?

They are complex, and not amenable to simple, piecemeal solutions. Ultimately, environmental stewardship requires changes in human behavior based on an understanding of the consequences of what we do individually and collectively, and on having viable alternative courses of action. Attaining a commitment to responsible environmental stewardship among a majority of the planet's five billion (and increasing) inhabitants is daunting, but there is no alternative if an acceptable level of life for the majority of individuals of our species is to be achieved.

What is the responsibility of the university?

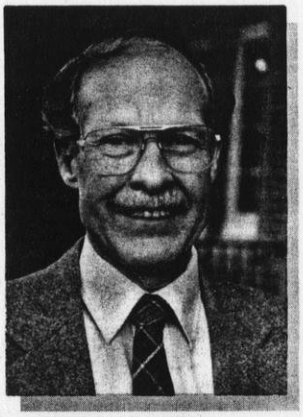
Of all institutions, universities potentially are best equipped to understand, prevent, and solve environmental problems. Nowhere else does the breadth and depth of human knowledge reside in one place. But universities must evolve new ways to function. Environmental problems will be successfully dealt with only to the extent that specialized knowledge from disparate fields can be integrated into cohesive holistic concepts and actions. To do that effectively, universities must add a new dimension to their traditional structure and operational style. That requires the development of learning/action matrices that integrate the disciplinary strengths of individual faculty, staff, and students across the campus.

Can our campus meet the challenge?

Our university made a commitment to new approaches to environmental problems when faculty, the administration, and the regents created the Institute for Environmental Studies 25 years ago. That commitment was reaffirmed when then-Provost David Ward signed the Talloires Declaration in 1990, pledging priority attention to understanding and improving the environment. IES is meeting its all-campus environmental mandate through its interdisciplinary instructional programs, research, and outreach.

Is our campus doing enough?

Given the magnitude and urgency of environmental problems locally, nationally, and around the world, the answer is no. IES alone cannot meet the environmental challenge. More campus units and individuals must become involved, and as part of the environmental learning/action matrix. There is good news: Individual students, staff members, and faculty members are recognizing the importance of environmental quality to human welfare and becoming active. More departments and colleges are



incorporating environmental concerns into their missions. That establishes and energizes the base upon which the environmental matrix must be built.

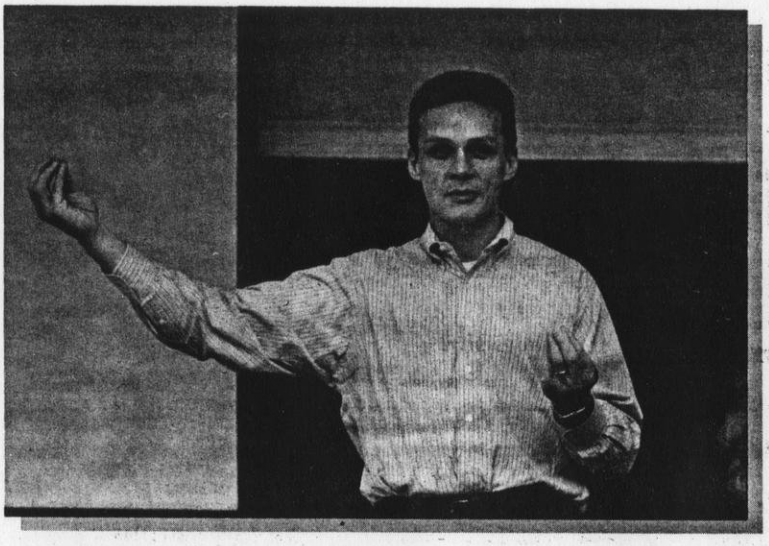
There is also bad news: Shrinking budgets, declining faculty and staff numbers, and reduced enrollments tend to evoke a focusing inward on the traditional structure, disciplinary areas, and individual scholarship rather than outward to seek innovative approaches to the new challenges that society faces. The risk of the traditional inward focus is that the public will conclude, as some of our critics have already noted, that "society has problems and the university has departments" and decide that the university is an irrelevant institution no longer worthy of public support.

Environmental problems are complex. They will not be solved by specialists working alone, however gifted these experts may be in their own disciplines. Our university must continue to lead the way in bringing together the natural and social sciences, humanities, and engineering and focusing them on environmental challenges in new and innovative ways.

Our civilization now seems less likely to end overnight in nuclear holocaust but well could fall over the coming years with accelerating deterioration of our environmental life-support systems. If we are unable or unwilling to deal with that now, then the pessimists are right — it is indeed too late.

Thomas Yuill, a professor of pathobiological sciences, animal health and biomedical sciences, wildlife ecology, and environmental studies, became director of the Institute for Environmental Studies in 1993. Before that, he was associate dean for research and graduate training in the School of Veterinary Medicine for 11 years. Yuill is a past president of the Wildlife Disease Association and the Organization for Tropical Studies.

Faculty Profiles



Dedicated and Diverse

IES's faculty is ever changing, reflecting the evolving interests and commitments of the UW–Madison faculty as a whole. Professors from throughout the campus—more than 150 in all—currently participate in IES.

They do so not by obligation but by choice. On these pages, three current IES faculty members —a social scientist, a natural scientist, and an engineer —explain why.

Kevin McSweeney

It's a marvelous opportunity to broaden your own view of the world.

A semester-ending stream of students finds its way to Kevin McSweeney's office on the fourth floor of King Hall. McSweeney, a professor of soil science and environmental studies, greets each request for advice, a critique, or more time with a mix of humor and patience. It's clear that he expects good work, but he's flexible with his deadlines.

While those qualities have made him popular with students, his colleagues have also taken notice. The College of Agricultural and Life Sciences at UW–Madison honored him with an Outstanding Teacher Award in 1992, his ninth year on the faculty.

His efforts to meet the needs of his students led McSweeney to link up with the Institute for Environmental Studies in 1987.

"A number of students who were soil science majors, or majors in other disciplines in the College of Agricultural and Life Sciences, wanted to enroll in IES's undergraduate certificate program, and there was a need for broadening the base of undergraduate advisers for that program."

McSweeney readily observes that he, too, has benefitted from his connection with IES. "The breadth of scholarship that you can tap into is certainly very enriching for me," he says. "It's a marvelous opportunity to broaden your own view of the world and get involved in issues that you might not even have considered if you just remained in your traditional domain. It's an exposure to areas of inquiry and scholarship that, for me, is intriguing."

McSweeney's research reflects his expansive approach. Among other things, he is the principal investigator in a landscape-characterization project in IES's Environmental Remote Sensing Center. The project, funded by the National Science Foundation, draws on satellite data, ground-based research, and other information to create an accurate picture of the so-called driftless area of west-central Wisconsin.

McSweeney has also conducted research in Latin America and recently linked up with the university's Latin American and Iberian Studies Program. He's a strong believer in the merits of cross-pollination between academic disciplines, an attitude that has led him to become more involved in the governance of IES.

"It's very nice to have a forum that allows you to meet and interact with faculty members from across the campus, addressing a variety of issues," says McSweeney. "It's also nice to have an opportunity to work with people who share a common interest in interdisciplinary education of undergraduate and graduate students, and who are also keen to foster interdisciplinary research on campus."

Philip O'Leary

Looking at environmental problems from a number of viewpoints is important.



For Philip O'Leary, the term "outreach" must have special meaning. It not only defines most of what he does, it recently carried him as far as 6,000 miles from home.

O'Leary, an associate professor of engineering professional development, agricultural engineering, and environmental studies, directs the Solid and Hazardous Waste Education Center, based in UW-Extension and on the UW campuses in Madison, Green Bay, and Stevens Point.

During the past year, O'Leary's work has taken him several times to Hungary and Poland, where he is helping establish a training institute for landfill managers.

"That involves going there, organizing the instructors, writing all the manuals, and directing their activities," he explains.

O'Leary says the Eastern European nations face a huge task in cleaning up their waste disposal practices.

"The magnitude is large, funds are very limited, and these communities have many other problems that must be addressed as they convert to democracy and market economies," he says. "Most of the locally elected governments have been in existence for only four years."

O'Leary's landfill training seminars generally keep him a bit closer to home, at least relatively so. His recent itinerary included stops in California, Colorado, and New York to share knowledge developed in Wisconsin.

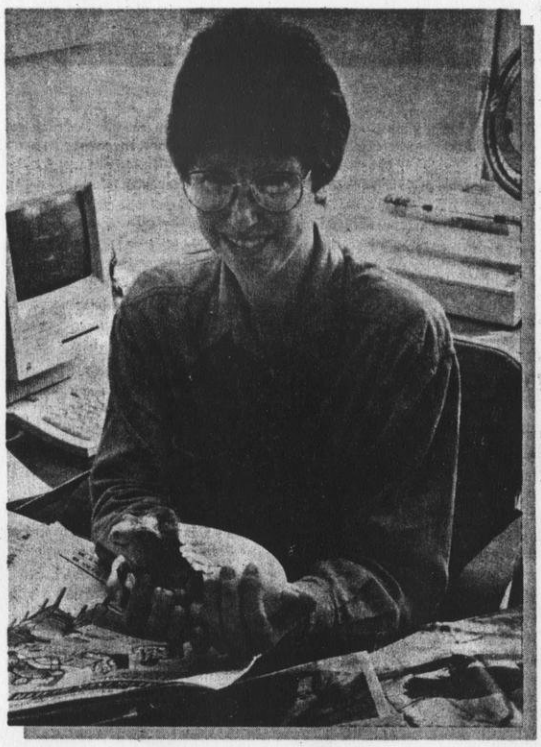
Of course, O'Leary also helps Wisconsin communities and businesses keep up with the changing world of waste disposal.

"Our center works with local officials in implementing the new recycling laws that came into play on January 1 in Wisconsin," he says. "We also work with Wisconsin business and industry to reduce the amount of toxic and hazardous waste they generate. And I am starting a training program for the state certification of Wisconsin landfill managers."

Becoming Involved

Professors in any academic field and at any stage of their career are encouraged to join IES if they would like to participate in its programs or activities.

For further information, contact the Director's Office, 40 Science Hall, 262-5957.



Sharon Dunwoody

I like dealing with environmental issues....And I'm intrigued by the interdisciplinary approach.

Shortly after Sharon Dunwoody joined the UW–Madison journalism and mass communication faculty in 1981, she found herself being recruited.

"There was a wonderful, close-to-retirement faculty member, Clay Schoenfeld, who had played a major role on campus in environmental communications," says Dunwoody, who specializes in science reporting. "We recognized the linkages between the two of us, and he one day walked in with information about IES and suggested that I explore the program."

Dunwoody, who holds the Evjue-Bascom professorship in journalism and mass communication, soon accepted a joint appointment in environmental studies. Her involvement with the institute has grown ever since. She advises a number of IES graduate students, has served on several policy-making committees, and will chair the institute's academic programs faculty beginning next fall.

To Dunwoody, the connection is only natural. Her popular science writing course always attracts what she calls "a healthy chunk" of IES students, who she describes as especially bright and motivated. It also fits her own interest in communication issues relating to technological risks. She has recently conducted research on media coverage of the Ladysmith mine controversy in northern Wisconsin and surveyed Milwaukee residents following the outbreak of cryptosporidium parasites in the city's drinking water.

"I like dealing specifically with environmental issues," says Dunwoody, a newly elected fellow of the American Association for the Advancement of Science. "And I'm intrigued by the interdisciplinary approach. IES is one of the few units on campus that has made that a part of its responsibility and keeps trying to do it."

Dunwoody acknowledges that it's not easy to get a variety of departments and programs to work together on any set of issues. But she points out that Chancellor David Ward is calling for greater "horizontal" organization throughout the university. Ward has asked the faculty and staff to form more working relationships with colleagues in other departments.

"Universities need to think in these messier terms, and here sits this unit for 25 years that's been trying to think that way. I view IES as a leader in that sense."

O'Leary's career at the university is a road map of growth and progress. He joined the academic staff in 1979 and moved to the faculty five years later. He earned a doctorate in land resources from IES in 1989 and was granted tenure in 1991.

His involvement with IES also has grown. O'Leary co-chairs its outreach committee, which seeks to develop more interest in, and remove barriers to, outreach by IES faculty and staff members. He says he finds IES's interdisciplinary approach appealing.

"I think looking at environmental problems from a number of different viewpoints is really important," he says. "I worked as an engineer for a number of years, and it became clear to me that a lot of the problems that I was working on were not being viewed from all the appropriate perspectives, and that solutions that were being generated satisfied only part of the need."

O'Leary says IES's breadth is often found on individual student advisory committees; he serves on several each year. He says he especially values his interactions with students, and he tries to convey the kinds of problems he runs across in his travels and training seminars.

"We have to deal with real-world problems every day, and those real-world problems are presented to us by people who need answers," he explains. "So when I work with students I just tell them what I've heard from people all over the state and the country about their needs."

25 YEARS

IES Mission and Vision

The mission of the Institute for Environmental Studies is to promote understanding of the environment and to define and solve environmental problems and issues through leadership in interdisciplinary instruction, research, and outreach at all levels, from campus to global.

Our vision is that the Institute for Environmental Studies will help protect and enhance the environment for future generations by seeking environmentally sustainable ways to meet human needs in the 21st century. Specifically, the institute will

- promote environmental literacy among all UW–Madison students, faculty, and staff
- maintain and nurture academic excellence in a broad range of courses and in interdisciplinary degree and certificate programs at the undergraduate and graduate levels
- foster the development of integrated systems of thought and analysis involving concepts and methodologies in the humanities and social, biological, and geophysical sciences
- define, analyze, solve, and prevent environmentally important problems through interdisciplinary research and scholarship
- help meet local, national, and international needs for environmental expertise by preparing managers, policy-makers, scientists, and scholars to work in interdisciplinary teams
- promote comprehensive understanding of environmental issues, problems, and their solutions through a proactive interdisciplinary outreach program for individuals and groups in the private and public sectors
- improve communication and cooperation within the university among groups involved in environmental instruction, research, and extension programs.

IES Faculty

GOVERNANCE FACULTY

Professors

Timothy F. Allen *(also botany, integrated liberal studies)*
Mary P. Anderson *(also geology and geophysics)*
Anders W. Andren *(also civil and environmental engineering)*
David E. Armstrong *(also civil and environmental engineering)*
Stephen M. Born *(also urban and regional planning)*
Marion R. Brown *(also agricultural journalism)*
Gary D. Bubenzer *(also agricultural engineering)*
Gordon Chesters *(also soil science)*
Arlen C. Christenson *(also law)*
James L. Clapp *(also civil and environmental engineering)*
J. Lin Compton *(also continuing and vocational education)*
James C. Converse *(also agricultural engineering)*
Michael L. Corradini *(also nuclear engineering and engineering physics, mechanical engineering)*
William Cronon *(also history, geography)*
Martin H. David *(also economics)*
Calvin B. DeWitt
Sharon L. Dunwoody *(also journalism and mass communication)*
Herman H. Felstehausen *(also landscape architecture)*
William R. Freudenburg *(also rural sociology)*
Raymond P. Guries *(also forestry)*
John P. Hearn *(also physiology)*
Thomas A. Heberlein *(also rural sociology)*
Evelyn A. Howell *(also landscape architecture)*
Erhard F. Joeres *(also civil and environmental engineering)*
Ralph W. Kiefer *(also civil and environmental engineering)*
John E. Kutzbach *(also atmospheric and oceanic sciences)*
Thomas M. Lillesand *(also forestry, civil and environmental engineering)*
Brent H. McCown *(also horticulture)*
Kevin McSweeney *(also soil science)*
David M. Mickelson *(also geology and geophysics)*
Timothy C. Moermond *(also zoology)*
Bernard J. Niemann, Jr. *(also landscape architecture)*
Peter Nowak *(also rural sociology)*
Garrett J. O'Keefe *(also agricultural journalism)*
Kenneth W. Potter *(also civil and environmental engineering)*
Frank L. Scarpace *(also civil and environmental engineering)*
William C. Sonzogni *(also civil and environmental engineering)*
Charles R. Stearns *(also atmospheric and oceanic sciences)*
Rodney E. Stevenson *(also business)*
James B. Stoltman *(also anthropology)*
John D. Strasma *(also agricultural economics)*
Donald M. Waller *(also botany)*
Thomas M. Yuill *(also pathobiological sciences, animal health and biomedical sciences, wildlife ecology)*

Associate Professors

Jean M. Bahr *(also geology and geophysics)*
John A. Harrington *(also landscape architecture)*
Harvey M. Jacobs *(also urban and regional planning)*
Marty S. Kanarek *(also preventive medicine)*
Jack R. Kloppenburg *(also rural sociology)*
Philip R. O'Leary *(also engineering professional development/agricultural engineering)*
Jae K. Park *(also civil and environmental engineering)*

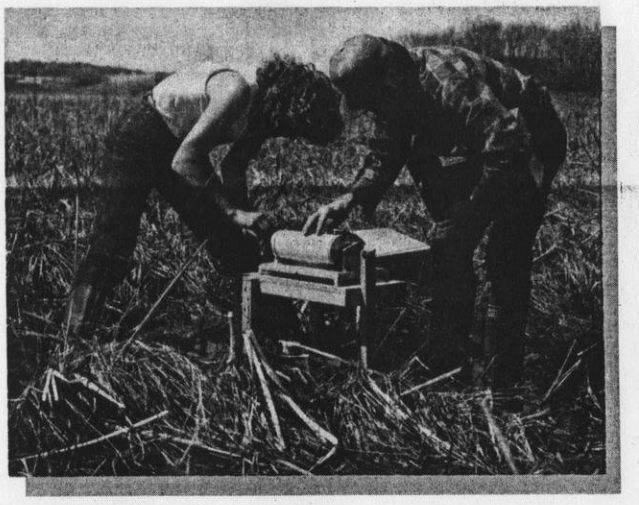
Assistant Professors

Jonathan A. Foley *(also atmospheric and oceanic sciences)*
Stephen J. Ventura *(also soil science)*

AFFILIATE FACULTY

Professors

Michael S. Adams *(also botany)*
Arnold R. Alanen *(also landscape architecture)*
Kenneth A. Albrecht *(also agronomy)*
Fernando L. Alvarado *(also electrical and computer engineering)*
Dan R. Anderson *(also business)*
John H. Andrews *(also plant pathology)*
Richard L. Barrows *(also agricultural economics)*
Richard B. Bilder *(also law)*
Richard C. Bishop *(also agricultural economics)*



James G. Bockheim *(also soil science)*
William C. Boyle *(also civil and environmental engineering, engineering professional development)*
Francis P. Bretherton *(also atmospheric and oceanic sciences)*
Waltraud A.R. Brinkmann *(also geography)*
Joseph Buongiorno *(also forestry)*
Frederick H. Buttel *(also rural sociology)*
Gerald R. Campbell *(also agricultural economics)*
Claudia F. Card *(also philosophy)*
Stephen R. Carpenter *(also zoology)*
Richard E. Chenoweth *(also landscape architecture)*
William L. Church *(also law)*
Jane L. Collins *(also sociology, women's studies)*
Stanley Dodson *(also zoology)*
Joseph W. Elder *(also sociology, South Asian studies)*
Thomas J. Givnish *(also botany)*
Robert M. Goodman *(also plant pathology)*
Linda K. Graham *(also botany)*
Theodore Green III *(also civil and environmental engineering, atmospheric and oceanic sciences)*
Robert K. Ham *(also civil and environmental engineering, engineering professional development)*
Robert H. Haveman *(also economics)*
John A. Hoopes *(also civil and environmental engineering)*
Jack R. Huddleston *(also urban and regional planning)*
Charles R. Irish *(also law)*
Robert L. Jeanne *(also entomology)*
Donald F. Kettl *(also political science)*
James F. Kitchell *(also zoology)*
James C. Knox *(also geography)*
Richard C. Koegel *(also agricultural engineering, mechanical engineering)*
Robert R. Kowal *(also botany)*
Gerald L. Kulcinski *(also nuclear engineering and engineering physics)*
Philip H. Lewis *(also landscape architecture)*
Leon N. Lindberg *(also political science)*
Willis F. Long *(also engineering professional development, electrical and computer engineering)*
Craig C. Lorimer *(also forestry)*
Birl Lowery *(also soil science)*
Frederick W. Madison *(also soil science)*
John J. Magnuson *(also zoology)*
Leonard R. Massie *(also agricultural engineering)*
Russell Middleton *(also sociology)*
John W. Mitchell *(also mechanical engineering)*
Phillip C. Muehrcke *(also geography)*
Alberto Palloni *(also sociology)*
James O. Peterson *(also agricultural engineering)*
Warren P. Porter *(also zoology)*
Ved Prakash *(also urban and regional planning)*
John T. Quigley *(also engineering professional development)*
Kenneth F. Raffa *(also entomology, forestry)*
Kenneth W. Ragland *(also mechanical engineering)*
Robert O. Ray *(also continuing and vocational education)*
Jackie J. Rutledge *(also meat and animal science, genetics)*
Charles T. Snowdon *(also psychology, zoology)*
Sara M. Steele *(also continuing and vocational education)*
Walter R. Stevenson *(also plant pathology)*
James H. Stewart *(also curriculum and instruction)*
Jeffrey C. Stier *(also forestry)*
Richard J. Straub *(also agricultural engineering)*
B. Robert Tabachnick *(also curriculum and instruction, educational policy studies)*
Stanley A. Temple *(also wildlife ecology)*
William Thiesenhusen *(also agricultural economics, agricultural journalism)*
William H. Tishler *(also landscape architecture)*
Larry E. Travis *(also computer sciences)*
Thomas R. Vale *(also geography)*
Alan P. Vonderohe *(also civil and environmental engineering)*

Associate Professors

Mark Bassin *(also geography)*
William F. Bleam *(also soil science)*
Theodore Garland *(also zoology)*
Jess Gilbert *(also rural sociology)*
Stith T. Gower *(also forestry)*
Jo Handelsman *(also plant pathology)*
Thomas W. Jeffries *(also bacteriology)*
William H. Karasov *(also wildlife ecology, zoology)*
Judith L. Ladinsky *(also preventive medicine)*
Benjamin Marquez *(also political science, Chicano studies)*
Kirin Narayan *(also anthropology, South Asian studies)*
Jennifer L. Parke *(also plant pathology)*
Joshua Posner *(also agronomy)*
Joan T. Schmit *(also business)*
Karen B. Strier *(also anthropology, zoology)*
Brian S. Yandell *(also statistics, horticulture)*
Karl S. Zimmerer *(also geography)*

Assistant Professors

Teresa M. Adams *(also civil and environmental engineering, engineering professional development)*
Vicki M. Bier *(also industrial engineering, nuclear engineering and engineering physics)*
Jay S. Coggins *(also agricultural economics)*
Denis Collins *(also business)*
William J. Hickey *(also soil science)*
James A. LaGro, Jr. *(also landscape architecture)*
Arik M. Levinson *(also economics)*
Zhengyu Liu *(also atmospheric and oceanic sciences)*
Catherine M. Price *(also history, American Indian studies)*
Robert W. Provencher *(also agricultural economics)*
Dennis J. Ray *(also business)*
Jess D. Reed *(also meat and animal science, dairy science)*
Glen R. Stanosz *(also plant pathology, forestry)*

ADJUNCT FACULTY

Professors

Henry A. Anderson *(also preventive medicine)*
James P. Bennett
Shel Feldman

Associate Professor

D. David Moyer

VISITING FACULTY

Associate Professors

Jan W. Bol
Filomena C. Steady



IES Offices, Programs, and Centers

Director
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Madison, WI 53706-1491
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608/262-0014 (Fax)

Administrative Services
550 North Park St., 64 Science Hall
Madison, WI 53706-1491
608/262-6532 (Phone)
608/262-0014 (Fax)

Public Information/Library
550 North Park St., 15 Science Hall
Madison, WI 53706-1491
608/263-3185 (Phone)
608/262-0014 (Fax)

Academic Programs
550 North Park St., 70 Science Hall
Madison, WI 53706-1491
608/262-0651 (Graduate Programs)
608/263-1796 (General Information and Undergraduate Programs)
608/262-2273 (Fax)

Center for Climatic Research
1225 West Dayton St., Room 1139
Madison, WI 53706-1695
608/262-2839 (Phone)
608/262-5964 (Fax)

Climate, People, and Environment Program
1225 West Dayton St., Room 1333
Madison, WI 53706-1695
608/265-5144 (Phone)
608/262-5964 (Fax)

Environmental Remote Sensing Center
1225 West Dayton Street, Room 1249
Madison, WI 53706-1695
608/262-1585 (Phone)
608/262-5964 (Fax)

Wisconsin Cooperative Research Unit, National Biological Service
610 Walnut St., 1007 WARF Building
Madison, WI 53705-2336
608/262-9937 (Phone)
608/263-0339 (Fax)

Special Anniversary Events

1995 University Summer Forum
June 20–July 13, 1995

Will There Be Enough Food on the Table?

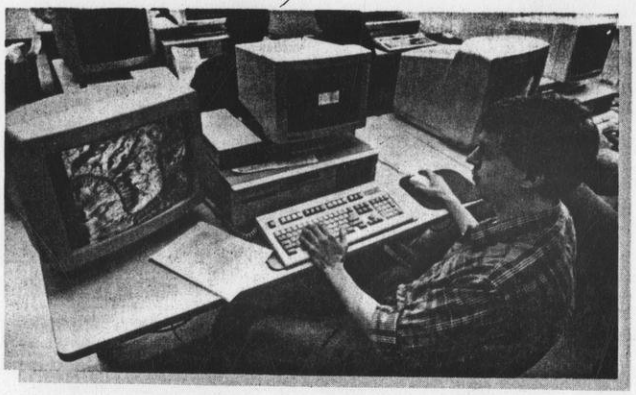
Seven free public lectures on the future availability of food. Lectures begin at 7:30 P.M. every Tuesday and Thursday from June 20 through July 13 except July 4. Also offered as a course (Envir St 400) for one or two credits. Co-sponsored by IES and Summer Sessions. Further details available in spring.

IES 25th Anniversary Symposium
September 28–October 1, 1995

The Search for Environmental Solutions

An examination of past, present, and future efforts to solve and prevent environmental problems. Symposium will include free public lectures by noted policy experts, educators, and activists. Further details available in spring.

Photos on pages 1 and 8 courtesy of John Hendrickson; on page 4, Departments of Agricultural Journalism and Engineering Professional Development; on pages 5 and 7, Office of News and Public Affairs.



Milestones in IES History

1964

Faculty Interdisciplinary Studies Committee identifies environmental studies as area of great campus potential.

1966

Special Committee on Environmental Studies, representing deans, urges creation of free-standing unit for research, teaching, and service in interdisciplinary environmental studies; recommends that unit serve as umbrella for appropriate existing programs and centers.

1967

Ad hoc faculty committee establishes experimental Institute for Environmental Studies as research program of Graduate School.

1969

Chancellor-appointed faculty Environmental Studies Advisory Committee reiterates 1966 recommendations of Special Committee on Environmental Studies.

1970

Chancellor and Board of Regents approve reorganization of Institute for Environmental Studies into comprehensive, independent academic unit. Reid Bryson appointed first director.

Marine Studies Center, Center for Climatic Research, Lake Wingra Ecological System Study Group, Remote Sensing Study Group join institute.

Faculty members from across campus begin to affiliate with IES, develop interdisciplinary courses, supervise students seeking joint and special committee degrees.

1971

National Science Foundation awards first major institutional grant to IES: $1.5 million from the Research Applied to National Needs Program.

1972

Three new centers (Geographic Analysis, Biotic Systems, Human Systems) and new groups (Environmental Monitoring and Data Acquisition, Quantitative Ecosystems Modeling) created to accommodate IES research.

Earthwatch Radio debuts on 12 Wisconsin radio stations.

1973

Water Resources Management Graduate Program, founded in 1965, affiliates with IES.

1976

Land Resources Graduate Program established.

1977

Environmental Monitoring Graduate Program established.

1979

Environmental Studies Certificate Program for undergraduate students established.

1980

Energy Analysis and Policy Curriculum and Certificate established.

Environmental Monitoring and Data Acquisition Group renamed Environmental Remote Sensing Center.

1985

Reid Bryson retires after 15 years as IES director. Arthur Sacks becomes acting director.

1986

Arthur Sacks appointed second director of IES.

1989

National Park Service establishes Great Lakes Cooperative Park Studies Unit at UW–Madison, with IES as administrative home.

1990

Conservation Biology and Sustainable Development Graduate Program established.

Arthur Sacks resigns; Daniel Bromley becomes acting director.

1991-92

Inactive IES research centers discontinued.

1993

Thomas Yuill becomes third director of IES.

Air Resources Management Curriculum introduced.

Climate, People, and Environment Program established.

Environmental Studies and Law Dual Degree Program approved.

1994

Environmental Sciences Student Exchange Program for undergraduates initiated with University of Guelph, Canada.

IES at 25

continued from page 2

With research grants from a variety of agencies, the center's scientists recently have investigated

- the causes of ice ages
- millennia-scale changes in monsoon climates of Africa, Asia, and South America
- the role of mountain uplift and continental plate movements in climate changes over the last 10 to 200 million years
- numerical and physical models of the earth's atmosphere and ocean
- relationships between vegetation change and climate change
- the nature and causes of short-period climate change.

CCR researchers work closely with the National Center for Atmospheric Research (NCAR) in Boulder, Colorado, whose CRAY supercomputer they use to develop, test, and refine sophisticated general circulation models of the atmosphere. CCR's own facilities include a radiocarbon dating laboratory that serves scientists nationwide.

Environmental Remote Sensing Center

High-quality data about the earth's environment and resources are needed for proper environmental and resource management. Remote sensing, a technology whose tools range from aerial photography to advanced digital satellite imaging, is one way of gathering such data. Computerized geographic information systems (GIS) are a new technology that is revolutionizing how these kinds of data can be used.

The Environmental Remote Sensing Center (ERSC) conducts research (1) to combine and refine these technologies and (2) to apply them in new ways to the management of natural resources, especially on large geographic scales over time. The center is closely tied to IES's Environmental Monitoring Graduate Program.

ERSC operates an extensive network of specialized work stations that can store, retrieve, process, and analyze digital image data rapidly. It also possesses a broad array of hardware and software to support its research in GIS applications. A network link to UW–Madison's Space Science and Engineering Center enables ERSC to acquire current data from satellites operated by the National Oceanic and Atmospheric Administration.

Recent research efforts have ranged from non-point source pollution modeling to development of soft-copy photogrammetry systems. The center plays key roles in two endeavors using data provided by satellites: an interagency land-cover mapping project in Wisconsin and a biodiversity assessment of the Upper Midwest that is part of a larger, national program.

ERSC has helped Dade County, Florida, develop a system to monitor the recovery of native vegetation following Hurricane Andrew. It is now helping the U.S. Army evaluate and monitor human environmental impacts, archaeological remnants, and desert flora and fauna at the Fort Bliss Army Reservation in Texas and New Mexico.

Special Programs and Units

Climate, People, and Environment Program

Endowed in honor of IES's first director, climatologist Reid A. Bryson, this interdisciplinary program supports a distinguished professor and graduate research fellows who study large-scale relationships and interactions between climate, people, and the environment.

Pre-college Program in Environmental Studies for Native American Youth

Begun in 1992 as a workshop in water resources for teenagers at Wisconsin's Lac Courte Oreilles Indian Reservation, this program has evolved into an intensive two-week exploration of nature and the environment for young Native Americans from throughout Wisconsin and elsewhere. Offered every summer, the program combines field and laboratory studies on Wisconsin Indian reservations and in the Madison area.



National Biological Service Wisconsin Cooperative Research Unit

This unit, formerly part of the National Park Service, helps coordinate and facilitate research, technical assistance, and other joint activities between UW–Madison and the National Biological Service of the U.S. Department of the Interior.

Sharing Environmental Information

The commitments of the Institute for Environmental Studies extend beyond the classroom, laboratory, and field. As part of a major public university, IES also has responsibilities to the citizens who help support it. Public service, or outreach, is another of the institute's major activities. In many ways, IES shares its special expertise, knowledge, and experience with the people of Wisconsin, the nation, and the world.

Earthwatch Radio

This series of two-minute reports on science, policy, and the environment is the nation's longest-running radio program on the environment. Broadcast on more than 160 stations in 20 U.S. states and Canadian provinces as well as on international shortwave radio, *Earthwatch Radio* has won numerous citations, including a Global 500 Environmental Achievement Award from the United Nations Environment Programme at the 1992 Earth Summit. IES and the UW Sea Grant Institute co-produce the program.

Public Lectures

Every year, IES sponsors and co-sponsors public lectures on environmental topics by local, state, national, and international experts. Periodically, the institute organizes multi-topic lecture series on environmental themes. These events are generally free and open to the public.

Seminars, Workshops, and Conferences

Recent seminars, workshops, and conferences organized or co-sponsored by IES have focused on subjects ranging from community-based forest ecosystem management to human values and the environment. Such events are often aimed at special groups within academia, government, business, and industry.

Community and State Assistance

The students, faculty, and staff of IES often venture off campus to help tackle community and state environmental problems. As part of their graduate education, for example, teams of water resources management students work closely with Wisconsin communities, state agencies, and private groups to solve significant water-related problems. Over the years, they have prepared more than two dozen comprehensive local plans to protect and improve water quality, recreational opportunities, and other public benefits.

National and International Cooperation

Individually and collectively, IES's faculty and staff members collaborate with people, organizations, and institutions across the United States and around the globe. Most recently, with support from the U.S. Information Agency, IES established a three-way partnership in environmental science and policy between UW–Madison, Mexico's University of Guadalajara, and Canada's University of Guelph. IES also helps coordinate UW–Madison faculty and staff exchanges with the Tropical Agricultural Research and Instruction Center, which advances sustainable agriculture and natural resource management in Central America and Mexico. Other recent cooperative projects have taken IES professors as far afield as Egypt, Russia, China, and Vietnam.

Crossing Traditional Boundaries

IES is designed horizontally to link faculty members from most of UW–Madison's colleges and schools. This enhances ties among the university's constituent units and strengthens the institution as a whole. Interdisciplinary collaboration creates a synergy that not only enriches the individual participants but directly benefits their home departments and colleges.

Structure and Governance

Uniquely structured to meet its campuswide mission, IES is administered by a director who is appointed by the chancellor and reports to the provost. An elected faculty chair oversees all of IES's academic programs. Each of these programs, in turn, has its own chair and faculty committee. Each IES research center is headed by a faculty member appointed by the director.

IES's academic faculty consists of governance members, who advise IES students, participate in faculty meetings, and serve on one or more IES committees; and affiliate members, who also advise students and/or participate in IES research or outreach but are not involved in governance and do not serve on formal committees.

Several councils and committees of faculty and staff members and students advise the director of IES on matters ranging from faculty membership to academic program review and development.

Environmental Studies, Institute for

Speak Up!

Program shows promising results in resolving conflict

Brian Mattmiller

UW-Madison's new "Speak Up!" program, designed to encourage open reporting of harassment and discrimination, responded to 35 student complaints in its first semester on campus.

Suzanne Jones, a Dean of Students office administrator, says the contacts last fall concerned four categories of harassment. There were seven reports of homophobia, four reports of religious harassment, 16 reports of racial/cultural harassment, and eight reports of sexual harassment.

Jones says none of the calls related to physical violence or resulted in violations of the law or the student conduct code.

"When we started this program, we had no idea whether we would have hundreds of calls or none at all," she says. "It's important in the first year to get a sense of what students are experiencing, how widespread the problem is, and let students know that we can help."

The Dean of Students created "Speak Up!" last fall. The program helps students who want to take action, and demonstrates the university does not take harassment lightly. It offers an efficient and confidential way for students to report complaints.

A number of the complaints last fall were about racial or sexual harassment on anonymous e-mail messages, Jones says. In some cases, the e-mail was sent directly to an individual and in others they were posted on general message boards. The messages have been especially troublesome because the senders have found ways around being identified, Jones says.

Other calls related to students who feared they were being stalked; bigoted remarks in graffiti; defacement of posters for student religious or gay and lesbian organizations; and defamatory comments made to students.

"With most of the cases we dealt with, we have been able to mediate a solution between the two parties," says Jones. "We call on people's good nature by emphasizing that what they are doing is very hurtful."

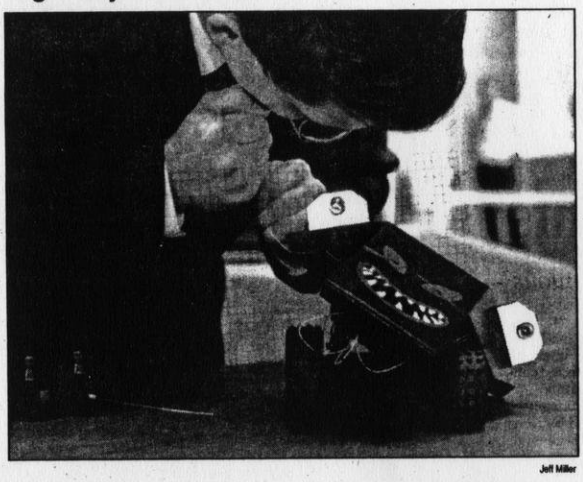
Some of the harassment is deliberate and malicious, but often students can be ignorant of the impact of their words or actions. People who do things deliberately "are the hardest ones to reach," she says. "They are not the ones who attend our diversity programs or paid attention at student orientation. The real hardcore folks are not listening to things that might give them a new point of view."

When a complaint comes in, the Dean of Students office will try to get in touch by letter with the alleged harasser. The students are asked to come into the office and talk with a Dean of Students staff member. Once confronted, they have usually been successful in having the student make amends.

"Most of the students who contact us are mad or hurt or real frustrated," says Janice Wheaton, an assistant dean of students. "We can give students whatever coping skills they need to get past something."

Engineering

Ingenuity in all its forms



Jeff Miller

James Hoffman, a senior in electrical and computer engineering, uses his teeth for last-second work on his invention, a radio-controlled car that plays laser tag. The car garnered him fourth place during Friday's Edison Day at the College of Engineering, where nine students competed for the second annual Schools Creativity Prize, which awards at least $22,000 to creative inventions. The $10,000 first-place winners in the event were seniors Matthew Younkle and Robert Meyers for "Fast Tap," a system that dispenses carbonated beverages at high speed without increasing foam.

KELLOGG

from page 1

basic and applied research. The College of Agricultural and Life Sciences will administer the program, which will focus mainly on underserved populations.

"We hope to involve a wide range of faculty, staff and citizens to enable us to address the concerns central to a sustainable food system and society's well-being," said CALS Dean Roger Wyse.

The program will also develop learning opportunities for UW students by involving them in communities in Wisconsin and abroad, and inviting community members to teach on campus, Wyse said.

CALS Associate Dean Kenneth Shapiro will direct the project, assisted by a planning board of 45 citizens and UW faculty.

The grant, one of 12 from the foundation, runs through December 2000. Other UW units involved are UW-Extension, UW-Milwaukee, UW-Platteville, UW-River Falls, and UW system administration.

Senate hears student evaluation debate

Bill Arnold

The development of a student course evaluation mechanism at UW-Madison was the subject of considerable debate in the Faculty Senate on Feb. 5.

Several faculty members expressed concern that the new evaluation or "feedback mechanism" might be given an undue amount of weight in departmental teaching assessments — especially in evaluating new and untenured faculty. Others expressed dissatisfaction that the proposed evaluation mechanism would be anonymous — not allowing instructors to have access to information regarding students (e.g. year in school, major, etc.) who hand in the evaluation forms.

"I hope these forms are filled out by the students who are actually enrolled in the class," said Claudia Card, a Faculty Senate member and professor of philosophy and environmental studies, noting that non-students who might be philosophically opposed to some courses could try to contaminate the process with extremely negative feedback.

Richard Knowles, professor of English, said he opposes making the evaluations into a "consumer guide" for students. "I hope we can avoid talking about students as 'customers,'" Knowles said. "As a teacher, I don't provide merchandise or a product, but do all I can to help students create their own product, to create their own education." Knowles received a round of applause for his comments.

James Taylor, professor of chemistry and X-ray lithography, said the evaluations are meant to elicit feedback from students — period. Taylor, chair of the Teaching Academy Task Force that worked to develop sample questions that could be used in SAL (Student Assessment of Learning) evaluations, emphasized that students will not be evaluating professors. "We want students to answer questions about their perceptions of the learning experience," he said.

Denice Denton, professor of electrical and computer engineering and chemistry, said SAL evaluations are one tool that can be used to evaluate the teaching performance of faculty. "We should view this as one piece of a much larger puzzle," Denton said.

Nels Bjorkquist, a student government leader who has helped develop the evaluations, said students are interested in compiling a comprehensive listing of quantitative data — not narrative information — about faculty. Narrative evaluations aren't very helpful because they tend to result in extreme opinions — either positive or negative — depending on the grade and viewpoint of the student, Bjorkquist said. "Students want (SAL) to be the most reliable source of evaluation on campus," he said.

Forcing students to identify themselves on evaluation forms would result in a "chilling effect" on students who fear retribution from instructors, Bjorkquist said. "I think it would undermine the whole thing ... I think the (evaluation) results would be much higher" because students would be fearful of receiving low grades for negative responses, Bjorkquist said.

A vote on University Committee resolutions — creating an ad hoc panel to develop a common set of learning concepts that could be incorporated into campuswide student course evaluations by fall 1996 — was postponed until the senate's March 4 meeting.

In other business, the senate unanimously adopted changes to *Faculty Policies & Procedures* that will allow implementation of a reorganization plan that makes major changes in the way biology is governed. The changes were first recommended in 1991 by the Hearn Committee, a panel of UW-Madison biologists, chaired by Wisconsin Regional Primate Research Center Director John P. Hearn.

The panel recommended sweeping change for a governing structure that had been outpaced by rapid and fundamental change in the biological sciences. The Hearn Committee recommended the formation of an elected strategic planning committee to help plan the reorganization, and for the past few years, the Biological Sciences Strategic Planning Advisory Committee (BSPAC), has been functioning in this role.

The restructuring reorders and consolidates tasks now handled by the Biological Sciences Divisional Executive Committee and two ad hoc committees and creates a governing structure of four entities: three elected subcommittees with responsibility in matters of tenure, curriculum and strategic direction, and a steering council whose members will be drawn from the other three committees.

The new biological sciences governing structure includes:

- A tenure committee, to be devoted exclusively to working through the university's heaviest tenure load.
- A curriculum planning subcommittee, to be devoted exclusively to curricular matters at both the graduate and undergraduate level.
- A strategic planning subcommittee, in effect a reconstituted Biological Sciences Planning Advisory Committee (BSPAC) that will be responsible for long-term planning functions across the biological sciences.
- A six-member divisional steering council, to provide executive leadership for the division, serve as a focal point for the elected subcommittees, and to be the primary point of contact between the divisional committee and campus administration.

Environmental team scores high marks

The UW-Madison's innovative environmental management programs have received some national recognition.

In January, Renew America, a Washington D.C.-based coalition of environmental, government, business and community organizations, selected the university's Environmental Management office and Campus Ecology Research Project for inclusion in its "Environmental Success Index," a database of more than 1,600 outstanding programs nationwide.

UW-Madison's environmental management programs are supported by the university's Division of Facilities Planning and Management and the Institute for Environmental Studies.

SThe achievements of two initiatives were recognized by Renew America: the Solid Waste Alternatives Project (SWAP), which promotes the procurement of recycled products, re-use of previously discarded items, and recycling of nontraditional materials by university departments; and the Transportation Demand Management Project, an effort to reduce the number of faculty and staff who commute alone to campus by vehicle.

Renew America describes itself as the only national organization that specializes in identifying, verifying and promoting successful environmental programs.

The organization will host a satellite teleconference entitled "Environmentally Sustainable Communities National Town Meeting" on Feb. 26. The live, 90-minute teleconference will feature: David Brower, chair, Earth Island Institute; Henry Cisneros, secretary, U.S. Department of Housing and Urban Development; Emanuel Cleaver, mayor, Kansas City, Mo.; Christine Ervin, assistant secretary, energy efficiency and renewable energy, U Department of Energy; Al Wei chair, sustainable economic dev opment working group, Thom Jefferson Sustainability Coun Charlottesville, Va.; and Debor Potter, broadcast journalist.

The teleconference will start 2:30 p.m. in 3070 Grainger Hall a will be followed by a one-h panel discussion.

Contact Renew America at (2 232-2252, or via e-mail renewamerica@igc.apc.org more information. Campus Er ronmental Management has a w site at http://env.fpm.wisc.edu



Left: A carbon dating laboratory is one of IES's special research facilities.
Below: Tracking wildlife with a radio receiver.



- Restoration of disturbed ecosystems
- Uses of new technology in environmental monitoring
- Ecological sustainability and economic development

Within the institute, special centers and laboratories serve as focal points for research in climatology, environmental remote sensing, environmental policy, and national park studies. The variety of basic and applied research conducted by IES over the years is impressive. So, too, is the roster of agencies, foundations, and businesses that have supported this research. Since its inception, IES has received more than $40 million in grants.

Sharing Knowledge: Outreach

As part of a major public university, IES is obligated to share its expertise and resources with the people of Wisconsin, the nation, and the world. The institute reaches beyond the campus in many ways, including:

- A widely distributed, award-winning radio program
- Frequent public lectures and lecture series
- Reports, booklets, and newsletters
- Technical assistance projects
- Seminars, workshops, and conferences
- Reference services and referrals
- Professional service

For More Information

Details about IES's courses, degree programs, and certificate programs are available from the IES Instructional Program Office; 550 North Park Street, 70 Science Hall; Madison, WI 53706-1491. Phone: 608/263-1796. Fax: 608/262-2273.

Information about IES's research and outreach activities is available from the IES Public Information Office; 550 North Park Street, 15 Science Hall; Madison, WI 53706-1491. Phone: 608/263-3185. Fax: 608/262-2273.

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♻ Printed on recycled paper with vegetable inks, April 1993

Institute for Environmental Studies

University of Wisconsin-Madison

Advancing Interdisciplinary Study of People and the Environment

Extraordinary Expertise

Few institutions match the University of Wisconsin–Madison's expertise in environmental studies. Literally hundreds of professors teach and conduct research in environmentally related subjects, from agriculture to zoology. Their scholarship and achievements are widely recognized. The university is consistently rated among the nation's best and most prolific in dozens of academic fields.

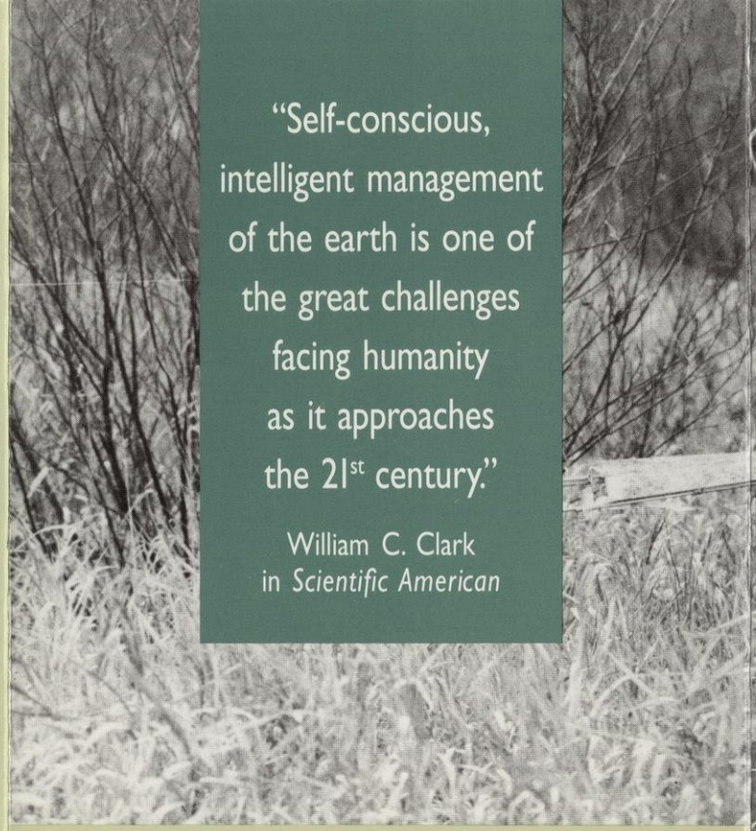
Interdisciplinary Collaboration

Specialists play a critical role in protecting the environment. But grappling with environmental concerns frequently requires knowledge and experience in more than one discipline. For this reason, in 1970 the University of Wisconsin–Madison created the Institute for Environmental Studies (IES). IES is a special intercollege unit of the university in which professors, students, and other professionals with wide-ranging backgrounds converge to better understand and resolve environmental problems.

Imparting Knowledge: Instruction

Instruction is the lifeblood of the Institute for Environmental Studies. Together with UW–Madison's 12 schools and colleges, IES sponsors more than 100 different courses. The variety of subjects is remarkable: from environmental health to environmental ethics, from natural resources to natural hazards, and from climates of the past to energy sources of the future. Students who wish to pursue environmental studies in depth may choose from six interdisciplinary degree and certificate programs administered by IES:

- Conservation Biology and Sustainable Development Program (M.S. degree)
- Environmental Monitoring Program (M.S., Ph.D. degrees)
- Land Resources Program (M.S., Ph.D. degrees)
- Water Resources Management Program (M.S. degree)
- Energy Analysis and Policy Curriculum (M.S.-level certificate)
- Environmental Studies Certificate Program (B.A.-, B.S.-level certificate)



"Self-conscious, intelligent management of the earth is one of the great challenges facing humanity as it approaches the 21st century."

William C. Clark
in *Scientific American*

The heart of IES is its instructional faculty: 70-plus professors representing more than 30 academic disciplines. The soul of the institute is its students, who come from throughout the United States and around the world. More than 1,000 students have earned degrees or certificates through the institute since 1970. Many IES alumni now work as environmental professionals for government, business, industry, academia, and nonprofit organizations.

Expanding Knowledge: Research

We know a great deal about the environment, but every new problem or issue raises new questions. Only careful research can answer these questions. The Institute for Environmental Studies encourages and enables researchers from all corners of the university to collaborate on common concerns. Among recent topics of IES research:

- Climate change and its potential impacts
- Local and regional water management
- Effects of pollution on human health





Above: Field study is an important part of some IES courses.
Left: A land-use simulation game enables students to explore tradeoffs in urban development.

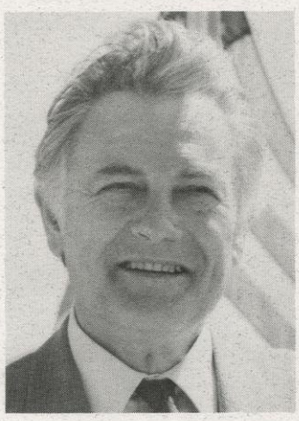
Environmental Studies, Institute For

The Search for Environmental Solutions

Twenty-fifth Anniversary Symposium and Celebration of the Institute for Environmental Studies
September 28-October 1, 1995 * State Historical Society Auditorium * University of Wisconsin-Madison

Free Public Events *

Thursday, September 28

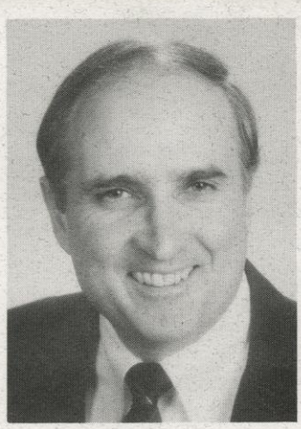


Lecture at 7:00 p.m.

Valdas Adamkus
Administrator, Region 5
U.S. Environmental
Protection Agency, Chicago

Twenty-five Years of Environmental Progress and Prospects for the Future

Friday, September 29



Lecture at 8:00 a.m.

David Orr
Professor and Chair,
Environmental Studies
Program, Oberlin College

Designing Minds: The Ecological Design Arts and Liberal Education

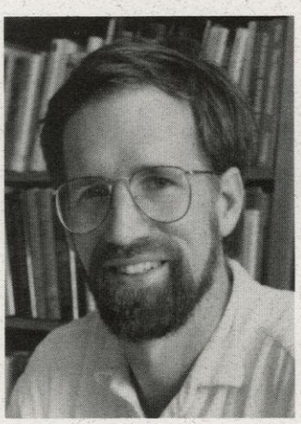


Lecture at 1:00 p.m.

Mary O'Brien
Staff Scientist, Environmental
Resources Foundation,
Annapolis, Maryland

Alternatives, Science, Activism: We Won't Behave Better Without Them

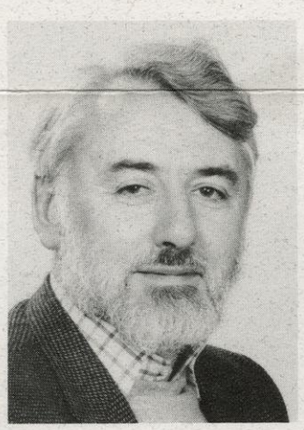
Saturday, September 30



Lecture at 9:00 a.m.

William Cronon
Frederick Jackson Turner
Professor of American History,
UW-Madison

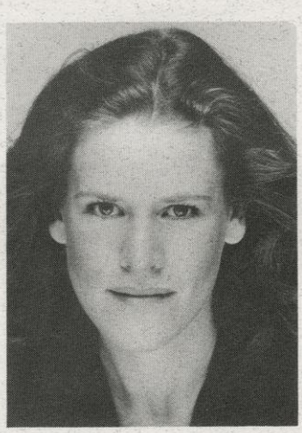
The Trouble with Wilderness, or Getting Back to the Wrong Nature



Lecture at 3:15 p.m.

R.J. "Sam" Berry
Professor of Genetics,
University College, London;
Past President, Linnean Society,
British Ecological Society, and
European Ecological Federation

An Environmental Ethic for the 21st Century



Special Presentation at 8:00 p.m.

Kaiulani Lee
Actress and playwright, in
a theatrical tribute to the life
and work of Rachel Carson

A Sense of Wonder

*** All events at State Historical Society.**
Preferred seating for registered participants.

This symposium is supported in part by a grant from the William and Flora Hewlett Foundation.

For more information, contact the Institute for Environmental Studies, 263-3185.

Please Post or Share

Environmental Studies, Institute For

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NEWS

UNIVERSITY OF WISCONSIN–MADISON

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28 Bascom Hall • 500 Lincoln Drive
Madison, Wisconsin 53706-1380

FOR IMMEDIATE RELEASE 6/1/95

CONTACT: John Ross, (608) 262-3754

UNIVERSITY SUMMER FORUM TO FOCUS ON FOOD SUPPLY

MADISON – Each year, the world's population grows by 85 million people. In order to feed all those additional mouths, global agriculture must produce 2 percent more food than it did the year before, year after year.

Can agriculture keep up? Where and how will the additional food be grown? And what will be the environmental impacts of increased food production?

Those are among the questions to be taken up at this year's University of Wisconsin-Madison Summer Forum, to be co-hosted by the Institute for Environmental Studies and Summer Sessions. A campus committee headed by John Ross, emeritus professor of agricultural journalism and environmental studies, has slated lecture topics and guest speakers for the forum, whose theme is Will There Be Enough Food on the Table?

The world's food supply may not seem like a cause for concern for most Americans. But Ross says a number of trends portend future food shortages that could affect everyone on the planet.

Resource limits such as water shortages are keeping new lands from coming into production in places like the Middle East. And the "green revolution," which boosted crop yields through hybrid development and other technologies, has lost momentum.

"If you're in a race to increase production equivalent to the population increase, your farm acre in southern Wisconsin has got to yield 2 percent more corn, soybeans, or dairy

-more-

products," says Ross. "Can you do it? And what are the costs?"

Ross contends that while there's no cause for immediate alarm, global agriculture needs a dose of long-term planning.

"There's no apocalyptic thing happening, but I think if we lose our focus on this issue, then it's going to come up and hit us on the back of the head."

The forum will feature seven evening lectures during the first four weeks of the regular summer session. Lectures will take place from 7 to 9 p.m. every Tuesday and Thursday (except July 4) from June 20 to July 13.

All of the lectures will be given in the Morgridge Auditorium (Room 1100) of Grainger Hall, 975 University Ave. Lectures will be free and open to the public. For more information, contact the Division of Continuing Studies, 905 University Ave., Madison, WI 53715-1005; or call (608) 262-4352.

The scheduled speakers and their topics will be:

- June 20: Peter Dorner, UW-Madison emeritus professor of agricultural economics, "The Sustainability of Food Production: An Overview."
- June 22: Kevin McSweeney, UW-Madison professor of soil science and environmental studies, "Food and the Land Base."
- June 27: Aaron Wolf, University of Alabama assistant professor of geography, "Food and Water."
- June 29: Roger Wyse, UW-Madison dean of the College of Agriculture and Life Sciences, "The Once and Future Green Revolution."
- July 6: Kathryn Clancy, Syracuse University professor of human nutrition, "The Quality of Food."
- July 11: Irwin Goldman, UW-Madison assistant professor of horticulture, "Food and Biological Research."
- July 13: David Pimentel, Cornell University professor of insect ecology and agricultural sciences, "Food and Population: A Summary Assessment of Our Status."

###

— Steve Pomplun, (608) 263-3063
Institute for Environmental Studies

Environmental Studies, Institute for

NEWS TIPS

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UNIVERSITY OF WISCONSIN–MADISON
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June 8, 1994

TO: **Editors, news directors**
FROM: **Terry Devitt, (608) 262-8282**
RE: **Kids for Biodiversity**

On Monday, June 13, 27 children from Guadalajara, Mexico, will arrive in Madison to begin an intensive, week-long exploration of Wisconsin's environment. The Mexican youngsters will be in Wisconsin as part of an initiative known as Kids for Biodiversity, a program intended to give children in Wisconsin and Wisconsin's Mexican sister state, Jalisco, a sense of the importance of environmental preservation. The program is geared to help children acquire the scientific and cultural literacy necessary to effectively deal with environmental problems that span borders and cultures.

At UW-Madison, Kids for Biodiversity is sponsored jointly by the Chicano Studies Program and the Institute for Environmental Studies. Founded in 1991 by UW-Madison graduate student Stephen Casanova and Mexican botanist Rafael Guzmán, Kids for Biodiversity grew out of the premise that environmental degradation and the need to preserve the diversity of the world's plant and animal species are matters of worldwide importance. Developing a conservation ethic and the ability to work with people from cultures different from one's own are central aspects of the program.

While in Wisconsin, the visitors from Mexico will have the opportunity to tour the UW-Madison Arboretum, the International Crane Foundation, a Wisconsin dairy farm and a cheese factory. They will also go on a two-day camping trip to Bethel Horizons Camp near Dodgeville.

There will be a number of opportunities for media to cover Kids for Biodiversity activities. For scheduling information and to arrange interviews, contact Stephen Casanova at (608) 274-4278, or Victoria Elenes at (608) 257-5905.

If you have any questions, feel free to call me.

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THE CAMPAIGN FOR WISCONSIN

PERTINENT FACTS

About the University of Wisconsin-Madison

and

PROFILES

of Academic and Program Units

INSTITUTE OF ENVIRONMENTAL STUDIES (IES)

Overall Strengths, Important Programs and Projects:

- The oldest program of its kind in the nation; now experiencing a significant increase in applications and enrollment.
- A unique undergraduate program offers certificates to students of all majors, such as engineers, social scientists, pre-law students, etc., thereby enabling them to gain important training and exposure in environmental subjects of far-reaching import.
- Masters and Ph.D programs in Environmental Monitoring, Land and Water Resources, Energy Analysis, Conservation Biology, and Sustainable Development.
- Among significant research projects: global warming, through the Center for Climactic Research; and satellite imagery to monitor the environment, through the Environmental Remote Sensing Center.

Outstanding Faculty Members:

- More than 70 professors are affiliated with the Institute, with most holding joint appointments in other departments, an arrangement that helps to formalize collaborative efforts between departments. Many of these faculty members have outstanding credentials, both in environmental and related fields.

  * John Kutzbach, professor of Meteorology and director of the Center for Climactic Research. Noted for his work in forecasting and modeling global warming issues.
  * Tom Lillesand, professor of Forestry, Civil and Environmental Engineering, and director of the Environmental Remote Sensing Center. A recognized leader in geographic information systems.
  * Timothy Moermond, professor of Zoology, chairman of Conservation Biology and Sustainable Development Program. World leader in this area, as well as in the preservation of biological diversity.

New Directions, Future Turns:

- Increased work in the areas of policy analysis and development, and environmental law.
- Greater efforts in topical environmental issues, environmental monitoring and assessment, and global and regional climate modeling.

Fund-Raising Priorities, Capital Campaign:

- Funding for research initiatives that enable IES to develop research and teaching programs in response to topical environmental issues.
- Professorships, which enable IES to bring more colleges, schools and departments into the loop (e.g., Agricultural and Life Sciences, Economics, Engineering and Law), thereby building stronger links and guaranteeing more focus on environmental issues throughout the University.

- Scholarships and fellowships, enabling students to participate in IES programs rather than affiliate solely with a traditional department because of financial incentives.

- Specific programs and projects prioritized for campaign funding:

  * Support for initiation and development of research projects, curriculum revision and lecture series to address topical environmental issues such as the global environment (e.g., acid raid, global warming); tropical environments; environmental monitoring and assessment; technology and the environment (e.g., hazardous waste disposal); and Wisconsin's natural resources.
  * Graduate student fellowships would be specifically applied to the Conservation Biology and Sustainable Development Program, the Energy Analysis and Policy Curriculum, the Environmental Monitoring Program, the Land Resources Program, and the Water Resources Management Program.

- The total campaign goal for the Institute of Environmental Studies is **$3,125,000.**

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Madison, Wisconsin 53706–1380

FOR IMMEDIATE RELEASE 2/4/93

CONTACT: Thomas Yuill, (608) 262-5957

YUILL HEADS UW-MADISON ENVIRONMENTAL INSTITUTE

MADISON — Thomas M. Yuill, a long-time University of Wisconsin-Madison faculty member and veteran administrator, has been named director of the UW-Madison's Institute for Environmental Studies (IES).

Yuill assumed his new duties as the third director of the 23-year-old institute, one of the nation's leading centers of environmental learning, on Feb. 1.

Associate dean for research and graduate training in UW-Madison's School of Veterinary Medicine for the past 11 years, Yuill is well known for his teaching and research in animal health and tropical studies. He is past president of both the Wildlife Disease Association and the Organization for Tropical Studies (OTS), a university consortium that offers field studies in Central and South America.

In making the appointment, Interim Chancellor David Ward cited Yuill's broad experience as a teacher, researcher, and administrator, and expressed confidence in his ability to lead IES during a time when environmental issues are at the forefront of public concern.

"We are fortunate to be able to draw on the experience of someone like Tom Yuill," said Ward. "His knowledge of, and concern for, some of the most pressing social issues of our day make him ideal for the job. Moreover, his knowledge of UW-Madison will help bolster IES as it seeks to capitalize on the many research and teaching strengths of the university."

Yuill spent the past year in La Paz, Bolivia, as a senior research adviser to the Bolivian Institute of Agricultural Technology in a technical assistance project funded by the World Bank. He relinquished that role and his position with the veterinary school to direct IES full time, but the UW-Madison professor says he looks forward to the challenge.

"Human well-being generally, and the standard of living enjoyed in the U.S., is at serious risk" from a litany of global problems ranging from rapid population growth to

-more-

widespread land and water degradation, says Yuill.

"We are facing a complex environmental crisis of major proportions that threatens the survival of our children and grandchildren," Yuill says. "If ignored, it will be no less devastating than the outcome of widespread war, only slower. Response to the threat should be as vigorous, and the commitment as great, as has been our response to the threat of war."

Yuill says land grant universities like UW-Madison offer "the breadth of disciplines required to define and solve environmental problems through their integrated research, teaching and outreach activities." He adds that IES, because it is comprehensive and multidisciplinary, can "provide the kind of leadership needed to deal with the environmental crisis."

Yuill earned his bachelor's degree from Utah State University and his master's and doctoral degrees in wildlife ecology and animal virology in veterinary science from UW-Madison. He then worked at the Walter Reed Army Institute for Research in Washington, D.C., and at a medical research center operated by the South East Asian Treaty Organization in Bangkok, Thailand.

He returned to UW-Madison in 1968 as an assistant professor of Veterinary Science. He was promoted to full professor in 1976 and chaired his department — recently renamed the Department of Animal Health and Biomedical Sciences — from 1979 to 1982, when he became an associate dean of the School of Veterinary Medicine. He also is a professor of wildlife ecology and has been assistant director of the university's Agricultural Experiment Station.

Yuill has served on a number of special faculty panels, including the 18-member Biological Sciences Review Committee which in 1991 proposed dramatic changes in the way biological sciences at UW-Madison are organized, funded, and managed.

An authority on the occurrence and spread of viral and other infectious diseases in wildlife and domestic animals, Yuill has conducted research in many parts of the United States and Latin America. He has written or co-authored more than 100 scientific papers and book chapters.

He is a consultant to the National Institutes of Health, the U.S. Environmental Protection Agency, and the U.S. Agency for International Development, and is on the board of directors of the Tropical Agricultural Center for Research and Instruction (CATIE), headquartered in Costa Rica.

As director of IES, Yuill succeeds UW-Madison agricultural economics professor Daniel Bromley, acting director of the institute for two years, and David Musolf, interim director since September. Musolf remains IES's assistant director.

Professors from approximately 25 UW-Madison departments, ranging from agricultural engineering to zoology, teach courses and oversee academic programs in the Institute for Environmental Studies. More than 250 students are currently enrolled in IES's four interdisciplinary graduate degree programs. Another 200-plus students are registered in the institute's environmental studies certificate program for undergraduates.

IES also houses outstanding research programs in climatology and environmental remote sensing and has conducted research on a wide array of other environmental topics since its inception. Its varied outreach activities include coproduction of the award-winning "Earthwatch Radio" program with the UW Sea Grant Institute.

In addition, devoting personal time and energy to Latin American projects, Yuill, who is fluent in Spanish, enjoys Latin American folk music and plays the tiple, a South American guitar-like instrument. He also is a licensed pilot and a cross-country skier. He and his wife, Ann, live in Cross Plains.

###

— Tom Sinclair, (608) 263-5599
Institute for Environmental Studies

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NEWS

UNIVERSITY OF WISCONSIN–MADISON

Phone: 608/262–3571
Fax: 608/262–2331

News & Information Service
19 Bascom Hall • 500 Lincoln Drive
Madison, Wisconsin 53706–1380

FOR IMMEDIATE RELEASE 5/28/92

CONTACT: Steve Pomplun, (608) 263-3063; Richard Hoops, (608) 263-3149

'EARTHWATCH RADIO' CITED FOR ENVIRONMENTAL ACHIEVEMENT

MADISON — "Earthwatch Radio" has been chosen by the United Nations Environment Programme (UNEP) to receive a Global 500 award for outstanding environmental achievement. UNEP cited the program for its long-time work in informing the public about environmental issues.

"Earthwatch Radio," co-produced and distributed by the Institute for Environmental Studies and the Sea Grant Institute at the University of Wisconsin-Madison, is a radio feature series heard regularly on more than 140 stations in the United States, Canada and overseas. The program, believed to be the nation's longest-running environmental radio series, will mark its 20th anniversary in September.

The Global 500 awards, established in 1987, "each year pay tribute to individuals and organizations whose everyday actions and leadership in the front lines of the environmental agenda push forward the urgent goal of safeguarding the planet and building sustainable development," according to UNEP. "Earthwatch Radio" is one of 74 recipients worldwide this year.

The awards will be presented on June 6 at a special World Environment Day ceremony in Rio de Janeiro, Brazil, coinciding with the United Nations Conference on Environment and Development, the "Earth Summit."

"Earthwatch Radio" last year won a parallel award from the private, nonprofit U.S. Committee for the United Nations Environment Programme as well as awards from the national Council for Advancement and Support of Education and the Wisconsin Association for Environmental Education.

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— Tom Sinclair, (608) 263-5599
Institute for Environmental Studies

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Environmental Studies, Institute for

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 5/09/91

CONTACT: Daniel Bromley (262-5957)

GIFT TO PROMOTE UNDERGRADUATE ENVIRONMENTAL RESEARCH

A long-time interest in environmental issues has inspired Carleton and Mary Beth Holstrom of Pipersville, Pa., to endow a new undergraduate research program at the UW-Madison.

Income from their $500,000 gift will be used by the university's Institute for Environmental Studies (IES) to support five competitive undergraduate fellowships annually. Each selected student will spend a summer investigating an environmental issue while working in conjunction with IES faculty members. The gift also will fund an annual environmental lecture by a nationally prominent speaker.

"Mary Beth and I share a deep concern for the environment and are committed to making a difference," said Carleton Holstrom. "We think that providing research opportunities for undergraduates will help find solutions to many problems facing the environment."

The endowment will help the university achieve one of its top priorities: enhancing the educational experience of undergraduates at UW-Madison.

"The fellowships will provide an excellent opportunity to involve undergraduates in the research mission of the university," said Daniel Bromley, acting director of IES and Anderson-Bascom professor of agricultural economics. "Our faculty welcome this chance to work with undergraduates on basic research."

The Holstroms' gift was received as part of The Campaign for Wisconsin, a major capital campaign now being conducted by the UW Foundation. Through the campaign, the foundation seeks to raise $350 million to support scholarships, professorships, research and other program advancement at the UW-Madison. The UW Foundation is a private, not-for-profit organization which raises, invests and distributes funds on behalf of the university.

Carleton Holstrom, who received his bachelor's degree in economics from the UW-Madison in 1957, retired as chief financial officer and partner of The Bear Stearns Companies in 1987. He is a member of the UW Foundation Board of Directors.

IES, established in 1970, is an interdisciplinary academic program offering dozens of environmental courses. Professors with ties to 27 UW-Madison departments and schools serve on its instructional faculty.

Undergraduates may earn a certificate in environmental studies. Currently, 175 students are enrolled in the certificate program. In addition, IES offers graduate degree and certificate programs, in which more than 230 students participate. IES also conducts interdisciplinary environmental research and outreach activities.

-- Mollie Buckley (263-7954)

professor for his work in developing Workers' Compensation.

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4/15/91

SUMMER INNOVATIVE COURSE BROCHURE AVAILABLE

The 1991 Summer Innovative course brochure describing a special selection of new and innovative courses offered for the first time at UW-Madison is now available.

A sampling of the courses include: Aging and Health Promotion (Nursing 590); English as a Second Language — Strategies for Bilingual Resource

Specialists (Curriculum and Instruction 375); French Literature: Vouvella Vogue Film and Other Arts (French and Italian 568); Human/Animal Relations (Zoology 400 and Wildlife Ecology 375); Law, Ideology and Cinema (Law 940); Looking at Environmental Issues - -The Wisconsin Experience (Environmental Studies 400); Scientific Aspects of Global Environmental Problems (Physics 175); and School Desegregation (Sociology 496).

For more information on these courses, contact the corresponding academic department or obtain a copy of the descriptive brochure from the Division of Summer Sessions, 905 University Ave., Madison, WI 53715-1005 (262-2115).

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UW-MADISON OFFERS RECYLING COURSE FOR EDUCATORS

Agriculture Economics 375 and 875, "The New Worlds of Recycling" taught by Peter Anderson and Professor John Strasma, is a three-credit course which will provide teachers with facts about recycling for both personal and classroom use.

Topics will include the solid waste hierarchy, environmental benefits, techniques for analyzing system economics, marketing dynamics, education

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 3/12/91

CONTACT: Dennis Ray (608) 263-4189

ENERGY ADVISOR TO SPEAK ON CAMPUS

MADISON--Calvin Kent, administrator of the Energy Information Administration (EIA) of the U.S. Department of Energy, will discuss national energy policies in a free public lecture Wednesday, March 20, at University of Wisconsin-Madison.

The lecture -- "Energy--The Paradox of Plenty" -- will take place from 4-5:15 p.m. in the auditorium of the State Historical Society, 816 State St.

As head of EIA, Kent advises the Secretary of Energy, the President, and Congress on energy and environmental issues.

EIA analysis was used in many issues faced by the last Congress, including the Clean Air Act Amendment, fuel efficiency standards for automobiles, offshore drilling for oil and gas, energy taxes, and global warming.

During the Persian Gulf war, Kent served as a senior duty officer in the emergency operations center, which provided 24-hour analysis and data on fuel and energy matters to the military and other governments involved.

He has been invited to lecture in Madison by the School of Business and UW-Madison Institute for Environmental Studies.

More information is available by calling Dennis Ray at (608) 263-4189.

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Release:

APRIL, 1990

EARTH DAY TWENTY YEARS LATER. Former Wisconsin Senator and Governor Gaylord Nelson, who co-founded the first Earth Day in 1970, will talk about positive steps taken in the past two decades to protect the environment and the challenges ahead in a lecture on Monday, April 16, at 7 p.m. in Room 145 Birge Hall on campus. Nelson is now a counselor for the Wilderness Society. His appearance is part of the UW-Madison Institute for Environmental Studies lecture series on "Earth Day 1990: Global Environmental Issues." For more information, contact IES at (608) 263-3064.

THE ROLE OF BUSINESS IN EDUCATION. The assistant managing editor of Fortune magazine, Ann Morrison, is the Business-Writer-in-Residence at UW-Madison this semester. She'll be on campus April 2-5. Morrison has been working on a special issue of the magazine, due out next month, on "The Education Crisis--What Business Can Do to Help." On Tuesday, April 3, at noon, she will talk to business leaders at the Wisconsin Manufacturers and Commerce Building, 501 E. Washington Ave., about that topic. For more information on her schedule or to arrange an interview, contact Jeff Iseminger at (608) 262-8287.

HUBBLE SPACE TELESCOPE BRIEFING. When the $2.2 billion orbiting observatory is launched later this month (target date April 12), a highly sensitive light detector known as a High Speed Photometer, designed and built at UW-Madison, will be aboard. A press briefing on the UW-Madison's contribution to this important project will be held on Friday, April 6, at 9:30 a.m. in Room 212 of the Educational Sciences Building, 1025 W. Johnson St. Computer animation of the telescope and the celestial objects it will observe will be available on 3/4-inch tape at that briefing. For more information, contact Terry Devitt at (608) 262-8282.

CONGRESSMAN TO HELP DEDICATE NEW CENTER. Wisconsin Representative Les Aspin will speak at ceremonies marking the dedication of the UW-Madison's $3 million Center for X-Ray Lithography, at 9:15 a.m. Monday, April 23. X-Ray lithography is a state-of-the-art technology used to make extremely powerful integrated circuits that can enhance the speed and capability of computers. The UW-Madison center is regarded as the most comprehensive academic facility in the country, and is expected to play a major role in the world-wide competition to develop increasingly sophisticated electronics. The center is located at 3731 Schneider Dr., Stoughton. (Take Hwy. 51 south from Madison to Schneider Dr.) For more information, contact Harvey Black, (608) 262-9772.

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TREATIES AND THE FUTURE. UW-Madison Professor Margaret Bogue is one of the most knowledgeable historians in the state on federal treaties with Wisconsin Indians. She can tell your audience how and why treaties executed 150 years ago were made and what they mean for Indians and non-Indians today. Along with representatives of several Indian tribes, Bogue will lead an outreach forum for teachers on Saturday, April 28, on "Wisconsin Indians: A Blueprint for the Future." They will discuss priorities for cultural, political and economic progress during the 1990s and how they can be realized. Call Bogue at (608) 262-1694 for a historical perspective on the treaty rights controversy and a look at possible paths for the future.

A CELEBRATION. The UW-Madison American Indian Studies Program is hosting a gathering April 19-21 entitled "Celebrating the Lives of American Indian Women." Women from several tribes will be participating in lectures, panel discussions and cultural events. There will be a panel discussion on "The Lives of American Indian Women: Image and Reality" on Friday, April 20, at 2 p.m. in Great Hall of the Memorial Union. On Saturday, April 21, participants will join in an intertribal dance exhibition from 3-4:30 p.m. in the Memorial Union's Tripp Commons. For more information, call (608) 263-5501.

HOT ITEMS! The UW-Madison Memorial Union and Union South are doing their part to promote recycling by selling reusable plastic coffee mugs for $2. Those who use and reuse the bright red mugs get a 20 per cent discount on hot beverages, and a 14-ounce fill instead of the 12-ounce fill they'd get with disposable Styrofoam cups. About 6,000 mugs have been sold since November -- 50 to 70 each day. Union officials estimate the mugs are keeping 8,000 Styrofoam cups a day from ending up in a landfill. Contact the Union's assistant food service director, Paul Algiers, at (608) 262-0118, for more.

UW SYSTEM REGENTS MEET APRIL 5-6. Committee meetings are scheduled for Thursday afternoon. At 1 p.m., the Education Committee will be reviewing an issue paper on strategic planning. The full board meets Friday, April 6, at 9 a.m. in Room 1820 Van Hise Hall. Questions pertaining to the agenda should be directed to Board secretary Judy Temby at (608) 262-2324.

NO FACULTY SENATE THIS MONTH. The Faculty Senate meeting scheduled for Monday, April 2, has been cancelled. The next meeting will be Monday, May 7, at 3:30 p.m. in Room 272 of Bascom Hall.

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-- Liz Beyler (608) 263-1986

Add 1--Newsbriefs

6/25/87. Environ. Studies Institute pr

ENVIRONMENTAL INSTITUTE NAMES NEW ASSISTANT DIRECTOR

David E. Musolf has been appointed assistant director of UW-Madison's Institute for Environmental Studies (IES).

He succeeds Joanne B. Mais, who is moving out of the state.

Musolf, 42, has worked in IES's administrative office since May 1986. Before that, he was employed for many years in the business office of the UW-Madison Academic Computing Center and Administrative Data Processing.

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KULCINSKI ELECTED TO NUCLEAR SOCIETY

UW-Madison nuclear engineering Professor Gerald L. Kulcinski has been elected to the Board of Directors of the American Nuclear Society.

Kulcinski, who received his Ph.D. at UW-Madison in 1965 before joining the faculty, heads UW-Madison's Fusion Research Institute. He currently is working on a project aimed at "mining" the moon for a form of helium that can be used as fuel in nuclear fusion reactors. The project is part of UW-Madison's new Center for Space Automation, funded by a $5 million NASA grant.

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POPULATION EXPERT TO SPEAK

The president of the Washington, D.C.-based Population Crisis Committee will give a free public lecture Thursday, July 2 at 10:20 a.m. in Room 1101 Humanities Building on campus.

Dr. Fred Pinkham will speak on "Family Planning in the Developing World." Pinkham also is former director of population and humanitarian activities at the U.S. Agency for International Development.

The lecture is sponsored by the UW-Madison Institute for Environmental Studies. For more information, call (608) 263-5599.

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 6/15/87

CONTACT: Jim Valiga (608) 262-1262

MODERN TOOLS GIVE SCIENTISTS A NEW LOOK AT PREHISTORIC CAVE PAINTINGS

By TERRY DEVITT
University News Service

MADISON--While most University of Wisconsin-Madison students pursue summer jobs and warm weather fun, graduate student Jim Valiga contemplates ancient figures on the sandstone wall of a shallow cave some 50 miles west of the Madison campus.

The faded glyphs -- a series of 40 figures including a bison, a hawk-like bird and animated human forms -- are a shadowy bit of Wisconsin's prehistory that Valiga hopes to illuminate using modern techniques of photogrammetry and computer image enhancement.

Discovered in 1972 by a youngster playing in the Iowa County cave, the forms are thought to have been drawn a thousand years ago by the ancestors of Wisconsin's Winnebago and Ioway Indian tribes.

Time has taken its toll on the figures, however, and many of the 4-inch to 1-foot high drawings are now only faint impressions having endured centuries of seeping water and the assaults of lichens and algae.

But the obscured and faded nature of the drawings is Valiga's challenge.

Armed with the same technology used to take and decipher satellite pictures, Valiga is gleaning from the southwestern Wisconsin sandstone a sharper picture that may help archeologists better understand the prehistoric drawings and, perhaps, the ancient artists who drew them.

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The figures, according to Valiga, are unique in Wisconsin and the Midwest and are a source of controversy among archeologists because of their similarity to drawings found at sites in Oklahoma and Ontario, Canada.

Some archeologists, says the 29-year-old Institute for Environmental Studies graduate student, are reluctant to link drawings from such a wide geographic range. The paintings are also done in an unknown style, although some of the figures have motifs similar to those found in prehistoric art from other parts of North America.

In addition, many of the drawings are so faded archeologists have difficulty pulling out enough detail to make good interpretations, Valiga said.

"The problem is that people are looking at the drawings and making different interpretations," he said. "One person sees one thing and the next person sees another thing."

To overcome the barriers of time and nature, Valiga has hauled generators, lights, special film and cameras to the remote cave so the drawings could be photographed under certain light conditions and precisely mapped.

Working under the direction of Beloit College anthropologist Robert L. Salzer and UW-Madison engineering Professor James P. Scherz, Valiga has used color and color infrared photography as well as color infrared photography with ultraviolet illumination to cut through centuries of wear.

"Up to this point most rock paintings have been photographed with just black and white and color film," Valiga said. "With these more sophisticated photographic techniques we can see things that the naked eye cannot see. Coupled with the computer-assisted interpretation, it's a much less subjective way of analysis."

Pictures taken by Valiga are transferred to videotape and the pixels -- small elements of the picture -- are looked at by computer to see if there are differences in the way light reacts to different shades and tones.

Those differences, said Valiga, help flesh out bare or obscured parts of the cave drawings.

Valiga has focused his camera lens principally on a human figure in the group known as the "Red Horn" series, named after a character prominent in Winnebago and Ioway legend. But he has also taken detailed shots of other figures including a series of pictures of a remarkable sketch of a crouching human smoking a long-stemmed pipe.

Using his elaborate photo techniques and computer enhancement of the pictures, Valiga has been able to more precisely define the drawings themselves as well as the blue-black, orange and red pigments used by the ancient artists.

Valiga emphasized that his work is simply adding one more piece to the puzzle. While his pictures will give scientists new information, excavations at the site, as well as a careful laboratory analysis of the few artifacts found there, are important to unraveling the mystery, he said.

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-- Terry Devitt (608) 262-8282

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Environmental Studies Institute for

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 6/11/87

CONTACT: Eileen Hanneman (608) 263-1796

FORMER NATIONAL AUDUBON PRESIDENT TO TEACH SUMMER COURSE

MADISON--One of the nation's most prominent spokesmen for the environment, Dr. Russell Peterson, will teach an eight-week summer course on "Prospects for the Global Environment" at University of Wisconsin-Madison beginning June 15.

Peterson's course, offered by the Institute for Environmental Studies (IES), will focus on four world issues: population growth, biological consequences of nuclear war, energy use and development, and ecological decline. It will consider the potential impacts of each on society and how they might be dealt with.

Peterson, a Wisconsin native and graduate of UW-Madison, was president and chief executive officer of the National Audubon Society from 1979 to 1985. He also is a former director of the Congressional Office of Technology Assessment, former chairman of the President's Council on Environmental Quality, and former governor of Delaware.

He currently is vice president and regional councilor of the International Union for the Conservation of Nature and Natural Resources, chairman of the Global Tomorrow Coalition, president of the Better World Society, and president of the International Council for Bird Preservation.

For more information about the course and how to register, contact IES at (608) 263-1796.

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-- Tom Sinclair (608) 263-5599

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Release: Immediately 6/10/87

YALE PROFESSOR SET FOR FIRST UW-MADISON SUMMER FORUM LECTURE

MADISON--"Development Pressures on the World's Peasants" will be discussed by Yale University anthropology Professor Timothy C. Weiskel at UW-Madison's University Summer Forum Tuesday, June 16.

The lecture is the first in a series of eight weekly lectures addressing "Environment and Development: Building Sustainable Societies." The public is invited to attend the free lectures Tuesday evenings from 7:30-9:30 p.m. in Room 3650 Humanities Building.

Weiskel has studied the historical evolution of agro-ecosystems in the Third World, particularly West Africa, where he has analyzed peasant reactions to colonial and post-colonial development schemes in French-speaking countries.

For more information, including a forum brochure, contact the Division of Summer Sessions at (608) 262-2116, or the Institute for Environmental Studies at (608) 263-1796.

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 4/7/87

CONTACT: Curt Meine (608) 263-7595, 251-2523

UW-MADISON STUDENT SEIZES OPPORTUNITY TO WRITE BOOK ABOUT LEOPOLD

By Steve Pomplun
Institute for Environmental Studies

MADISON-- It was a great opportunity. No one had yet written a comprehensive biography of famed Wisconsin naturalist Aldo Leopold.

Leopold's children were eager to preserve the family history with a written record, and the centennial of Leopold's birth (in 1987) was just a few years away.

Enter Curt Meine, a doctoral candidate in the Institute for Environmental Studies at the University of Wisconsin-Madison. Meine had written his master's thesis on Leopold. When approached by members of the Leopold family and former Leopold colleagues in 1983, Meine at first declined to write the full-fledged biography.

"I had just finished my thesis, and I was burned out," Meine recalled. "I was tired of writing and tired of school, and I was wary of the tremendous amount of research it would involve."

Second thoughts plagued him for the next six months before he agreed to the task. The result, tentatively titled "Great Possessions: The Life and Work of Aldo Leopold," will be published this fall by the UW Press. Agricultural journalism Professor John Ross served as Meine's advisor on the project.

Meine says he was under no pressure to portray Leopold in a way to suit the family. The surviving Leopold children -- sons Luna and Carl and

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daughters Estella and Nina Leopold Bradley -- "were, to a person, very easy to deal with," he said. "They're all scientists -- critical and objective thinkers. They went out of their way to say, 'Do what you want to do and say what you want to say.'"

Meine traveled the country from Leopold's birthplace of Burlington, Iowa to the Southwest, where Leopold began his career with the U.S. Forest Service, to Washington, D.C. He visited Leopold's daughters and sons in Seattle, Berkeley, Calif. and Ithaca, N.Y. And, of course, he crisscrossed Wisconsin.

He said the Leopolds were at times surprised with the emerging portrait of their father. "A lot of material was new to them, especially the early years," he said. "They didn't know anything about this period because he never talked or wrote about himself and how he grew up."

Meine said Leopold was a man ahead of his time whose greatness arose from his interdisciplinary thinking. He foresaw issues arising from technological growth and the shrinking frontier, and he recognized the interconnectedness of human activities and the environment.

"New agricultural technologies and soil erosion, hunting and wildlife management, wilderness preservation -- Leopold was on the cutting edge, addressing these issues before anyone else had thought about them," Meine said. "Leopold's mind was broad enough to grasp how all of these things affected one another and the principles that come out of all that."

Leopold shared his interdisciplinary vision with others and tried to heal rifts between factions within the conservation movement. "He was constantly trying to make them realize that their own little section of conservation was connected to the broader question of human use of land," Meine said. "He was always appealing to each specialty group to broaden its vision, to see common ground."

He was also an innovator in his 15 years at the University of Wisconsin.

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Besides founding the department of wildlife management (now the department of wildlife ecology), he taught unconventionally for the 1930s and '40s, inviting professors and students from other departments to lecture. He created game management courses that considered land use, plant succession and population dynamics, evolution, and climate.

Hearing the recollections of Leopold's family, colleagues, students was, for Meine, a fascinating experience. "When you're writing history, these eras come alive for you and in a sense you're living in the past," he said.

Still, the biography challenged him to shine an objective light on Leopold's life. "You hope as a biographer that he becomes less of a saint and more of a human being. That, I think, gives you greater empathy for him, and ultimately, greater respect. Saints are unapproachable, but you can relate to human beings."

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-- Steve Pomplun (608) 263-3063

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Environmental Studies Institute for

Release: Immediately 2/27/87

CONTACT: Arthur Sacks (608) 262-5957

UW-MADISON ENVIRONMENTAL STUDIES INSTITUTE AWARDED $275,000

MADISON--A California foundation has awarded $275,000 to the Institute for Environmental Studies (IES) at University of Wisconsin-Madison.

The grant, from the William and Flora Hewlett Foundation, will be used over the next three years to support environmental policy research and curriculum innovations at the institute.

It is the second largest grant ever given by the Hewlett Foundation to an environmental studies program, according to IES Director Arthur Sacks. He called it "a credit to UW-Madison and the high-quality faculty and staff across the campus who are associated with the institute."

IES received a three-year, $210,000 Hewlett Foundation grant in 1983.

The Institute for Environmental Studies has promoted interdisciplinary environmental instruction and research at UW-Madison since 1970. About 230 students are currently enrolled in its graduate degree programs and undergraduate certificate program.

IES's research focuses on ecological and human systems, climate, land information, marine science and policy, and environmental remote sensing.

The Hewlett Foundation, incorporated by founders of the Hewlett-Packard Company in 1966, supports a wide range of activities emphasizing environment, arts and humanities, population and education programs.

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-- Tom Sinclair (608) 263-5599

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Environmental Studies Institute

Release: Immediately 6/9/86

CONTACT: Arthur B. Sacks (608) 262-5957

SACKS NAMED DIRECTOR OF UW-MADISON'S ENVIRONMENTAL INSTITUTE

MADISON--Arthur B. Sacks has been named director of the Institute for Environmental Studies at University of Wisconsin-Madison, UW-Madison Chancellor Irving Shain announced Monday (June 9).

Sacks has been acting director of the institute since July 1, 1985. He replaced Reid Bryson, who retired from the position.

Sacks was unanimously recommended for the directorship by a search committee established in January. He has been associated with the institute for 10 years, most recently as associate director and acting director. He is the immediate past president of the North American Association for Environmental Education, and co-founder and deputy secretary-general of the World Council for the Biosphere-International Society for Environmental Education.

In announcing the appointment, Shain said "the institute and the university are fortunate that a candidate with the qualifications of Dr. Sacks is available for the position."

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-- Steve Schumacher (608) 262-8289

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 4/8/86

CONTACT: William P. O'Connor (608) 255-3000

FARM BILLS HELP FARMERS SAVE SOIL

MADISON--Dairy farmers know about the highly-publicized federal dairy herd buyout. But fewer of them realize that the U.S. government also is offering to buy out farmers' options to use highly erodible land.

Money-short farmers should consider the land buyout plan, says a farmland conservation expert, especially in light of a new state law that adds tax incentives to the federal program.

William P. O'Connor, a Madison conservation attorney and lecturer for University of Wisconsin-Madison's Institute for Environmental Studies, said the plan lets a farmer submit a bid to the U.S. Department of Agriculture (USDA) offering a dollar value per acre for not farming the land for 10 years.

"If the feds accept the bid," O'Connor said, "they send the farmer a check each year for 10 years and the land becomes part of the Federal Conservation Reserve."

In addition to receiving cash, farmers can save property tax by enrolling their erodible lands in the reserve, O'Connor said. The new state farm bill requires the local tax assessor to consider the fact that these acres will be out of production for 10 years. That could mean tax savings for the farmer.

It also could mean soil savings for the state. Cropland accounts for 85 percent of the 79 million tons of soil swept from Wisconsin annually.

The federal definition of "highly erodible" land takes into account such factors as soil type, slope and current erosion rates, O'Connor said.

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"By this definition, 1.5 million acres of cropland in Wisconsin qualify for the reserve. This could mean income for Wisconsin farmers," he said.

USDA reported "disappointingly" low interest in the program during the March 3-14 sign-up period. According to USDA, 1,210 Wisconsin farmers submitted bids. Of these, 423 bids on 12,588 acres were accepted for about a half-million dollars a year. Program officials eventually hope to enroll 131,700 acres in Wisconsin this year, and have scheduled a second sign-up beginning May 5.

The low turnout isn't surprising, O'Connor said, since program rules were announced only a couple of weeks before the first sign-up period.

"Ten years is a sizable commitment," he said. "It's not the sort of thing you make a fast decision about."

He said he sees the reserve program as a shift in national farm policy. "The USDA has tried in the past to reduce crop surpluses by taking land out of production, but this is the first time they've made soil conservation the basis for eligibility."

O'Connor said the state farm bill also provides tax considerations for conservation easements and Wisconsin Farmland Preservation agreements. Easements are voluntary agreements land owners make with government agencies or private organizations to preserve certain natural, agricultural or historical features on their lands.

"In urban counties, this would be a good way to protect farmland from encroaching suburbs and shopping malls," O'Connor said. "In more remote areas, for example, an easement could be made to protect wildlife habitat."

Under Wisconsin Farmland Preservation agreements, farmers receive property tax relief for not subdividing or developing their farmland for 10 to 25 years.

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-- Inga Brynildson (608) 262-9772

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Release: Immediately 6/26/85

UW-MADISON NEWSBRIEFS

UW-MADISON ACCOUNTING DEPARTMENT LISTED EIGHTH NATIONALLY

MADISON--An annual survey of accounting professors and department heads has ranked University of Wisconsin-Madison's accounting department eighth in the country.

The 1984 survey by Public Accounting Report listed five Big Ten schools among the top 10. University of Illinois was rated first, University of Texas-Austin second, and University of Michigan third.

Others among the top 10, in order, were Southern California, Ohio State, Brigham Young, Notre Dame, UW-Madison, Missouri and Michigan State.

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SACKS NAMED ACTING DIRECTOR OF IES

Arthur B. Sacks, associate director of the Institute for Environmental Studies (IES) at UW-Madison, will become acting director on July 1.

Reid Bryson is retiring as IES director, but will stay on at the university as professor of meteorology. The search to find a permanent replacement for Bryson will begin soon.

Sacks is president of the North American Association for Environmental Education. He holds a doctorate in English from UW-Madison.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 4/1/85

CONTACT: Sally Benjamin (608) 263-3063/257-1806

STUDENTS WILL STUDY TOP TROUT STREAM

MADISON--Black Earth Creek, one of the Midwest's most productive trout streams, will serve as a master's degree project for 14 University of Wisconsin-Madison graduate students this summer.

The students will investigate changes in land use and water quality in the creek's watershed, and the impact of the changes on the stream's plants and animals.

The project is the final requirement for the students, who are in the Water Resources Management Program of the Institute for Environmental Studies.

The group outlined its work plan at an April 1 meeting of the Dane County Land Conservation Committee. The work will concentrate on the upper portion of the watershed, a 46-square-mile drainage areas upstream from the village of Black Earth in Dane County.

Black Earth Creek supports exceptionally large numbers of wild brown trout, about one legal-length trout for every two feet of stream, according to the Wisconsin Department of Natural Resources.

A major part of the student project will involve analyzing information accumulated as far back as the 1930s by federal, state and county agencies, according to student David Kirkpatrick. The students will survey anglers and residents in the area to get ideas on how the watershed might best be managed.

The students also plan to study the abundance and distribution of weeds in the creek and the impact of the plants on the water quality and organisms.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 5/2/85

CONTACT: Thomas Lillesand (608) 263-3251

HIGH-TECH MAPS MAY HELP CURB SOIL EROSION

By TOM SINCLAIR
Institute for Environmental Studies

MADISON--In what their professor calls a first, a team of University of Wisconsin-Madison graduate students has used a satellite and a computer to produce a map of potential soil erosion trouble spots in the Dane County town of Westport.

"The students have found areas where, in the absence of other factors, you would expect soil erosion to occur before other places," said Thomas Lillesand, a professor of environmental studies, forestry and civil and environmental engineering.

However, Lillesand stressed that his students' map shows only potential trouble areas, not necessarily areas where soil erosion actually occurs. It may be, he said, that people in those areas use land-management practices that minimize any actual soil erosion problem.

The students produced the map as a class project for a course in the university's Institute for Environmental Studies, co-taught by Lillesand and Ralph Kiefer, also a professor of environmental studies and civil and environmental engineering.

The students will describe how they produced the map at a public presentation Friday (May 3) at 12:30 p.m. in Room AB20 Weeks Hall on campus.

-more-

Add 2--High-tech map

The students also produced a map breaking the whole of Dane County into 13 land-cover categories ranging from cropland and pasture to water, urban areas and forests.

Lillesand said the point of the class project was to demonstrate the utility of remote sensing technology in land use and land cover mapping and to "prepare our students for the future world of satellite monitoring and microprocessor data analysis."

He stressed that the technology is still far from perfect. Although the Thematic Mapper, for instance, is sensitive enough to record differences in energy reflected or emitted by different types of cropland, interpreting its data accurately -- and then programming a computer to do so -- is tricky.

"The technology sometimes misclassifies corn as alfalfa and so forth, but the type of experimental work our students have done this semester is making it more and more reliable," he said.

"We don't purport to have the last word on who's to blame for soil erosion, nor should landowners worry that some kind of spy satellite is going to take away their rights," Lillesand added. "But the class has done something that may set the tone for how land managers use satellite data in Wisconsin and other states."

Several other UW-Madison professors and federal, county and state agency representatives also helped with the project.

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-- Tom Sinclair (608) 263-5599

Lillesand said the map of Westport is important because the Wisconsin Legislature, in a step toward reducing erosion, has ordered all Wisconsin counties to assess the soil-erosion potential within their borders. He said the students, using a technology called remote sensing, have found what may be a time- and labor-saving way to do the job.

"It looks like this might be a means of helping implement legislative intent through new technology," he said.

The UW-Madison students employed a special sensor aboard the Landsat 5 satellite to record the Westport data when the satellite passed over Wisconsin August 26, 1984.

The sensor, called the Thematic Mapper, has seven channels that detect different wavelengths of light and heat reflected or emitted from the ground. Since different types of land cover such as rock, soil and plants reflect or emit different types of light and heat, the Thematic Mapper can read their electromagnetic fingerprints from space and relay the data to the ground.

A computer programmed to recognize those fingerprints can then identify them and produce a map of land cover.

The sensor, Lillesand said, can distinguish between features as small as 30 meters square, so its maps have a resolution of 30 meters -- impressive work for a satellite that orbits 440 miles above the Earth and covers the entire globe in just 16 days.

The students produced their erosion-potential map of Westport by combining the computer-interpreted satellite map of the town's forests, meadows, row crops, water, and other types of land cover with data supplied by the multi-agency Dane County Land Records Project on the town's soil types, hilliness and other factors influencing erosion. The final product shows the town's area broken into five categories of erosion potential -- from least to greatest.

5/3/85 - Environmental Studies

noted for her both for her fiction and non-fiction work. One novel -- "Massacre in Mexico" -- has been translated into English.

Her visit is sponsored by Ibero-American studies and the departments of Spanish and Portuguese and comparative literature.

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CONTACT: Sally Benjamin (608) 263-3063/257-1806

STUDENTS FISHING FOR OPINIONS

Anglers fishing on Black Earth Creek Saturday (May 4) will have the opportunity to voice their opinions about one of the Midwest's most productive trout streams.

Opinion surveys about the creek, in western Dane County, will be distributed to anglers by 14 UW-Madison graduate students. The survey is part of a study of the creek by the university's Water Resources Management Program.

Working under the auspices of the Institute for Environmental Studies, the students are studying a 46-square mile drainage area upstream from the village of Black Earth. They will be looking at how land use and water quality in the watershed have changed and the impact of changes on the stream.

Results of the study will be published upon completion of the project.

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Institute for Environmental Studies

University of Wisconsin-Madison

The Institute for Environmental Studies (IES) was created as a research program of the Graduate School at the University of Wisconsin-Madison in 1967. Three years later it was reorganized as a comprehensive, independent academic unit designed to study the interrelationships between people and the environment. It has three important missions: (1) to educate graduate and undergraduate students, (2) to conduct interdisciplinary research, and (3) to share its expertise with the public.

Below is a brief description of how IES carries out those missions.

Instruction

Highly diverse is perhaps the best way to describe the variety of courses -- more than 100 in all -- on environmental subjects available through IES. Many of them are offered in conjunction with other UW-Madison departments. They range in topics from pollution to ethics, from energy resources to environmental health, from minerals to land use.

About 40 courses are taught each fall and spring semester; another 15 are taught each summer. They are generally open to all UW-Madison students who meet the prerequisites.

IES also administers three graduate degree programs, a special graduate-level curriculum, and an undergraduate certificate program. All are interdisciplinary.

Environmental Monitoring Program -- Students may earn master's and/or doctoral degrees in this program. They learn to use remote sensing technology -- particularly instruments aboard aircraft and satellites in combination with computers -- to inventory and monitor natural resources and environmental conditions. Master's theses and doctoral dissertations are required.

Land Resources Program -- Also offering both master's and doctoral degrees, this program accommodates students with a broad range of interests in land and natural resources. Students, according to well-developed guidelines and with faculty consultation, design study plans to suit their own needs. Master's theses and doctoral dissertations are required.

Water Resources Management Program -- Designed to train water resources practioners, this program offers master's degrees only. Students end their coursework with a group practicum that focuses on an actual public water resource problem.

Energy Analysis and Policy Curriculum -- This master's-level curriculum is for graduate students who wish to learn about energy problems and management. The curriculum is an option in IES's Land Resources Program and in the master's programs of the Department of Urban and Regional Planning and the LaFollette Institute of Public Affairs. Program requirements vary.

Environmental Studies Certificate Program -- Any UW-Madison undergraduate can earn a special environmental studies certificate by completing at least 26 credit hours of courses recommended by IES.

Enrollment in IES's three graduate programs, including Energy Analysis and Policy Curriculum students in the Land Resources Program, was 169 (117 M.S. and 52 Ph.D. candidates) in the fall of 1988. About 90 undergraduate students were enrolled in the Environmental Studies Certificate Program. By the fall of 1988, IES listed 603 graduate alumni (546 with M.S. and 57 with Ph.D. degrees) and 94 certificate recipients.

Nearly 70 active professors from 31 UW-Madison departments and schools teach IES's courses and direct its graduate and undergraduate programs. Their academic backgrounds include agricultural economics, agricultural engineering, agricultural journalism, botany, business, civil and environmental engineering, economics, forestry, geography, geology and geophysics, general engineering, history, horticulture, journalism and mass communication, landscape architecture, law, philosophy, political science, preventive medicine, rural sociology, soil science, urban and regional planning, water chemistry, wildlife ecology, and zoology.

Research

The range of problems and issues explored by IES researchers is vast: Agricultural impacts of climate change. Uses of remote sensing technology in natural-resource management. Health risks from air and water pollution. Better measures of human well-being and environmental quality. New ways to organize, store, and retrieve resource-related information. Earth systems science and sustainable development of the biosphere. These things -- and many more -- are under study in the institute.

IES is home to seven research centers. Each draws professors, staff scientists, and graduate students from a variety of academic disciplines to explore a different realm of the "human-environment system."

Center for Biotic Systems -- Ecosystems and biological aspects of the environment are the focus of study. Much of this center's current work focuses on learning more about the ecology of oligotrophic lakes and on restoring natural ecosystems such as prairies that have been disturbed by human activities. The center also has extensively studied wetlands, rivers, eutrophic lakes, and the environmental impacts of dams.

Center for Climatic Research -- Understanding the causes, mechanisms, and evolution of world climate patterns and the impact of climate on ecosystems are the primary aims of this center. Current research aims at diagnosing and modeling the behavior of past and present climates and improving the reliability of long-range seasonal forecasts. The center leads an international scientific effort to construct a history of the last 150,000 years of world climate change.

Environmental Policy Studies Center -- Institutional, legal, and public policy aspects of past, current, and future environmental decisionmaking are the focus of this center. Researchers have examined environmental indicators of global sustainability used by international development agencies, statutory and case law affecting Wisconsin River policy, and a wide range of issues related to the humid and dry tropics.

Environmental Remote Sensing Center -- Closely tied to IES's Environmental Monitoring Program, this center conducts research to improve the gathering and analysis of remotely sensed data and to apply remote sensing technology to the measurement, study, and management of the Earth's resources. One recent project, for example, developed a computerized method of pinpointing abandoned toxic waste dumps from aerial photographs.

Center for Human Systems -- Social, cultural, and behavioral aspects of people's interactions with the environment are examined in this center. Recent studies have probed health risks of air pollution and groundwater contaminants. One research team is evaluating measurements of human well-being and environmental quality on a global scale. Other scientists are exploring risk assessment and management.

Center for Land Information Studies -- Researchers in this center are trying to solve technical and institutional problems associated with the development of multipurpose land information systems. The North American Institute for Land Information and the Land Information Assembly have designated UW-Madison a North American "center of excellence" in this field.

Marine Studies Center -- Resource problems and policies related to the oceans and Great Lakes are the subject of this center's research. One team of scientists is seeking to reestablish self-sustaining populations of lake trout in Lake Michigan. Another is examining consumptive uses of Great Lakes water and how they might be affected by diversions of water outside the Great Lakes region.

IES has received research grants totaling more than $38 million since 1967. Major grantors have included the National Science Foundation, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the U.S. Department of the Interior, the U.S. Department of Agriculture, the Rockefeller Foundation, the William and Flora Hewlett Foundation, the Wisconsin Alumni Research Foundation, the U.S. Office of Naval Research, the U.S. Army Corps of Engineers, the Upper Great Lakes Regional Commission, the Wisconsin Department of Natural Resources, the Wisconsin Department of Transportation, the Wisconsin Department of Administration, Union Carbide Corporation, Wisconsin Power & Light Company, Wisconsin Electric Power Company, and Madison Gas & Electric Company.

Outreach

An award-winning radio program. A technical report series. Special periodicals. Public lectures. These are just a few of the channels through which IES reaches beyond the UW-Madison campus to share its expertise with the rest of the world. Since its inception, the institute has given high priority to public outreach activities.

Earthwatch -- IES and the University of Wisconsin Sea Grant Institute coproduce this series of two-minute radio features on environmental issues and research. Heard five times a week on 110 stations in eight states and on a nationwide satellite radio network, *Earthwatch* has been on the air for 16 years, is widely recognized in the upper Midwest, and has won a number of awards.

IES Reports -- These technical reports -- 133 to date -- feature research by IES faculty, staff, and graduate students and proceedings of special IES-sponsored seminars. Copies are distributed on request from the IES Office of Publications, Information & Outreach. Nearly 50 libraries -- 40 in the United States and and eight in foreign countries -- are depositories for IES's report series.

Guest Lecturers and Lecture Series -- The institute hosts a number of public lectures each year on environmental topics related to its instruction and research programs. In the summer of 1987, IES sponsored a major eight-week lecture series, "Building Sustainable Societies: Environment and Development," featuring prominent national and international speakers.

Periodicals -- The institute publishes several newsletters. One, the *Wisconsin Land Information Newsletter*, reports on research and advances in land information technology. Another, *Environmental Job Opportunities*, lists job openings in environmental fields. IES also publishes a bimonthly newsletter on its own activities and a semiannual newsletter for its alumni.

Student Projects -- Some IES courses put students to work on community environmental problems. In the annual practicum of the Water Resources Management Program, a student research team works with one or more Wisconsin communities, usually in concert with a state agency, to solve a significant water-resource problem. The practicum has produced many lake- and stream- management plans to protect and improve water quality, recreational opportunities, and other public benefits.

Special Projects -- The institute often shares its expertise with other institutions. IES scientists, for example, recently helped Indonesia's agricultural university establish an image-processing laboratory for remotely sensed data and train people to operate it. Other faculty and staff have recently begun cooperating in the field of environmental education with educators in the Soviet Union.

Public Service -- Many IES faculty and staff serve in scientific, professional, and other public-service organizations ranging from the National Science Foundation and the American Congress on Surveying and Mapping to the North American Association for Environmental Education and The Nature Conservancy. The institute encourages faculty and staff to participate in such organizations.

For More Information, contact: Office of Publications, Information & Outreach, Institute for Environmental Studies, 550 N. Park St., 15 Science Hall, Madison, WI 53706, (608) 263-3185.

*Factsheet 7 ** Institute for Environmental Studies ** University of Wisconsin-Madison ** September 1988*

UNIVERSITY OF WISCONSIN-MADISON

CHANCELLOR
Bascom Hall • 500 Lincoln Drive
Madison, Wisconsin 53706
608-262-9946

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Envir. Studies

December 12, 1984

IES
DEC 18 1984
Business Office

Mr. K. L. Shirk, Jr.
President
The Institute for Modernization of Land Data Systems/
Land Information Institute
P.O. Box 1552
Lancaster, PA 17603

Dear Mr. Shirk:

The University of Wisconsin-Madison is pleased to accept the designation as a "Center of Excellence in Land Information Science" conferred on it by the Board of Directors of the Institute of Modernization of Land Data Systems (MOLDS). We are cognizant that this designation has been made by MOLDS only after a careful scrutiny of the commitment, accomplishments, and capabilities of the board, an interdisciplinary group of UW-Madison faculty who have been engaged in research, instruction, and outreach activities associated with land information systems for more than a decade.

This designation serves as a significant recognition of UW-Madison faculty leadership and energy in an area of study that has far-ranging implications at national and international levels for both public and private sectors--the individual citizen; local, state and federal government; and business and industry. Their work has been in the best tradition of the Wisconsin Idea.

The designation will also serve to draw greater attention to the complex array of technological, institutional, and public policy issues involved in modernizing land records. Diverse experience and disciplinary expertise and a coordinated effort to integrate knowledge are required to meet real world needs and provide flexibility for the future. In addition, this designation will help faculty attract resources to move the effort forward.

It has become increasingly evident that ours is an information society. Computer technology permits the storage and manipulation of vast quantities of information and data. The microprocessor revolution makes this technology readily available. At the UW-Madison we have

recognized that this reality also requires new institutional arrangements to facilitate the flow of information through systems that are compatible and can be networked for greater efficiency and power. For this reason, we established an all-campus Office of Information Technology designed to promote effective uses of computers and preclude the confusion and inefficiency that would result from unplanned, uncoordinated proliferation of systems and approaches. Though the issues involved in modernizing land records are far more complex than handling information on one university campus, the need for new institutional mechanisms not only to manage information but to provide flexibility and balance for as yet unidentified future needs, is not dissimilar. We applaud the farsightedness of MOLDS in taking such steps as this designation of the UW-Madison as a Center of Excellence in Land Information Science in the effort to respond to an important national need.

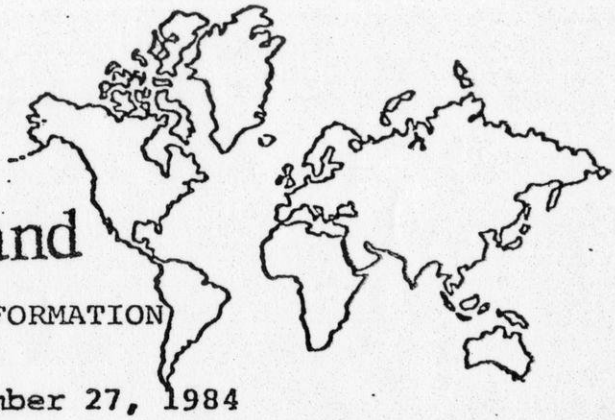
I would welcome the opportunity to meet with you, the faculty involved, and their academic deans and directors should you wish to come to Madison for a formal presentation of this designation.

Sincerely,

Irving Shain

Irving Shain
Chancellor

cc: Robert M. Bock
John G. Bollinger
Reid A. Bryson
Bernard C. Cohen
E. David Cronon
Leo M. Walsh



The Institute for Modernization of Land Data Systems/LAND INFORMATION INSTITUTE

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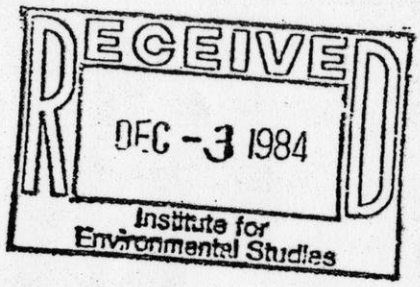

Dr. Irving Shain,
Chancellor
Room 158, Bascom Hall
University of Wisconsin-Madison
Madison, WI 53706

Dear Chancellor Shain:

On behalf of the Board of Directors of the Institute for Modernization of Land Data Systems (MOLDS), I wish to inform you that at its March board meeting MOLDS designated the University of Wisconsin-Madison as one of three Centers of Excellence in Land Information Science.

This designation recognizes the University of Wisconsin-Madison's long interest and leadership in research and instruction in the area of multipurpose land information systems through its College of Agricultural and Life Sciences, the College of Engineering, the Institute for Environmental Studies, and the College of Letters and Science.

MOLDS recognizes the extent of economic and human investment already in place at Wisconsin and hopes that this commitment will be maintained and enhanced.

We are also aware that there may well be additional needs to strengthen the program through net additions to the faculty and through securing the computer hardware required for the state-of-the-art research, instruction, and outreach needed to advance this important effort.

As background, MOLDS is an international organization of representatives from an array of public and private agencies. Officially organized in 1974, MOLDS' principal objective has been to foster the development of improved Land Information Systems. We represent a wide range of public and private agencies that are deeply involved with land information collection and management (see enclosure).

The need for concentrated, organized education, research and outreach in land information sciences is an issue of national consequence. In 1980 the Committee on Geodesy of the National Research Council concluded the following:

> "There is a critical need for a better land-information system in the United States to improve land conveyance procedures, furnish a basis for equitable taxation, and provide much-needed information for resource management" (National Research Council, 1980, page 1)

In the Committee's deliberations on the implementation of modern land information systems, it became evident that qualified personnel to manage such systems are rare:

> "There is considerable concern that qualified personnel required to perform the functions inherent in a comprehensive land-information system will not be available at all levels of government and in the private sector. The panel believes that means must be found to develop the qualified personnel and to encourage and support university research and development activities and programs--therefore: We recommend support by the federal government for the establishment of a center or centers of excellence in land information science, for the purpose of providing a program that develops scholars and professionals. The curriculum should include direct experience with land-data system problems." (National Research Council, 1980, page 4)

Since this initial study, two additional panels have been sponsored by the NRC. Both panels have concurred with the recommendation that a limited number of academic centers of study and training be established.

To help facilitate this NRC recommendation, MOLDS requested information from two U.S. and one Canadian university concerning their interest and capacity to conduct research, education and outreach in land information science. The initial selection of these three universities was based upon our knowledge of their past work in land records modernization issues.

Faculty from your university responded to this request in two forms. Sponsored by the Institute for Environmental Studies, they prepared a paper and presented their ideas at the American Congress of Surveying and Mapping meeting this past March.

They illustrated your institution's present array of available course work related to land information science, and they identified existing graduate degree programs which could be used to begin the education and training of scholars and professionals.

Based upon this documentation of their past research and teaching activities and their enthusiam, we have concluded that the University of Wisconsin-Madison meets our expectations as a Center.

To expand somewhat, in hopes of indicating how impressed MOLDS has been with your institution's activities in land information studies during the past decade, the following is important: The College of Agricultural and Life Science's work on the automation of highway and

electrical transmission location procedures provided some early insights into the potential advantages of computing technology, but also identified various institutional problems associated with land records modernization.

The Land Tenure Center's experience in implementing land registry and property systems as part of agrarian reform in Central and South America has been and continues to be outstanding. I might also say that we would support the extension of the Land Tenure Center's knowlege and expertise to study land tenure in the U.S.

The on-campus relationship between the U.S. Department of Agriculture-Economic Research Service and the College of Agricultural and Life Sciences is also noteworthy.

The Economic Research Service sponsored the first national symposium on local land records modernization issues in 1966. Since that time, they have conducted important work in developing monitoring systems of alien farm ownership and land tenure change in rural America in association with your institution.

The College of Letters and Science has also been active through the Geography Department during the past several decades. The University Cartographic Laboratory was established in 1953, and degree programs in Cartography were established at the bachelor's and master's level in 1973 and 1974 respectively.

The innovative cartographic work by faculty and students in the Geography Department is of national consequence.

The College of Engineering has been instrumental in addressing the issues of modernizing cadastral and ownership records to allow for their merger with other existing land records. It should be noted that a strong surveying component is essential in that geo-positioning, property boundary location, and mapping provide the foundation for land information systems.

The kind of work being conducted by the Departments of Civil and Environmental Engineering and Landscape Architecture in the Dane County Land Records Modernization Project is just the type of educational, research, and training experience we believe essential to bring about needed improvement in land information systems in North America.

The Institute for Environmental Studies' Environmental Remote Sensing Center has been at the forefront of applying advances in remote sensing technology to the mapping sciences. The Environmental Remote Sensing Center has also been addressing the use of remote sensing in land management policy formulation.

The Institute for Environmental Studies' spring semester sponsorship of the "Seminar on the Multi-Purpose Cadastre: Modernizing Land Information Systems in North America" has made a major contribution to understanding the complex of issues as seen from the academic, governmental agency, and commercial perspectives. The breadth of subject matter and the quality of the speakers have been most impressive.

Perhaps the most important aspect of your institution's past and present activities is the interdisciplinary nature of the research and training in land information science.

The most compelling proof, however, is the paper submitted by the fifteen faculty authors from seven departments and/or institutes.

The fact that consensus could be obtained across such a diverse set of disciplines is proof of your institution's ability to provide needed leadership in beginning the process of integrating and synthesizing knowledge relevant to the problems this country faces as it begins to modernize its land records systems and institutions.

We are also cognizant of the fact that your institution, through the Institute for Environmental Studies, has the administrative structure, experience, and expertise to provide meaningful frameworks for cooperative interaction across traditional school and college boundaries.

These examples are provided to suggest that we believe the University of Wisconsin-Madison is deserving of being designated as a Center of Excellence in Land Information Science.

To further the aims of MOLDS and your LIS activities, we encourage joint sponsored research, workshops, and conferences, joint sponsored publications, and joint pursuit of mutual goals.

Please advise us, if any specific joint sponsorship of any particular project would be helpful.

Again, our congratulations on your level of excellence. We extend best wishes for your continued growth and excellence in Land Information Sciences.

Yours truly,

K. L. Shirk, Jr.
President
MOLDS/LII

KLSjr:dd:clc
cc: Dr. Robert M. Bock, Dean, Graduate School (333 Bascom Hall)
Dr. John G. Bollinger, Dean, College of Engineering (258 Mechanical Engineering Building)
Dr. Reid A. Bryson, Director, Institute for Environmental Studies (1007 WARF Building)
Dr. Bernard C. Cohen, Vice Chancellor-Academic Affairs (150 Bascom Hall)
Dr. E. David Cronon, Dean, College of Letters and Science (102 South Hall)
Dr. Leo M. Walsh, Dean, College of Agricultural and Life Sciences (140 Agriculture Hall)

REPRESENTATIVES TO MOLDS/LII BOARD OF DIRECTORS

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American Congress on Surveying and Mapping
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Urban and Regional Information Systems Association
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U.S. Department of Housing and Urban Development
U.S. Geological Survey

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 2/7/85

CONTACT: Ben Niemann (608) 263-6506; Tom Sinclair (608) 263-5599

UW-MADISON DESIGNATED 'CENTER OF EXCELLENCE' IN LAND INFORMATION SCIENCE

MADISON--University of Wisconsin-Madison has been designated one of three North American centers of excellence in land information science in recognition of its teaching and research leadership in that field.

The designation, made on the recommendation of the National Research Council, came from the Institute for Modernization of Land Data Systems (MOLDS), a consortium of more than 40 agencies concerned with land information science.

Ben Niemann, professor of landscape architecture and environmental studies, said the recognition from MOLDS gives added credibility to UW-Madison's expertise in this field which relates to the ways in which land use information is collected and managed.

The designation also should help generate research interest from private industry, he added, explaining that these programs, which involve several departments, evolved during the 1960s.

"Key people here saw that federal agencies weren't responding to the land information needs of state and local agencies," said Niemann, adding that the university undertook a program to help out in that area. "With the emerging use of computers in this field, up-to-date training had to be provided for people doing land data work," he said.

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Add 1--Land data programs

In designating UW-Madison a center of excellence, MOLDS president K. L. Shirk cited the university's innovative research as well as the education and training experience it provides. He also noted the unique spirit of cooperation exhibited among the seven departments and institutes involved in land information sciences.

In a letter to UW-Madison Chancellor Irving Shain, Shirk pointed to several specific university activities and achievements that led to the MOLDS designation. Among them were the College of Agricultural and Life Science's work on the automation of highway and electrical transmission locations which, Shirk said, "provided early insights into the potential advantages of computing technology" as well as "identified various institutional problems associated with land records modernization."

Also cited were the Land Tenure Center's work on land registry and property systems as part of agrarian reform in Central and South America; the nationally recognized work of the university's geography and cartography departments; and the Institute for Environmental Studies' Environmental Remote Sensing Program in which photographs taken from planes and satellites have been used to assess land use patterns in many areas of Wisconsin.

Also, Shirk wrote, the university's work on the Dane County Land Records Modernization Project is "just the type of educational, research and training experience we believe essential to bring about needed improvement in land information systems in North America."

UW-Madison is the first center of excellence in this field to be named by MOLDS; the other two have yet to be selected.

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--Linda Weimer (262-6843)/Bill Keenan

1984

Human Systems Center for

IES Center for Human Systems

Marty S. Kanarek, Director

The IES Center for Human Systems (CHS) probes the social, cultural, and behavioral aspects of people's interactions with the environment.

Air Pollution and Health

CHS has recently been analyzing data on the effects of air pollution, including indoor air pollution, on people's health in the city of Portage, Wisconsin. Nearly 350 Portage residents carried small air-sampling devices with them for a week in 1981 and again in 1982 so scientists with the center and the UW-Madison Department of Preventive Medicine could learn more about their day-to-day exposure to nitrogen dioxide gas. Stationary air-sampling devices also were placed in and around their homes, schools, and offices.

The effects of nitrogen dioxide on people are still not clear. But based on studies showing that it causes respiratory problems in laboratory animals, the U.S. Environmental Protection Agency limits the annual concentration of the gas in the nation's outdoor air to a maximum of 0.05 parts per million.

CHS's analysis indicates that much of the nitrogen dioxide to which people are exposed in Portage comes from indoor air and that combustion from gas stoves is one of the single biggest sources. Such findings suggest that public health officials should consider the quality of indoor, as well as outdoor, air.

In related work, CHS and the Department of Preventive Medicine monitored the air in 50 Wisconsin homes both before and after the homes were weatherized in 1983-84. Scientists hope to learn how weatherization affected the amounts of radon, formaldehyde, particulates, and other air pollutants in the homes and whether the residents experienced any changes in health and comfort as a result.

Water Quality and Health

Also under examination in CHS are the potential health effects of low-level chemical contamination in groundwater, whether chloroform and other volatile organic chemicals in drinking water are related to cancer causation, and the theories underlying epidemiological studies.

Emphasis lately has been on environmental health, but the center has, in the past, pursued such topics as the traditional farming methods of a primitive tribe in Borneo and their implications for agricultural development elsewhere in Indonesia; the flow of information in communities with nuclear power plants; and recreation planning in the upper Great Lakes region.

Future Topics

Future research will explore, among other things, population ecology, agricultural systems, the economics of development, environmental policies and institutions, and risk-assessment policies and techniques.

Faculty associated with the Center for Human Systems

Professors Marty S. Kanarek and Jon Moline; Associate Professor Rodney E. Stevenson; Assistant Professor Mark E. Hanson; and Adjunct Assistant Professor Henry A. Anderson

For More Information

Contact the IES Publications and Information Office, 120 WARF Building, 610 Walnut St., Madison, WI 53705, (608) 263-3185

Factsheet 5 January 1985
Institute for Environmental Studies
University of Wisconsin-Madison

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Immediately 3/18/85

Mary — Please put in IES file for the record — this was never released L.

CONTACT: Arthur Sacks (608) 262-5957; David Ward (608) 262-1453

COMMITTEE RECOMMENDS CHANGES FOR ENVIRONMENTAL STUDIES INSTITUTE

MADISON--The University of Wisconsin-Madison's Institute for Environmental Studies (IES) should retain its mission and interdisciplinary character, but should be administered differently, according to recommendations recently made to Chancellor Irving Shain by a nine-member campus committee.

Calling IES "an unusually successful experiment...in American universities in the past fifteen years," Shain had asked the committee to examine the research and instructional missions of the institute and recommend the best institutional arrangements and organizational structure "to provide sound guidance for the next phase of the history of the unit."

The study was prompted by the impending retirement of director Reid Bryson, head of the institute since it was established in 1970. After June 1985, Dr. Bryson will return to full-time teaching and research as professor of meteorology, geography, and environmental studies.

The institute was formed to promote interdisciplinary research, education, and outreach in the environmental studies area. Over the past fifteen years, it has developed dozens of courses and several degree and certificate programs at graduate and undergraduate levels. IES regularly conducts research activities in climate, biotic systems, marine studies, human systems, land information studies, and remote sensing of the environment. It is also engaged in a variety of outreach functions, including co-sponsorship, with the UW Sea Grant Institute, of the well-known Earthwatch radio program.

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The committee went on to explore several options for the administration of the institute, ranging from establishing IES as a separate College of Environmental Studies; to folding it into an existing college like Letters and Science, Agriculture or Engineering; to leaving it as it now exists -- a separate administrative unit that is not a college but whose head reports directly to the chancellor.

After examining the possibilities, the committee concluded that IES should not be granted school or college status and should not be headed by a dean. Rather, the committee recommended that IES be placed within the Graduate School and that its director report to the graduate school dean.

The committee recommended this option because the graduate school is campuswide in its mission and has programs similar to IES under its auspices. The committee said in its report that this arrangement would "strengthen the hand of the new director and allow IES to concentrate its attention and energies on its mission -- the building of its research and educational program."

The committee, headed by Graduate School Associate Dean David Ward, said in its report, "IES must continue to have a distinct status in order to further its interdisciplinary focus. It could not flourish as a captive of a disciplinary or a multidisciplinary unit.

"It will need to have its own resources in terms of staff and budgeted faculty positions," the committee added.

The committee also recommended that in the future all IES faculty appointments be budgetary only, that its current practice of having a few tenure or tenure track appointments no longer be an option of the faculty who participate.

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Many IES faculty and academic staff have taken issue with the committee's recommendations and they have communicated their concerns to the Chancellor. Chancellor Shain said he has not yet made up his mind on the issues of faculty appointments and IES's structure.

"This is an important proposal which could have a broad impact on the campus. For that reason, I want to meet personally with the committee, and talk with the faculty, staff, and students of the institute and other interested parties before making any decision," he said.

Other members of the IES study committee are Seymour Abrahamson, Lloyd Bitzer, John Bollinger, Fred Hayward, Arthur Kelman, Jon Moline, Robert Ragotzkie and James Skiles.

###

Linda Weimer (608)
262-6843

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 2/6/85

EARL LAYS OUT STATE'S ENVIRONMENTAL CHALLENGES

MADISON--Preventing soil erosion, groundwater contamination and toxic waste build-up will be just a few of Wisconsin's major environmental challenges in coming years, Gov. Anthony Earl said Tuesday night in a lecture at University of Wisconsin-Madison.

Earl said that, until now, the major focus of environmental protection in the state has been on cleaning up environmental damage and noted that the state's air and water are cleaner than they were ten years ago.

But he said new initiatives are needed now to protect the state's natural resources before they are harmed.

"I'd like to see us begin to shift now, not away from cleaning up, but shift new energy and resources into prevention of pollution in the first place," Earl said. "I think that that is especially important in the areas of toxic waste and protection of our soils."

Earl lauded the efforts of UW-Madison's Institute for Environmental Studies, which sponsored the Governor's appearance as part of its fifteenth anniversary observation. The institute, created in 1970, offers interdisciplinary environmental instruction and conducts environmental research. It also focuses on increasing public awareness of these issues through its production, with the UW Sea Grant Institute, of the popular "Earthwatch" radio program.

Earl, who heads the Standing Committee on Energy and Environment of the National Governor's Association, told his audience of 250 people that national

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initiatives also are needed to help solve problems that affect the state such as acid rain. Earl said the governor's committee is currently proposing a federal law that would greatly reduce allowable sulphur dioxide emissions in the air. Airborne sulphur dioxide is linked to acid rain.

Federal measures also are needed to combat unnecessary shipments of hazardous waste around the nation, Earl contended. He said the Nuclear Regulatory Committee (NRC) is largely to blame for the shipments because it does not enforce its own standards.

"The explicit NRC policy is that on-site storage (of nuclear waste) makes the best sense and that we shouldn't necessarily move it around," Earl said. "That is a policy that's more honored in the breach than in the observance, because we're moving the stuff around like the pea under the shell all the time."

Earl said the transport of nuclear waste shipments down the Mississippi River valley is a particular threat to the state because the waste is traveling over environmentally sensitive wetlands and through communities "woefully unprepared" to deal with a nuclear accident.

"As one of the volunteer firefighters said over there, 'If I heard the train went off the track I'd leave town,'" said Earl.

Earl also stressed that guaranteeing a clean environment in Wisconsin is vital to the state's economic future, saying "I don't think that there is a good deal of important economic development going on at the Love Canal."

###

-- Jennifer Riddle (608) 262-2650

uw news

Environmental Studies

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 1/30/85

CONTACT: Tom Sinclair (608) 263-5599

EARL TO SPEAK ON ENVIRONMENTAL ISSUES TUESDAY

MADISON--Wisconsin Gov. Anthony Earl will be the first speaker in a new Institute for Environmental Studies (IES) colloquium marking the 15th anniversary of the University of Wisconsin-Madison institute.

Earl will address post-election environmental issues and initiatives in the state and nation at 4:15 p.m. Tuesday, Feb. 5, in the auditorium of the State Historical Society on the UW-Madison campus. The public is invited.

Earl, 48, heads the Standing Committee on Energy and the Environment of the National Governor's Association, and was secretary of the Wisconsin Department of Natural Resources from 1975-80.

IES was created Feb. 6, 1970, by the UW Board of Regents to offer interdisciplinary environmental instruction and conduct comprehensive environmental research. It now administers three graduate programs, a master's-level curriculum in energy analysis and policy, and an undergraduate certificate program in environmental studies. The institute also conducts a wide range of research and public service activities, including coproduction of the popular radio program "Earthwatch."

Future speakers in the new IES colloquium will be announced later.

###

--Terry Devitt (608) 262-8282

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 12/5/84

CONTACT: Tom Sinclair (608) 263-5599

ENVIRONMENTAL EVENING COURSES SET FOR SPRING SEMESTER

MADISON--How do social institutions help determine a society's environmental problems? Are environmental issues also ethical issues?

Those are among the questions to be explored in two extended timetable courses being offered by the Institute for Environmental Studies (IES) at the University of Wisconsin-Madison starting in January. Extended timetable courses are taught in late afternoons and evenings for the benefit of people who cannot attend daytime classes.

The first course, Environmental Studies: The Social Perspective, will probe the relationship between social institutions and environmental problems such as wildlife protection, soil and water conservation, food supply, population, and health. The class will meet Mondays and Wednesdays from 6:30 to 7:45 p.m.

The second course, Environmental Ethics, will explore the ethical aspects of environmental issues from pollution to animal rights. Classes will be held Tuesdays and Thursdays from 6:30 to 7:45 p.m.

In addition to the lectures, each course will feature a 50-minute discussion section once a week.

Instruction for both three-credit courses begins Jan. 21. For more information contact the IES Instructional Program, 70 Science Hall, 550 N. Park St., Madison WI 53706, or call (608) 263-1796.

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-- Terry Devitt (608) 262-8282

Add 1--UW-Madison Newsbriefs

11/28/84 Grievance Studies

WAISMAN RESEARCH FUNDED

A three-year grant to study the classification and management of children with severe speech delays has been awarded to UW-Madison communicative disorders Professor Lawrence D. Shriberg.

The grant, $113,771 for the first year of the study, was awarded by the U.S. Department of Education and will be used to finance Shriberg's research at the Waisman Center on Mental Retardation and Human Development. Funds for the remaining two years of Shriberg's study will be negotiated at a later date.

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STANTON RECEIVES A.B. WOOD MEDAL AND PRIZE

Timothy Stanton, a researcher at UW-Madison's Institute for Environmental Studies (IES), has been selected by the Institute of Acoustics in Edinburgh, Scotland, to receive its 1985 A.B. Wood Medal and Prize.

The prize, awarded for distinguished contributions in the application of acoustics, is given every other year to an American or Canadian researcher.

Stanton is an assistant scientist in the IES Marine Studies Center and is currently studying how sonar signals are reflected by fish and how those signals can be interpreted by computers.

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ADVOCACY FOR THE DEVELOPMENTALLY DISABLED IS TOPIC

Stanley S. Herr, a University of Maryland law professor, will discuss the future of advocacy for the developmentally disabled Dec. 14 at the Waisman Center on Mental Retardation and Human Development, 1500 Highland Drive.

Herr, who has worked as a public interest lawyer, researcher and lecturer in the area of law and disability, will speak at 3:30 p.m. in the center's auditorium.

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For more: Fred Madison
(608) 263-4004

UW-MADISON STUDENTS HASTEN ANIMAL WASTE CLEANUP

Seventeen graduate students at the University of Wisconsin-Madison are helping the state wage a new campaign against a chronic cause of water pollution -- improper handling and storage of farm animal wastes.

The students are enrolled in an eight-week summer workshop offered by the university's Institute for Environmental Studies. It is their final requirement for earning masters' degrees in water resources management.

The collective assignment is to write a model county plan to pinpoint animal-waste problem areas, and then put it to the test in Dane County.

Their effort not only could save Wisconsin county and state agencies a lot of work, but it could speed up the availability of money to farmers from a new state cost-sharing program aimed at preventing animal-waste pollution.

"We started meeting in January and put in a tremendous amount of work this spring," says the student's faculty advisor Fred Madison. "We took field trips, visited farms and looked at animal waste problems. The students have gained an enormous amount of insight into the problems and have gotten a good head start on getting this job done over the next few weeks."

The Wisconsin Legislature established the $1 million Wisconsin Farmers Fund last year to give farmers up to $10,000 each for barnyard and feedlot improvements to control runoff. The state Department of Agriculture, Trade and Consumer Protection will administer the fund, which is expected to be ready for business in late July.

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Add 1--UW-Madison Newsbriefs

10/24/82 Environmental Studies

FRATERNITY SPONSORING UNICEF TRICK-OR-TREATERS

The UW-Madison chapter of Kappa Alpha Psi fraternity is sponsoring city of Madison children who will be trick-or-treating for UNICEF on Halloween.

Anyone interested in helping sponsor a child can call Michael Stanford, president of the Madison Kappa chapter, at (608) 257-6699.

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LEGAL STUDIES COLLOQUIUM FOCUSES ON DIVORCE

"The Process of Negotiation in Divorce" is the topic for an Interdisciplinary Legal Studies Colloquium scheduled noon Thursday (Nov 8) in the UW-Madison Memorial Union. Margo Melli, UW-Madison professor of law, and Howard Erlanger, professor of law and sociology, will speak.

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FIVE STUDENTS SHARE ENVIRONMENTAL FELLOWSHIPS

Five graduate students in the Institute for Environmental Studies (IES) at UW-Madison will share a total of $19,675 in fellowships this year from the Jessie Smith Noyes Foundation of New York City.

Pamela Foti, (216 N. Thornton Ave.,) Elizabeth Wildman-Evans, (733 Christianson Ave.,) Nancy Newcomb, (614 S. Brooks St.,) Sue Rodenbeck, (15 N. Hancock St.,) and Peter Ruhl, (2849 Oregon Road,) were chosen by IES faculty members from the 149 students enrolled in the institute's three graduate-level programs.

Established in 1947, the Jessie Smith Noyes Foundation supports institutions whose work involves finding ways to provide sustainable food and water supplies for future generations while promoting wise stewardship of the earth and its resources.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies Institute

Release: Immediately 7/31/84

CONTACT: Tom Sinclair (608) 263-5599

ENVIRONMENTAL COURSES SET FOR EVENINGS THIS FALL

MADISON--The Institute for Environmental Studies (IES) at the University of Wisconsin-Madison will offer two "extended-timetable" courses on the environment this fall especially for people who cannot attend daytime classes.

The first course, "Forum on the Environment," will explore global environmental problems associated with population growth and conflicts over resources. Guest lecturers from the UW-Madison faculty will discuss topics ranging from world food production and energy to environmental health and the ecological effects of nuclear war. The class will meet Mondays and Wednesdays from 6:30 to 7:45 p.m.

The second course, "Environmental Studies: The Humanistic Perspective," will consider environmental problems from the standpoints of philosophy, literature, fine arts, history of science, and anthropology. The class is scheduled for Tuesdays and Thursdays from 6:30 to 7:45 p.m. with discussion sections to be held from 8:00 to 8:30 p.m.

Both are three-credit courses open to all UW-Madison students with no prerequisites. Classes begin the first week of September and end with final exams the third week of December.

The courses are the first in a sequence leading to a Certificate in Environmental Studies offered by IES to all UW-Madison undergraduates and to people who already have bachelor's degrees from accredited institutions. IES

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expects to offer additional evening courses in sequence in subsequent semesters.

People who are not now enrolled at UW-Madison may take the courses as special or guest students. For more information, contact the IES Instructional Program, 70 Science Hall, 550 N. Park St., Madison, WI 53706, (608) 263-1796.

IES is an interdisciplinary unit of UW-Madison founded in 1970 to offer environmental instruction and conduct comprehensive research. Aside from the certificate program for undergraduates, IES administers graduate programs in environmental monitoring, land resources and water resources management, and a master's level certificate program in energy analysis and policy.

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--Tom Sinclair (608) 263-5599

INSTITUTE FOR ENVIRONMENTAL STUDIES

ORGANIZATIONAL NETWORK

1983-84

ADMINISTRATIVE UNITS OF IES

Director's Office (includes Publications and Information Office)
Center for Biotic Systems
Center for Climatic Research
Environmental Policy Studies
Environmental Remote Sensing Center
Center for Geographic Analysis
Center for Human Systems
IES Instructional Program
Marine Studies Center

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Thomas M. Lillesand, Alternate

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Frank L. Scarpace	IES/Civil & Environ Engr
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Kenneth Conca	Land Resources Graduate Student
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Jon N. Moline

STANDING COMMITTEES OF IES INSTRUCTIONAL PROGRAM

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Gerald C. Gerloff, ch	Botany/IES
John A. Hoopes	Civil & Environ Engr/IES
Thomas M. Lillesand	IES/Forestry/Civil & Environ Engr
Gretchen H. Schoff	General Engr/IES/ILS

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Ralph W. Kiefer	Civil & Environ Engr/IES
Dorothy J. Klinefelter, ex officio	IES
Jon N. Moline, ch	Philosophy/IES
Arthur B. Sacks, ex officio	IES

- Curriculum Committee:

Becky J. Brown	IES/Botany
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Calvin B. DeWitt	IES
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Evelyn A. Howell, ch	Landscape Architecture/IES
Harold C. Jordahl, Jr.	Urban & Reg Plng/Extn/IES
Marty S. Kanarek	Preventive Medicine/IES
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Frank L. Scarpace	IES/Civil & Environ Engr

- Colloquium Committee:

Harold C. Jordahl, Jr.	Urban & Reg Plng/Extn/IES
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Frank L. Scarpace	IES/Civil & Environ Engr
Clay Schoenfeld	Journalism/IES

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Thomas M. Lillesand	IES/Forestry/Civil & Environ Engr
Robert A. Ragotzkie	Meteorology/IES

- Teaching Assistant Policies and Procedures Committee:

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Calvin B. DeWitt	IES
Duncan A. Harkin	Agricultural Economics/IES
Bruce Herrick	Land Resources student
Thomas M. Lillesand	IES/Forestry/Civil & Environ Engr
James B. MacDonald	Law/IES
Arthur B. Sacks, ch	IES
Frank L. Scarpace	IES/Civil & Environ Engr

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Brent H. McCown	Horticulture/IES
Arthur B. Sacks	IES
Frank L. Scarpace	IES/Civil & Environ Engr
Gretchen H. Schoff	General Engr/IES/ILS
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Evelyn A. Howell	Landscape Architecture/IES
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Thomas M. Lillesand	IES/Forestry/Civil & Environ Engr
Phillip C. Muehrcke	Geography/IES
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Charles R. Stearns	Meteorology/IES

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Gordon Chesters	Soil Science/IES
Arlen C. Christenson	Law/IES
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Donald J. McCarty	Educ Admin
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William C. Boyle	Civil & Environ Engr
Gerald C. Gerloff	Botany/IES
Duncan A. Harkin	Agricultural Economics/IES
Evelyn A. Howell	Landscape Architecture/IES
James C. Knox	Geography/IES
James B. MacDonald	Law/IES
David M. Mickelson	Geology & Geophysics/IES
Clay Schoenfeld	Journalism/IES

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Converse H. Blanchard	Physics
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George Bunn (on leave)	Law/IES
Charles J. Cicchetti	IES/Economics
Mohamed El-Wakil	Mechnical Engr/Nuclear Engr
Wesley K. Foell	Engr Experiment Station
William T. Gormley, Jr.	Political Science/IES
Mark E. Hanson	Engr Experiment Station
Duncan A. Harkin	Agricultural Economics/IES
Richard G. Koegel	Agricultural Engineering
Leon N. Lindberg	Political Science/IES
Cora E. Marrett	Sociology/Afro-American Studies
Edward E. Miller	Physics/Soil Science
John W. Mitchell	Mechanical Engineering
John E. Ross	Agricultural Journalism/IES
James J. Skiles	Electrical & Computer Engr
John S. Steinhart, ch	Geology & Geophysics/IES
Rodney E. Stevenson	Business/IES

IES INSTRUCTIONAL PROGRAM FACULTY (EXECUTIVE COMMITTEE MARKED "*")

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Aber, John D.	Assoc Prof		NatRsc-Forestry
Adams, Michael S.	Professor	*	Botany
Anderson, Mary P.	Assoc Prof		Geol & Geophys
Armstrong, David E.	Professor		Civil & Environ Engr
Barrows, Richard L.	Professor		Agric Econ/Coop Extn
Bishop, Richard C.	Assoc Prof		Agric Econ
Bogue, Allan G. B.	Professor	*	History
Bonnicksen, Thomas M.	Assoc Prof		Forestry
Born, Stephen M.	Professor	*	Urban & Regional Plng/Coop Extn
Brinkmann, Waltraud A. R.	Assoc Prof	*	Geography
Brown, Becky J.	Asst Prof		Environ Studies/Botany
Bryson, Reid A.	Professor	*	Meteorology/Geography
Bubenzer, Gary D.	Professor	*	Agric Engr
Bunn, George	Professor	*	Law
Chesters, Gordon	Professor	*	Soil Science
Christenson, Arlen C.	Professor		Law
Cicchetti, Charles J.	Professor	*	Environ Studies/Economics
Clemence, Barbara A.	Assoc Prof		Nursing
Cottam, Grant	Professor	*	Botany
David, Martin H.	Professor	*	Economics
Denevan, William M.	Professor	*	Geography
DeWitt, Calvin B.	Professor	*	Environ Studies
Engman, Charles A. Jr.	Emeritus		
	Assoc Dir		
Felstehausen, Herman H.	Professor	*	NatRsc-Land Arch/Coop Extn
Gerloff, Gerald C.	Professor	*	Botany
Gormley, William T.	Assoc Prof		Political Sci
Green, Theodore III	Professor	*	Civil & Environ Engr/Meteor
Harkin, Duncan A.	Professor	*	Agric Econ/Coop Extn
Hart, Henry C.	Emeritus		
	Professor		
Heberlein, Thomas A.	Professor		Rural Sociology
Hoopes, John A.	Professor	*	Civil & Environ Engr
Howell, Evelyn A.	Assoc Prof	*	NatRsc-Land Arch
Joeres, Erhard F.	Professor	*	Civil & Environ Engr
Jordahl, Harold C. Jr.	Professor	*	Urban & Regional Plng/Coop Extn
Kanarek, Marty S.	Asst Prof		Preventive Med/Environ Studies
Kiefer, Ralph W.	Professor	*	Civil & Environ Engr
Kitchell, James F.	Professor		Zoology
Knox, James C.	Professor	*	Geography
Kutzbach, John E.	Professor	*	Meteorology
Lee, Gerhard B.	Professor	*	Soil Science/Coop Extn
Lillesand, Thomas M.	Professor	*	Environ Studies/NatRsc-Forestry/Civil & Environ Engr
Lindberg, Leon N.	Professor	*	Political Sci
MacDonald, James B.	Professor	*	Law
Magnuson, John J.	Professor	*	Zoology

IES INSTRUCTIONAL PROGRAM FACULTY (CONTINUED)

(Name)	(Title)		(Tenure/Tenure Track)
Massie, Leonard R.	Assoc Prof		Agric Engr/Coop Extn
McCown, Brent H.	Professor	*	Horticulture
Mickelson, David M.	Professor		Geol & Geophys
Moline, Jon N., Chair	Professor	*	Philosophy
Muckenhirn, Robert J.	Emeritus Professor		
Muehrcke, Phillip C.	Professor	*	Geography
Nelson, Margaret E.	Professor		Family Resrcs/Coop Extn
Niemann, Bernard J. Jr.	Professor	*	NatRsc-Land Arch/Coop Extn
Potter, Van R.	Emeritus Professor		
Ragotzkie, Robert A.	Professor	*	Meteorology
Ross, John E.	Professor	*	Agric Journ
Ruff, Robert L.	Professor		Wildlife Ecology/Coop Extn
Sacks, Arthur B.	Lecturer		
Scarpace, Frank L.	Assoc Prof	*	Environ Studies/Civil & Env Engr
Schoenfeld, Clarence	Professor	*	Journ & Mass Com
Schoff, Gretchen H.	Professor	*	General Engr/Environ Studies
Smail, John R. W.	Professor	*	History
Stearns, Charles R.	Professor	*	Meteorology
Steinhart, John S.	Professor	*	Geol & Geophys
Stevenson, Rodney E.	Assoc Prof		Business
Suomi, Verner E.	Professor	*	Meteorology
Vale, Thomas R.	Professor		Geography

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 5/24/84

CONTACT: Barbara Borns (608) 263-4373

MINORITY FELLOWSHIP AT UW-MADISON NEEDS APPLICANTS

MADISON--The Institute for Environmental Studies at University of Wisconsin-Madison is seeking applicants for a new minority graduate fellowship sponsored by the U.S. Department of Education.

The institute has no qualified applicants so far, said institute administrators, and the application deadline has been tentatively set as the end of June. The award is renewable for up to three years, and could be worth as much as $22,000.

Applicants must have a financial need and be accepted into one of the four graduate programs administered by the Institute for Environmental Studies: environmental monitoring, land resources, water resources management or energy analysis and policy.

Those interested can contact the institute by telephone at (608) 263-4373, or write to the Institute for Environmental Studies, 120 WARF Building, 610 Walnut St., Madison, WI 53705.

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--Steve Schumacher (608) 262-8289

Newsbriefs -- add one

3/24/82 Environ. Studies Institute for

SACKS NAMED IES ASSOCIATE DIRECTOR

Arthur B. Sacks has been named associate director of the UW-Madison's Institute for Environmental Studies.

Sacks, 37, has been assistant director of the program since last August and administrator of its academic programs since 1978. He also serves as president-elect of the North American Association for Environmental Education and deputy secretary-general of the World Council for the Biosphere and International Society for Environmental Education.

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HALLINAN TAKES PROFESSORSHIP AT NOTRE DAME.

Maureen T. Hallinan, UW-Madison professor of sociology since 1972, has been named William P. and Hazel B. White Professor of Arts and Letters at the University of Notre Dame.

Hallinan is the second woman to be named to an endowed professorship at Notre Dame. She does research on the analysis of children's friendships in school settings and the effects of instructional grouping on student friendships and academic achievement. She will start her new professorship this fall.

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UW-MADISON GRADUATE RECEIVES HIGH NAVY COMMAND

Navy Capt. Arthur F. Schroeder, son of Mr. and Mrs. Art Schroeder of DeForest, has assumed command of the Naval Ordnance Missile Test Facility in White Sands, New Mexico.

Schroeder, a 1962 graduate of the UW-Madison's ROTC program, previously served as officer in charge of the Navy's High Energy Laser Program office detachment also in White Sands. He holds a master's degree in physics from the Naval Postgraduate School and has received several commendation medals from the Navy during his years of service.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 12/21/83

CONTACT: Arthur B. Sacks (608) 262-5957

BRYSON, SACKS TO HELP LEAD THINK TANK ON DEVELOPMENT AND ECOLOGY

MADISON--Two directors of the Institute for Environmental Studies (IES) at University of Wisconsin-Madison have assumed leadership roles in a world organization created this October to foster ecologically sound development practices worldwide.

Both IES director Reid A. Bryson, 11 Rosewood Circle, and assistant director Arthur B. Sacks, 409 Bordner Drive, were involved in forming the group, called the World Council for the Biosphere. Bryson is a founding member and Sacks has been elected the council's deputy secretary-general.

An environmental think tank allied with the International Society for Environmental Education, the council was established to create and distribute educational programs and materials urging "ecologically sustainable development," Sacks said.

"We are convinced that development is going to continue," he said. "It must continue in developing countries if people there ever hope to achieve minimal standards of health and happiness. We must work to create the kind of development that, in the long term, sustains the things that are necessary for human beings and other life to survive."

Sacks said the possible negative effect of development on earth's "life-support systems" is "one of the key threats to human life on earth."

Eight professional environmental education societies from North America and Asia already have affiliated with the group, he said.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 12/12/83

CONTACT: Arthur Sacks (608) 262-5957

ENVIRONMENTAL STUDIES INSTITUTE AWARDED $210,000

MADISON--A California foundation has awarded $210,000 to the Institute for Environmental Studies (IES) at University of Wisconsin-Madison for instruction, research and outreach activities of value to policymakers.

The grant, from the William and Flora Hewlett Foundation of Menlo Park, Calif., will bolster several current and planned institute projects, said IES Director Reid Bryson.

Bryson said the projects include:

-- Dissemination of new climate and crop-yield forecasting techniques;

-- Studies of potential uses of computer and satellite-assisted remote sensing technologies in environmental resource management, particularly in land-records systems;

-- Applications of research to new decision-making approaches and policy formulation; and

-- Publication of policy-oriented "white papers" on the implications of new technologies for decision makers in the United States.

IES will receive the grant in annual installments over the next three years. Bryson, IES Assistant Director Arthur Sacks, and Thomas Lillesand, director of IES's Environmental Remote Sensing Center, will oversee projects funded by the grant.

Established in 1970 to promote interdisciplinary environmental instruction and research at UW-Madison, IES administers graduate degree programs in

-more-

environmental monitoring, land resources and water resources management; a graduate-level certificate program in energy analysis and policy; and an undergraduate-level certificate program in environmental studies.

More than 60 UW-Madison faculty members with ties to nearly 30 academic departments belong to the IES teaching staff. The institute has enrolled 171 graduate students and 102 undergraduates.

IES also is home for five research centers focusing on biotic systems, climate, environmental remote sensing, geographic analysis and marine studies.

The Hewlett Foundation was incorporated in 1966 by William R. Hewlett; his wife, Flora; and their son, Walter B. Hewlett. The elder Hewlett is co-founder of Hewlett-Packard, a major manufacturer of microelectronics products.

The foundation supports a wide range of activities with emphasis on environment, arts and humanities, population, and education programs. It also has a regional grants program in the San Francisco Bay area.

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-- Tom Sinclair (608) 263-5599

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 4/28/83 sjs

CONTACT: Tom Sinclair (608) 263-5599, Peyton Smith (608) 263-3259

'EARTHWATCH' CITED FOR PUBLIC SERVICE

MADISON--"Earthwatch," a two-minute radio report on science and the environment heard five times weekly on some 100 radio stations in the Midwest, has received a "Wisconsin Idea in Action" award from the Madison-based Center for Public Representation.

The award is one of 10 public interest awards given this year to citizens and groups by the center, a non-profit public interest law firm.

The Wisconsin Idea award is given to the individual or group that best exemplifies the concept of extending the expertise of the university campus to the people of the state.

"Earthwatch" is co-produced by the Institute for Environmental Studies and the Sea Grant Institute, both of the University of Wisconsin-Madison.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

IES

Release: Immediately 3/29/83 jwh

CONTACT: Kusum Nair (608) 262-3657

NEW COURSE LOOKS TO FUTURE

MADISON--University of Wisconsin-Madison students at all levels are participating this semester in a new interdisciplinary course through the Institute for Environmental Studies (IES) called "Global 2000: Population, Resources and Peace."

The freshman-level course, which has no prerequisites, studies some of today's crucial issues head-on by examining conflicts over world resources and their potential for disrupting peace.

Speakers from UW-Madison and elsewhere are lecturing the 50 students on, among other things, the geographic distribution of people, power and poverty, planetary interdependence on land, water, energy and minerals; and the effects of technology on human health and environment.

Basic text for the class is "The Global 2000 Report to the President," a 1981 three-volume document prepared by the U.S. Council on Environmental Quality. It projects global trends in population, resources and the environment into the next century.

Coordinating the course is Kusum Nair, a visiting professor in South Asian studies and IES. Nair is an author and an analyst of development policies and achievements in the Third World. Assisting in the course are IES scientist Gerald M. Lower Jr. and administrator Arthur B. Sacks.

"This kind of course meets the long term interests of the IES faculty," said Sacks, who administers IES instructional programs. "In fact it's just what we want to stress more in the future--looking at global issues and stakes."

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 1/26/83 tks

CONTACT: Barbara Borns (608) 263-4373

LAND RESOURCES STUDENT BEGINS WASHINGTON INTERNSHIP

MADISON--Carolyn Rumery, a master's candidate in the Land Resources Program at the University of Wisconsin-Madison, is one of 10 students nationwide selected as interns for the National Sea Grant Program.

Rumery, a native of Summit, N.J., begins her one-year internship this month working for the staff of the House Subcommittee on Natural Resources, Agriculture Research, and Environment in Washington, D.C.

Among other things, she will help members of the subcommittee prepare for hearings and will brief them on environmental problems. The subcommittee deals with such concerns as acid rain, groundwater pollution, and ocean waste-dumping.

Rumery's studies at UW-Madison have focused on environmental resources management, policy, and planning for coastal areas, lake shores, and wetlands. The Land Resources Program in which she is a student is administered by the University's Institute for Environmental Studies.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 3/15/83 tks

CONTACT: Arthur Sacks (608) 263-1796

FOUNDATION GRANT SUPPORTS ENVIRONMENTAL STUDENTS

MADISON--A private foundation will give $44,600 to the Institute for Environmental Studies (IES) at University of Wisconsin-Madison over the next two years to provide fellowships for the institute's graduate students.

The award was announced recently by the Jessie Smith Noyes Foundation of New York City.

"The Noyes Foundation told us the competition for grants this year was the keenest it had ever had, and only the finest programs in the nation could be funded," said Arthur Sacks, IES academic programs coordinator. "So this is also a high honor."

Half of the $44,600 will be awarded during the 1983-84 academic year, and the other half the following year. A Noyes grant from last year is already helping to support four graduate students.

Sacks said fellowship recipients will be selected by a faculty committee that will consider financial need, academic qualifications and graduate study goals. First-year graduate students will be given preference, he said, because new students have more difficulty finding other means of financial support.

The Noyes Foundation has specified that the money be used to help students interested in "wise stewardship of natural ecosystems, the earth and its resources, including biological diversity," with particular interest in "finding ways to provide sustainable food and water supplies, within this framework, for future generations."

- more -

Add one--foundation grant

The Institute for Environmental Studies, now 13 years old, administers three graduate degree programs and a master's-level curriculum in topics from land resources to energy policy. Total enrollment in IES's graduate programs now stands at 159 students.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 10/7/82 ts

CONTACT: Barbara Borns (608) 263-4373

FOUR ENVIRONMENTAL STUDIES STUDENTS SHARE $20,500 AWARD

MADISON--Four graduate students in the University of Wisconsin-Madison Institute for Environmental Studies (IES) will share a total of $20,500 in fellowships this year from the Jessie Smith Noyes Foundation of New York City.

The students are Sherri Boykin, Timothy Diehl, David Mladenoff, and Bruce Herrick, all enrolled in the IES Land Resources Program.

Boykin, who lives at 949 Spaight St., came to Madison this fall from Austin, Texas, where she earned a B.S. in zoology from the University of Texas in 1980. She has worked as a technician in a biomedical research laboratory.

Diehl, of 2853 Oregon Road, is a Madison native and earned a B.S. in botany from UW-Madison in 1977. He has been employed as a range technician with the U.S. Bureau of Land Management in Idaho, a consultant to the Wisconsin Department of Justice and as a university field research assistant. Diehl has begun his fifth semester in a master's-level curriculum in energy analysis and policy at the University.

Mladenoff, a Ph.D. candidate who lives at 2138 Lakeland Ave., returned to Madison last January after serving as director of the Nature Conservancy's Natural Heritage Program in the state of Washington. He has a B.A. in an individually designed social science major and an M.S. in landscape architecture, both from UW-Madison.

- more -

Add one--Noyes fellowships

Herrick, also a Ph.D. candidate, has a B.S. in biology from Rutgers University and an M.S. in horticulture from the University of Georgia, where he has been a research and teaching assistant. He lives at 811 Prospect Road.

The Jessie Smith Noyes Foundation, established in 1947 by the owner of a large New York real estate firm as a memorial to his wife, awards grants to institutions with programs aimed, among other things, at "finding ways to provide sustainable food and water supplies to future generations" while promoting "wise stewardship of natural ecosystems, the earth, and its resources."

The IES fellowship winners were chosen by a committee of IES faculty members.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Grad. Studies

Release: Immediately 6/1/82

CONTACT: Francis Heliotis (608) 257-1199

UW-MADISON STUDENT CHOSEN FOR INTERNATIONAL DEVELOPMENT SEMINAR

MADISON--A University of Wisconsin-Madison graduate student is one of 30 from around the United States selected to take part in a seminar on management of environmental resources in developing countries June 7-25 at Clark University in Worcester, Mass.

Francis Heliotis, a native of Greece, says he was chosen partly because his country is "behind" in environmental protection and because it has increasingly become a liaison between western countries and developing countries. He says Greece has excellent relations with many nations in Africa and the Middle East.

The Clark seminar, considered one of the best in international development in the United States, is cosponsored by that university and the Exxon Education Foundation. The program pays all of the students' room, board, tuition and travel expenses.

Heliotis, who lives at 11 E. Gilman St., is completing a master's degree in civil and environmental engineering and working on a doctorate in the Land Resources Program of the UW-Madison Institute for Environmental Studies. He already has a master's degree in land resources and a bachelor's degree in biology from the University of Athens.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 3/10/82 tks

CONTACT: George Bunn (608) 263-7736

ENERGY FELLOWSHIP AWARDED TO UW-MADISON STUDENT

MADISON--Douglas Mitchell, a first-year graduate student at the University of Wisconsin-Madison, has received a $9,324 fellowship from the Wisconsin Power and Light Company (WP&L) to cover his tuition, books, and living expenses for the current academic year.

Mitchell is one of 16 students enrolled in a curriculum in energy analysis and policy begun in the fall of 1980. He is a native of New Bedford, Mass., and a 1981 graduate of Wesleyan University in Middletown, Conn., where he majored in environmental science.

WP&L established the fellowship one year ago to help support students in the new energy studies program. Mitchell is the second recipient.

The energy analysis and policy curriculum is offered at the master's level through the Land Resources Program in the Institute for Environmental Studies, the Urban and Regional Planning Program, and the Public Policy and Administration Program.

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research news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 3/4/82 dls

CONTACT: Barry Heist (608) 262-4912

A BETTER FISH COUNT

MADISON--It looks like just another ice fishing shanty, but Barry Heist's set-up isn't for catching fish. It's for counting them.

With perch, lake herring and ping pong balls below him, Heist is testing the efficiency of a device called a multi-beam sonar while trying to keep comfortable in a harsh Wisconsin winter.

"It's cold," he agreed, "but it's easier to do the work this way."

The Lake Mendota ice provides a stable platform from which Heist makes his initial calibration measurements in deep water. Also, he can use the ice platform to lower netting material that attracts fish.

Heist, a graduate student in environmental monitoring at the University of Wisconsin-Madison, said the sonar device is a sophisticated echo counter that receives the reverberations of a wide sonar beam on an array of elements. The timing and intensity of received signals is translated into a fish count and a readout of their position in the sonar beam. Submerged ping pong balls provide a mock target to focus on.

The researcher believes the device will prove to be more accurate, reliable and time-effective than the single-beam sonar devices which have been used in such work.

- more -

If so, a number of public and commercial enterprises might benefit. Commercial fisheries constantly want to know the size of their stocks, and the Department of Natural Resources sets fishing regulations according to estimates of the fish population in lakes and streams.

The ultimate goal of Heist and others who share his interest is to develop marine acoustic equipment that will be able to determine not only the number of fish below the surface, but the species. Since every fish varies in size, physical make-up and orientation in the water, some elaborate signal processing techniques will need to be used.

"In 20 years, the technology might be there," Heist said. "I think we are beginning to understand the sound scattering process now, but the equipment is expensive."

Nevertheless, Heist envisions a time when commercial fishermen will be able to purchase, at a reasonable price, sophisticated fish counting and species-differentiation devices for their boats.

Heist brings together a number of interests in his work. His undergraduate degree is in zoology, and he "picked up" enough electrical engineering and computer science know-how to do much of the work on the new sonar apparatus.

The project involves cooperative efforts with Clarence Clay, a professor of geology and geophysics, in the area of acoustics; with John Magnuson, a professor of zoology and environmental studies, in the area of limnology (conditions relating to fresh water); and with Tim Stanton, a postdoctorate assistant on the project.

The University may be one of the few places where such fish monitoring experiments could be conducted. "This may be biased," Heist remarked, "but I can't think of a place that combines acoustics and biology more than we do here."

This summer Heist and his colleagues will be taking the multibeam sonar to the Gulf Stream off the Atlantic Ocean coastline to study fish behavior around thermal fronts, where fish tend to aggregate. Heist hopes to determine the position of midwater fish with respect to one another, and to obtain an accurate count of the number of fish in the frontal area.

The Office of Naval Research is funding Heist's work. The Navy hopes that by understanding sound scattering from fish they will be able to distinguish the echoes from ships and submarines from echoes from biological sources.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 11/25/81 tks

CONTACT: Professor Henry Hart or Dr. Arthur Sacks (608) 263-1796

NEW FELLOWSHIPS TO HELP IES GRADUATE STUDENTS

MADISON--The Institute for Environmental Studies (IES) at the University of Wisconsin-Madison has been awarded $20,500 to provide new fellowships for its graduate students in the 1982-83 academic year.

The award was made recently by the Jessie Smith Noyes Foundation of New York City.

The money will enable IES to offer additional fellowships for tuition and living expenses to at least two graduate students next year, according to Professor Henry Hart, chairman of the IES Instructional Program.

Hart says the fellowships probably will go to newly-admitted graduate students who want to study environmental problems but cannot secure other financial support to attend the university.

"These fellowships will fill a big gap in our aid to new students. The ability to finance the initial year of graduate training is the limiting factor for many applicants," says Hart.

"In the last year alone, four highly qualified students admitted to IES graduate programs with strong academic backgrounds have decided not to come to UW-Madison because of the lack of initial financial support."

The majority of IES graduate students find assistantships or other means of financial support by the time they begin their second year on campus. But

- more -

Hart says continuing students with exceptional academic records who have not found such support are also eligible for the fellowships.

IES now has a record-high 181 students enrolled in its three graduate programs: land resources and environmental monitoring (both offering M.S. and Ph.D. degrees) and water resources management (M.S. only). Of those students, 151 are working toward master's degrees and 30 are pursuing Ph.D.s.

The Jessie Smith Noyes Foundation was established in 1947 by the late Charles F. Noyes, owner of a highly successful real estate firm in New York, as a memorial to his wife.

The foundation awards student-aid grants to institutions with programs in selected areas of health care, education, and the environment.

In particular, the foundation supports programs aimed at "finding ways to provide sustainable food and water supplies to future generations" while promoting "wise stewardship of natural ecosystems, the earth, and its resources, including maintenance of biological diversity."

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 10/29/81 ns

UW-MADISON NEWS BRIEFS

CONTACT: Tom Sinclair (608) 263-5599

FIRST STUDENTS COMPLETE ENVIRONMENTAL CERTIFICATE PROGRAM

Susan M. Muzik of Middleton and Richard T. Roth of Madison have become the first UW-Madison students to complete a certificate program in environmental studies begun two years ago.

Muzik, of 3115-1 Harbor View Road, Middleton, earned her certificate along with a B.A. in political science. Roth, of 1 N. Bedford St., Madison, completed the certificate program and received his bachelor's degree in education.

The UW-Madison Institute for Environmental Studies established the certificate program for undergraduate students in the fall of 1979 and offers it as an adjunct to the University's regular degree programs. All UW-Madison undergraduates are eligible to earn an environmental studies certificate.

About 90 students from nearly 40 different departments are now enrolled in the certificate program.

- o -

CONTACT: Susan Cattle (608) 262-1651

SEMINARS TO AID FUTURE STUDENT TEACHERS

School of Education students who plan to complete their UW-Madison student teaching assignments in the 1982-83 school year will attend seminars Nov. 11 and 12 from 6-7 p.m. in Tripp Commons of the Memorial Union.

- more -

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 5/26/81 tks

CONTACT: Tom Sinclair (608) 263-5599 or Susan Disch (608) 262-2116

LECTURE SERIES TO FOCUS ON ENERGY POLICY

MADISON--Nationally known experts on energy policy will speak in a series of eight free public lectures at the University of Wisconsin-Madison this summer, the Institute for Environmental Studies has announced.

The lecture series, also offered as a one-credit course to UW-Madison summer students, is titled "The Institutional and Political Challenges of Energy Policy." It is scheduled Tuesday nights at 7 p.m. in Room 3650 of the Humanities Building, 455 N. Park St., from June 16 through Aug. 4.

Speakers in the series will represent industry, government, universities and public interest groups from throughout the United States. The schedule of lecturers and topics is:

June 16--Matthew Holden, commissioner of the Federal Energy Regulatory Commission, "The Regulatory Process and the Politics of Energy."

June 23--Mason Willrich, vice president of corporate planning, Pacific Gas and Electric Co., San Francisco, "Overcoming Political Stalemate in Energy Decision-making."

June 30-- Arnold B. Baker, senior consultant, Division of Corporate Planning, Atlantic Richfield Co., Los Angeles, "The Public and Private Sectors: Their Relationship in Future Energy Decisions."

July 7--Russell W. Peterson, president, National Audubon Society, New York, "Instruments of Innovation in Energy Planning."

- more -

July 14--Robert M. Brandon, Washington director of the Citizen-Labor Energy Coalition, Washington, D.C., "Public Control Over Energy Policy: Power, Participation and Income Distribution."

July 21--Business Professor Irvin C. Bupp of Harvard University, "Trends and Prospects for the Energy Industry and Electric Utilities."

July 28--Todd R. LaPorte, associate director, Institute for Governmental Studies, University of California-Berkeley, "Social Organizational Aspects of Energy Technologies: Alternative Energy Development."

Aug. 4--Professor Dororthy Nelkin, Program on Science, Technology and Society, Cornell University, "The Anti-Nuclear Movement as a Form of Participation in Energy Policymaking."

S.David Freeman, chairman of the Tennessee Valley Authority, had been listed as a speaker in early announcements of the lecture series. But Freeman canceled his appearance in April when he found he would not be able to attend.

Wisconsin Public Radio will record the lectures for broadcast over the state radio network Tuesdays and Thursdays at 1:30 p.m. from July 23 through Aug. 18. WHA Radio will carry the lectures in the Madison area. The lectures also will be published as a series of essays edited by lecture coordinator Leon N. Lindberg, a professor of political science and environmental studies.

The UW-Madison Institute for Environmental Studies (IES), Summer Sessions, and Energy Research Center are sponsoring the lecture series.

More information is available from the IES Publications and Information Office, 120 WARF Building, 610 Walnut St., Madison 53706, telephone (608) 263-5599.

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FILE

earthwatch/wisconsin
university of wisconsin
sea grant college program • institute for environmental studies

IES: FITTING THE PIECES TOGETHER

by Tom Sinclair

(Earthwatch/Wisconsin is a service of the Sea Grant Program and the Institute for Environmental Studies at the University of Wisconsin.)

Naturalist John Muir, who spent his boyhood in rural Wisconsin and attended the university in Madison before adopting the Sierra Nevada mountains as his adult home, once noted, "When we try to pick out anything by itself, we find it hitched to everything else in the universe."

The complex idea behind that simple statement emerged again a decade ago when the University of Wisconsin-Madsion created its Institute for Environmental Studies (IES).

"We don't want to find a special little piece of the world that nobody else studies," says IES Director Reid Bryson. "Instead, we want to add that extra dimension of how the pieces hang together. Our belief is that we need integrators, people who can pull together information from a variety of disciplines because, in general, the problems of the environment and the problems of man do not lie within single disciplines."

Now, 10 years after its creation, IES has matured as an innovative wing of the university whose wide-angle perspective has drawn faculty and students from all corners of the Madsion campus for research and instruction. Historians have teamed up with civil engineers. Economists with meteorologists. Oceanographers with political scientists. Soil scientists with sociologists.

- more -

1800 university avenue/ madison/wisconsin/53706/ telephone [608] 263-3259

A six-year study of the Lake Superior region, one of the first undertaken by IES, probed topics including forestry, mining, recreation, shoreland property use, regional economics, and cultural heritage. The findings played a part in, among other things, the design of the Wisconsin Coastal Management Program, state mining regulations, and federal lake-level control policies.

One of IES's current projects has global proportions. A team of meteorologists, environmental studies experts, geographers, and anthropologists is trying to reconstruct a scenario of world climate changes during the past 20,000 years. The group also hopes to learn more about the forces behind and impacts of climate change and to sharpen its skills for predicting future climates.

"With world population increasing and limited food resources, the sensitivity of life on this planet to even the normal vagaries of weather is very apparent," says John Kutzbach, director of IES's Center for Climatic Research. "That's one of several things that have led to a new interest in trying to predict climate."

IES researchers have investigated dozens of other topics, from wind energy to glass recycling, from park management to air pollution. Some of its studies, like one on the potential impacts of the ill-fated LaFarge Dam in western Wisconsin, have stirred controversy. Others, like a current report on the merits of mechanical lake-weed harvesting, have been widely used for their new information.

On campus these days, fewer students wear ecology buttons and leaflet against exhaust fumes than 10 years ago, but more want to enter environmental professions.

Last year, IES launched a certificate program for undergraduate students to earn special credit in environmental studies to complement their traditional degree requirements. The program has welcomed 44 students in its first year.

Meanwhile, more than 130 graduate students—the biggest enrollment ever—are seeking advanced degrees in three IES graduate programs: water resources management, environmental monitoring, and land resources. This fall, the latter of these programs is one of three on campus offering a new master's-level option in a growing public concern: energy analysis and policy.

Students in IES are just as likely to meet in the council chambers of a town hall or on the soggy shores of a marsh as in a classroom. This summer, the Baraboo River watershed in south-central Wisconsin became a working laboratory for 17 students who met with farmers and lake property owners and took field trips in the area to draw up a management scheme for Lake Redstone and begin a recreation plan for the river.

The interdisciplinary approach is as important in IES's teaching as it is in the institute's research, according to Gerhard Lee, chairman of the Land Resources Graduate Program.

"You could be a highly qualified soil scientist, but that would not help you resolve everyday land use problems unless you, or someone you know, could communicate your understanding of soil science concepts to other people," says Lee. "Land use decisions are not based solely on technical data but are influenced strongly by political, sociological, legal, and economic concerns. We want our graduates to see as many of these perspectives as possible."

The IES story is uncommon. Similar programs were begun at other colleges and universities during the heyday of environmental activism. But caught in the squeeze of tighter budgets and low in priority, many have fallen dormant or disappeared. "We have not only survived," Bryson reflects. "We have thrived."

# # # #

24 September 1980

The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release Immediately

9/19/80 tks

CONTACT: Peter Dorner (608) 262-3653

AMERICANS, ARABS CALL FOR MORE INTERNATIONAL COOPERATION

MADISON--In the eyes of most Americans, the Organization of Petroleum Exporting Countries (OPEC) and the oil-producing countries that belong to it are no friends of the United States.

OPEC often is characterized as a relentless monopoly of nations growing immensely rich by squeezing as much profit as possible out of its sale of oil. It has been blamed for causing global inflation, recession, unemployment, and a host of other woes.

The oil-exporting countries see things differently. They argue that the United States, its industrial partners, and transnational corporations have drained their lands of an irreplaceable resource for decades while paying much too low a price for it in return. So these nations have taken control of their oil fields and banded together to assure that they won't be left high and dry when the last drop of oil is gone.

In hopes of clarifying the conflict and finding common ground, a group of Americans and Arabs have written a new book, "Resources and Development: Natural Resource Policies and Economic Development in an Interdependent World," recently published by the University of Wisconsin Press. It was edited by Peter Dorner, UW-Madison dean of international studies and programs and professor of agricultural economics; and Mahmoud El-Shafie, chief planning adviser for the United Nations Planning Institute for Economic and Social Development, based in Syria.

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Contributing authors include several UW-Madison professors and professionals from the Organization of Arab Petroleum Exporting Countries (OAPEC)--an Arab development organization with 10 member nations--and the countries of Egypt and Kuwait. They discuss the interplay of three major concerns: the industrial nations' heavy dependence on foreign natural resources, particularly oil, for raw materials, the Third World nations' struggle to develop healthy economies; and the realization that the world's natural resources are limited.

In recent generations, North America, Western Europe, and other industrial regions have experienced booming economic growth powered less and less by renewable resources--wind, water, wood, animals, and people--and more by finite resources--mainly coal and petroleum, according to Dorner and El-Shafie. Industrial nations have reached worldwide to satisfy their hunger for the cheapest, most abundant fuel, sometimes disregarding the needs of others.

"Powerful nations were once relatively unrestrained in acting to achieve what they interpreted as their own interests," write the editors. "The weak had to depend on the goodwill and self-imposed forbearance of the strong and powerful... to refrain voluntarily from using power to its limit....A half-century ago, the transnational corporations, too, were more or less able to do as they wished."

Now, they say, the situation is changing: "Although none of these manifestations of international power have disappeared, there have been substantial changes in the exercise of power during the past 30 years. The nation-states of the world have become increasingly interdependent....Even the most powerful are not immune to the adverse consequences of their own acts, and too narrow a view of self-interest in today's interdependent world can prove disastrous."

Despite those changes, several authors in "Resources and Development" cite a growing gap in wealth and income between the industrial and developing nations. Ali Attiga, secretary general of OAPEC, notes that the Arab nations are among those on the poorer end of that gap.

"Although the Arab oil-exporting countries are often portrayed as the world's wealthy...the gross domestic product of Italy is greater than that of all the Arab countries combined," writes Attiga in the book. "The twenty-one Arab countries combined (including the oil-exporters), with about 120 million people, earn less than Italy with only 50 million inhabitants and a standard of living that is not among the highest in Europe."

While their new control of oil sales has given the Arabs economic hope, it also has given them new problems, according to Abdulaziz Al-Wattari, OAPEC assistant secretary-general.

"A sudden influx of money, coming in the midst of poverty and underdevelopment, brings to the surface demands and pent-up expectations in the form of urgent social wants that poverty had suppressed for generations," Al-Wattari writes. He adds that new expectations among their citizens pressure Arab governments into spending more of their newfound income on immediate consumption and less on long-term economic development.

The authors of "Resources and Development" say the emerging resource problems of both the rich and poor nations straddle national boundaries and cannot be solved without greater international cooperation and substantial restructuring of the world economy. Otherwise, says UW-Madison law Professor Richard Bilder:

"Each nation will continue to press for definitions of equity and for resource arrangements which further its own interests and increase its own share of the resources. Nations will have little hope of successfully meeting problems of resource allocation, especially under predicted resource scarcities, unless they are prepared to work together to solve them."

The Arab officials deny they seek power and wealth at the expense of the United States and other industrial countries. In fact, they observe that economically well-off nations are necessary markets for growing Third World countries.

But I.H. Abdel-Rahman, a senior Egyptian government adviser, claims the imbalance has been too great in the past and that "the system must change. The strategy for the 1980s...must look at the development of the developing countries as an integral and crucial part of the world economic scene and not merely as a marginal or peripheral problem to be dealt with separately."

"Resources and Development" grew out of the 1977-78 Wisconsin Seminar on Natural Resource Policies in Relation to Economic Development and International Cooperation. The seminar, proposed by UW-Madison Professors John Ross and Raymond Penn and co-chaired by Dorner and El-Shafie, was held primarily in Madison with working sessions in the Middle East. Seminar sponsors were the UW-Madison Institute for Environmental Studies and Graduate School, OAPEC, the Arab Fund for Social and Economic Development, and the Kuwait Fund for Arab Economic Development.

UW-Madison professors who are authors include Dorner; Bilder; Edgar Feige, economics; Penn, emeritus agricultural economics; Vincent Rideout, electrical and computer engineering; Ross, agricultural journalism and environmental studies; and John Steinhart, geophysics and environmental studies.

Arab chapter authors include El-Shafie; Al-Wattari; Abdel-Rahman; M. Sarwat Montassir, director of investment promotion for International Consultants of Egypt; George Tomeh, philosophy professor at the University of Kuwait and former United Nations ambassador; and Attiga, who is a UW-Madison graduate.

The 512-page clothbound book is available at bookstores or by mail through the University of Wisconsin Press, 114 North Murray St., Madison, WI 53715. The price is $20. Prepaid mail orders within Wisconsin should include 4 percent sales tax. Postage is included in the price.

Croom Helm Ltd. of London, England is copublishing the book in Europe.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 8/29/80 cmh

CONTACT: George Bunn (608) 263-7736

NEW ENERGY CURRICULUM OFFERED

MADISON--The University of Wisconsin-Madison is offering a master's-level curriculum in energy policy studies for the first time this fall.

About 10 persons have signed up for the course of study, believed to be the only one of its kind in the Midwest.

Faculty members designed the interdisciplinary curriculum to develop "energy specialists who are able to direct policy and management decisions for governments, utilities, consulting firms, and other organizations that deal with energy," said scientists at the Institute for Environmental Studies (IES).

Energy facets such as economics, conversion technology, environmental and health impacts, and policy, politics and government are among courses in the new syllabus.

Students enroll in one of three established degree programs -- IES land resources, public policy and administration, or urban and regional planning -- which will act as carriers for the energy curriculum.

Most of the courses already exist in these and other degree programs. Funding to create some new courses came from the College of Engineering and from IES, UW-Madison coordinator of interdisciplinary programs in environmental studies.

Chancellor Irving Shain, describing the curriculum to the UW system's central administration, wrote:

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"Students who successfully complete this curriculum could contribute effectively to the solution of pressing problems of the state of Wisconsin, such as implementation of emerging alternative technologies to conserve petroleum-based fuels, energy conservation in the public sector, power plant siting, planning the appropriate mix of energy technologies (nuclear, fossil alternatives), studies on large versus small electric generating stations, alternative transportation fuels, etc."

Planning for the new curriculum began in 1977 when urban and regional planning Professor Steven Born, former director of the State Energy Office, brought together about 30 persons from various University disciplines concerned with energy.

"They felt the need to bring together all the resources on campus for the benefit of students interested in energy studies," said committee Chairman George Bunn, professor of law.

"A graduate may work on the staff of a utility commission analyzing a state's future need for electricity and the capacity of utilities to supply it; this person needs a background in economics, mathematical modeling and electrical engineering, as well as in politics," Bunn said.

Also sparking creation of the new curriculum were state legislators Sharon Metz, chairman of the Assembly Energy Committee, and Tom Harnisch, head of the Senate Natural Resources Committee. Both wrote University administrators asking whether they were planning an academic program on energy matters.

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research news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 5/8/80 ses

CONTACT: Pat J. Behling (608) 263-5606

RESEARCHERS SEEK GROWING SEASON WEATHER FORECASTS

MADISON--When it snows on ripening Florida oranges, rains during the wheat harvest, or fails to rain in the sub-Sahara, the effects can range from higher breakfast bills, to disruption of world markets, to starvation and the near-collapse of a way of life.

Preparing for crop disasters like these demands a reasonable forecast of what the weather will be for many months to as much as a year in advance. Unfortunately, as a research team at University of Wisconsin-Madison is discovering, Mother Nature hides her future in a complex cloak.

UW-Madison's Climate/Food Project works on the premise, however, that if Mother Nature is unpredictable, it's because humans haven't tried hard enough to figure her out. And they're among scientists worldwide who are trying very hard, and beginning to glimpse success.

"What we're trying to do is to make forecasts, say a year in advance, of monthly temperature and precipitation for stations in the United States and the Northern Hemisphere," says Pat J. Behling, project coordinator.

"Work is also being done on crop yield models which we hope will give farmers a better idea of what the growing season weather might be and the effect this may have on the crops they intend to plant."

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But to make accurate climate and crop forecasts, the team's researchers are learning they have to study volcanic activity, earthquakes, climate history, global heat distribution, and the Chandler Wobble--a variation in the earth's rotation.

The trick is to put all the factors together.

"We're looking for a mechanism in the earth-moon-sun system that would be predictable and that could be used in our forecast model," says Behling. At this point we're not exactly sure how the Wobble affects the climate or, for that matter, the full effect of volcanos. It's hard to figure out the physics and know exactly how to analyze the data to obtain the model's best predictive capabilities."

The Climate/Food Project is housed within the Center for Climatic Research, one of five research branches of UW-Madison's Institute for Environmental Studies.

Basically, the project's staff is using a computer to connect evidence of recent climatic changes with crop-yield figures from different countries in the Northern Hemisphere. The staff already has completed computer models for wheat in North America, Mexico, and India.

"We hope to improve our models by trying to better translate what is happening to plants during their gorwth and by better defining the influence of the technological variables we use in the models," Behling adds.

But the problem with making long-term forecasts is to find a reliable mechanism that will predict the weather. Despite the complexities, Behling thinks the project's forecasts are becoming more reliable. The project is getting more and more requests for advanced weather and crop predictions.

"A tobacco farmer called to get information for this coming season. Because we're a public institution, we give information to those concerned with these problems. But our predictions are not perfect, of course. We still have a long way to go."

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

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CONTACT: Tom Sinclair (608) 263-5599

ENERGY-ENVIRONMENT CONFLICT WILL FEATURE LECTURE

MADISON--Must the quality of the environment and public health and safety suffer from the United States' stepped-up search for new energy resources?

A Wisconsin woman whose job in the federal government is to prevent that from happening will discuss the question in a free public lecture at 7:30 p.m. March 3 in Room 3650 of the Humanities Building at the University of Wisconsin-Madison.

She is Ruth C. Clusen, assistant secretary for environment in the U.S. Department of Energy (DOE). Her appearance is sponsored by the Institute for Environmental Studies as part of its 10th anniversary observance.

A native of Bruce, Wis., Clusen was appointed to her position by President Carter in 1978 after serving four years as national president of the League of Women Voters (LWV). Before that, she held several other posts with the national LWV and was president of the Wisconsin LWV from 1962 to 1966.

As president of LWV, Clusen initiated the 1976 presidential debates. President Carter named her to the National Commission on the Observance of International Women's Year, which organized 56 state and territorial women's meetings and the National Women's Conference in Houston in November 1977.

She has had a distinguished career in public service, particularly in environmental work. She helped promote improved environmental quality planning, administration, monitoring and financing. She has encouraged public education

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and involvement in energy production and conservation, land and water use management, air and water quality improvement, and solid waste management.

Clusen has represented the United States in several international environmental conferences and has been an environmental consultant to the U.S. State and Interior departments, the Conservation Foundation, the U.S. Chamber of Commerce, and the Wisconsin Department of Natural Resources.

In 1977, the Natural Resources Council of America cited her for outstanding accomplishments in conservation, and the National Wildlife Federation named her international conservationist of the year.

She is a graduate of the University of Wisconsin-Eau Claire and has received honorary doctor of law degrees from Colgate and Wayne State universities and an honorary doctor of humanities degree from St. Mary's College in Indiana.

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(EDITORS: Ruth Clusen will be available for interviews at 3 p.m. March 3 in the Institute for Environmental Studies office on the 13th floor of the Meteorology and Space Science Building, 1225 W. Dayton St.)

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 1/16/80 ts

CONTACT: Tom Sinclair (608) 263-5599

PAUL EHRLICH TO SPEAK JAN. 24 AT UW-MADISON

MADISON--One of the nation's pioneering spokesmen for environmental concerns, Professor Paul Ehrlich, will speak at the University of Wisconsin-Madison Jan. 24.

His topic will be "Population, Resources, and Environment: The Agenda for the '80s."

Ehrlich will speak at 7:30 p.m. in 3650 Humanities Building. The talk is free and open to the public.

A professor of biology at Stanford University, Ehrlich is best known for his bestselling book, "The Population Bomb," published in 1968. In it, he warned that world population threatened to overshoot the world's capacity unless nations took bold steps to clamp down on population growth.

He is author and co-author of several other books, including "Population/Resources/Environment," "Human Ecology," "How To Be A Survivor" and "The End of Affluence," and has written many scientific and popular articles.

Ehrlich has lectured on college campuses, appeared frequently on television and radio, and testified before congressional groups.

A graduate of the University of Pennsylvania, he earned his master's and doctoral degrees from the University of Kansas where, as a postgraduate, he was a fellow of both the university and the National Science Foundation. Before joining the Stanford faculty in 1959, he was a research associate for a year at the Chicago Academy of Sciences.

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Besides teaching courses in population biology and related subjects, Ehrlich has conducted field research in Colorado, Alaska, Mexico, the Canadian Arctic and Subarctic, New Guinea, New Britain, the Solomon Islands, Malaya, Cambodia, India, Kashmir and East Africa.

Ehrlich's visit will be sponsored by the UW-Madison Institute for Environmental Studies, which is celebrating its 10th anniversary during the spring semester of 1980.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 7/27/79

FOR ADDITIONAL INFORMATION: Tom Sinclair (608) 263-5599

ENVIRONMENTAL STUDIES CERTIFICATE AVAILABLE TO UNDERGRADUATES

MADISON--Undergraduate students interested in environmental problems and issues can earn a special certificate beginning this fall at the University of Wisconsin-Madison.

The certificate is being offered for the first time to undergraduates who complete a minimum of 26 credit hours of environmentally related courses. These include courses offered through the Institute for Environmental Studies (IES) as well as many other academic departments.

"This certificate program is the result of long, complex and thorough deliberations on the part of the faculty and University administration," says Prof. Carlisle P. Runge, chairman of the IES instructional program. "It represents the University's continuing commitment to interdisciplinary studies and will provide students with an innovative option to broaden their education."

The certificate is neither a degree nor a major in environmental studies. But it is an addition to a traditional major and is noted on a student's academic transcript to indicate a concentration in environmental studies.

The program is open to all UW-Madison undergraduates, according to Arthur B. Sacks, IES academic programs administrator.

"Students from any school or college are eligible to participate in this program within their elective options. They will continue to meet the basic requirements of their school or college, and they must complete a major," says Sacks. "The certificate is done as an adjunct to these requirements. It will be conferred upon completion of a student's degree."

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Sacks adds that many courses taken for the certificate also may count toward a student's degree requirements. He advises interested students to consult their deans' offices and an IES faculty adviser to plan curricula that best meet both sets of requirements.

Students can choose from nearly 50 environmentally related courses to earn credits for certificates. They will select courses from three categories:

Perspective courses -- introductory courses on social, humanistic, and scientific perspectives of environmental studies;

Breadth courses -- intermediate and advanced courses in natural sciences, social studies, and humanities;

Integrative courses -- courses and an undergraduate seminar emphasizing interdisciplinary environmental topics.

The certificate program was developed by an undergraduate planning panel chaired by Gerald Gerloff, professor of botany and IES. John Smail, professor of history and IES, was vice chairman. The campus Academic Planning Council approved the program in late June.

Persons who would like more information about the certificate program should write or call the IES Instructional Program Office, 70 Science Hall, 550 N. Park St., Madison, WI 53706; (608) 263-1796.

IES is an interdisciplinary division of the University that offers environmental instruction and conducts a comprehensive research program.

Besides its undergraduate offerings, IES administers graduate study programs in water resources management, land resources, and environmental monitoring.

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uw news

From The University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone (608) 262-3571

Environmental Studies

Release: Immediately 2/10/77 ns

CONTACT: John E. Ross (608) 262-5957

ARAB ORGANIZATIONS FUND STUDY ON WORLD RESOURCE POLICIES

MADISON--A grant of $391,780 from three Arab organizations to conduct a far-reaching study on international resource policies was recommended for acceptance Friday by University of Wisconsin System regents.

The grant comes from the Organization of Arab Petroleum Exporting Countries, the Kuwait Fund for Arab Economic Development and the Arab Fund for Economic and Social Development.

The project will be conducted through the Institute for Environmental Studies (IES) at the UW-Madison, and will receive additional funding from IES and the Graduate School.

Resource problems of developing countries will be emphasized in the study, with Prof. Peter Dorner of the agricultural economics department and Land Tenure Center as co-chairman. Chancellor Edwin Young, who will be responsible for policy directions in the study, pointed out that the University's international reputation for resource studies provides historical background and faculty competence to undertake the project.

The 18-month project was organized by Profs. John E. Ross and Raymond Penn in consultation with two former UW students. Serving as co-chairman of the study will be Dr.Mahmoud El-Shafie, chief planning adviser for the United Nations Planning Institute of Economic and Social Development at Damascus, Syria. Co-organizer of the project is Dr. Ali Attiga, also a UW graduate, now secretary general of the Organization of Arab Petroleum Exporting Countries.

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uw news

From The University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: (608) 262-3571

Environmental Studies

Release: Immediately 2/9/79 jl

CONTACT: Center for Biotic Systems (608) 262-9937

LAKE WEED HARVESTING TOPIC OF THREE-DAY CONFERENCE

MADISON--The University of Wisconsin-Madison will host a three-day conference on aquatic weed harvesting Feb. 14-16.

The conference, sponsored by the University's Institute for Environmental Studies, will focus on mechanical weed harvesting as a means of improving lake quality.

UW-Madison scientists who have conducted long-term studies on Madison's Lake Wingra will present their findings. In addition, scientists from regions as diverse as Canada and Florida will discuss their experiences with lake weed harvesting.

Conference coordinator Grant Cottam said mechanical harvesting of aquatic plants is an ecologically sound way to reduce nuisance levels of aquatic plants. It is also considered a promising way to reduce nutrient levels in many over-fertilized lakes.

Topics at the meeting will include the effects of weed harvesting on fish life and on the lakes' nutrient cycles. Techniques of mechanical harvesting and ways to use the harvested weeds will also be discussed.

The meeting will be held at the Wisconsin Center, 702 Langdon St. The conference is being funded by a grant from the National Science Foundation.

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research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Environmental Studies

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CONTACT: Jean M. Lang (608) 263-5599

MADISON,Wis.--Americans could cut their energy consumption by 64 per cent and still have full employment, claim the authors of a recently published report from the Institute for Environmental Studies at the University of Wisconsin-Madison.

"Part of the new employment would come from an increased demand for skilled labor in the building trades," says John Steinhart, co-author of the report. "Part would come from new industries producing energy-saving products and services. And some of it will come from a return of labor to agriculture and forestry, though in new, less physically demanding roles."

Steinhart, professor of geology and environmental studies, reached these conclusions in a year-long UW seminar with co-authors Mark Hanson, Carel DeWinkel, Robin Gates, Kathleen Broidy, Mark Thornsjo, and Stanley Kabala.

In their report entitled "A Low Energy Scenario for the United States: 1975-2050," Steinhart and his colleagues describe a future in which full employment and energy conservation go hand in hand. They project a future in which rising energy costs accelerate the already apparent migration of people away from metropolis and into smaller cities. At the same time the declining metropolitan area would begin to divide and rebuild itself into a number of distinct smaller cities.

Each city would be large enough to provide its own services, and all services would be accessible via a network of bus routes, bicycle paths and pedestrian walks. Rapid rail systems would link the cities together.

"People would not be deprived of autos," claims the report, "but autos would be expensive to operate and not really necessary for day to day activities."

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In this low-energy future, food production and some manufacturing would become more localized as the high costs of transportation forced farmers and industrialists to concentrate on regional rather than national markets. Home gardening would become an increasingly important source of food.

Maximum effort would be made to cut residential energy use, and eventually all buildings would have solar-heated water. Older homes would be retro-fitted with insulation and new homes would be built to minimize heating and cooling requirements.

These changes in lifestyle would have significant effects on employment.

"Automobile manufacturers and related industries would suffer cutbacks as automobile use declined," speculates Steinhart. "And many industries making energy-demanding but 'nonessential' products -- such as overprocessed foods, non-essential toiletries and cosmetics, and throwaway packaging and utensils -- would decline."

But Steinhart's energy group foresees an ultimate increase in employment as workers are transferred and retrained for millions of new jobs in building rehabilitation, solar system installation, construction of railroads and rapid transit systems, and materials salvage and recycling.

"The efforts to conserve energy in existing buildings and to create new energy-efficient structures would employ electricians, carpenters, plasterers, painters, and other building trade workers, as well as truck drivers and factory workers. As the investment per conserved kilowatt increased, so would employment," claims the report.

Rehabilitation of railroads and construction of mass transit systems would also require an increased labor force. Past studies have shown that passenger transport by both railroad and bus requires more labor, but less money and energy than auto transport.

The report suggests that the manufacture and installation of centralized as well as single unit solar energy systems would be a burgeoning industry, taking up the slack labor from declining automotive and fossil fuel industries.

"The Federal Energy Administration has estimated that the solar energy industry could create half a million jobs by the end of the decade," note the authors.

They add that the labor required for recycling would also increase as the salvage industry expanded to handle not only metals and glass, but also wood, paper and cloth. This new employment would be expected to take up the slack in the throw-away packaging industry.

Aside from a change of job for many workers, the UW study group also forecasts a change in working hours.

"We think it is possible that by 1990, many of us will be working a 30 hour week and a single job may be shared by two people," says Steinhart.

He stresses however that people would be paid only for the 30 hours they worked and not for 40 hours.

"The worker would have the option of taking his wealth in the form of more time for himself, instead of cash," explains Steinhart. "For many people, increased personal time can actually be more profitable than the same time on the job. In fact, the increased and persistent employee absenteeism of recent years may be a sign that some people have already made the decision to increase their free hours and cut their pay."

The report suggests that in the future, this additional free time could be used to reduce energy costs and save money. Examples would be tending a home vegetable garden or making one's own home repairs instead of hiring someone else to do it.

The report notes that the passage to a low-energy society with full employment will not be easy. But the authors believe that federal legislation could assist in the retraining of workers and the development of new energy-conscious industries.

"Were the U.S. to take full employment seriously," concludes Steinhart, "the fears of organized labor could be eased and the transition to a low energy economy made easier."

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feature story

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: (608) 262-3571

Environ Studies

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For more information, contact Jean M. Lang, (608) 263-5599

IMPACT HEARING IS 'TRAINING FOR THE REAL-LIFE WORLD'

MADISON, Wis.--A public hearing last week at the University of Wisconsin-Madison had, at times, the air of a Perry Mason drama. Attorneys hotly objected to the badgering of witnesses while hurried conferences were held at the back of the room.

Although the intense feelings in the hearing were real, the hearing was not. It was a mocked up event, culminating a three-week course on environmental impact analysis.

The course, jointly sponsored by UW's Department of Real Estate and the Institute for Environmental Studies (IES), teaches students how to take part in an environmental impact hearing.

"We provide training for the real-life world," explained IES instructor Daniel Willard. "Today, the public hearing is often the only chance that citizens have to challenge a corporation's or agency's plans. We try to teach the students how to take full advantage of that opportunity."

The subject of this hearing was the Xanadue Recreational Project in Door County, Wisconsin.

"This was an imaginary development," said co-instructor James Canestaro of the Department of Real Estate, "but based on similar developments that have been proposed along the Lake Michigan shore. Our fictitious developer proposed a large hotel, condominiums, residential sites, marina, golf course, and other facilities on a relatively undeveloped bay."

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Under the watchful eye of real-life hearing examiner Maurice Van Susteren of the Department of Natural Resources, the students argued for and against the permits to build the complex.

Students played the roles of attorneys, members of the DNR, private consultants, and concerned citizens. Some attorneys hit hard, catching witnesses unaware. Other attorneys were baffled when their questions were over-ruled as irrelevant.

However, the students learned quickly from their own mistakes. By the second day of hearings, witnesses were better prepared and the attorneys had sharpened up, noted Willard.

Prior to the hearing the 28 graduate students had studied environmental impact statements and hearing procedures. They heard from a variety of experts in economics, law, real estate, and natural resources on how to evaluate impact statements. And they had visited an actual development site in Door County and talked with developer John Mendonca.

The hearing began early each morning and often ran late into the night.

"We deliberately string them out," said Willard, "since tension and pressure are very real parts of a lengthy hearing process.

"Most students become deeply involved in the issues," he added. "It sometimes takes tham a couple of days to 'return to reality' after the hearing is over."

Canestaro noted that the realism of the mock hearing depends largely on the donated time of university staff, state oficials like Van Susteren, and businessmen like Mendonca.

"These people get nothing for their efforts but the knowledge they did a good job of training the students," added Willard.

Add two--mock hearing

The students come from a variety of disciplines. About a third of this class were real estate majors, while another third were in environmental or resource management programs.

"Our real estate students knew how to plan a development project that was economically feasible," said Canestaro. "But they never before had to consider what makes a project publicly and environmentally acceptable. This class took their training that much farther."

He added that the students also learned just how long it can take--even beyond the hearing process--to win approval for a major building project.

Willard and Canestaro expect that about half the students will eventually participate in a real public hearing. And when that time comes, they will be ready.

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uw news

From The University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: (608) 262-3571

Environmental Studies Institute

Release: Immediately 6/14/77 jl

For further information, contact Jean Lang, Institute for Environmental Studies (608) 263-5599

MADISON--"In terms of a specific wetlands protection law, Wisconsin is nowhere," Wisconsin Legislative Council attorney David Stute told a recent gathering of wetland experts at the University of Wisconsin-Madison.

The three-day conference, sponsored by UW's Institute for Environmental Studies, drew scientists from throughout the Midwest and East.

Stute pointed out that while Wisconsin has had at least one wetlands protection bill before the legislature every session since 1971, none of these bills have made it through both houses.

"There are some pretty clear reasons why these bills have failed," said Stute, "not the least of which is fear of further restrictions on private property rights.

"Earlier bills tried to put tight controls on wetland use," noted Stute. "Considering that half of Wisconsin's two million acres of wetlands are on private lands, it is not surprising that the opposition was strong."

Currently, said Stute, three wetland bills are in committee and all are much less restrictive than previous bills.

"The only activities they clearly regulate are urban or industrial development on wetlands," he said. "Any agricultural or forestry practice is generally exempted. And all currently existing uses of wetlands are allowed to continue."

However, Stute is uncertain whether any of the bills will pass, even with the bite taken out of them.

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"Assembly Bill 92 probably will not even get to the floor," he said. "It requires local zoning boards to classify their wetlands according to a scheme that is considered just too complex."

Assembly Bill 794 and Senate Bill 320 have better chances of success, but still have to face the obstacles that have plagued all wetland bills, said Stute. These include a general resistance to any increase in Department of Natural Resources control over land use, and the opposition of a very vocal and well-organized lobby group.

"The push behind wetlands protection has never been as united or strong as the opposition," commented Stute.

He added that many wetlands activists consider the pending bills too weak to be worth supporting.

"A continuing obstacle is the wide difference of opinion on the value of wetlands in their natural state," claimed Stute. "There is growing public awareness that wetlands are important in containing flood waters, trapping pollutants, and providing open space and ecological diversity."

But, he added, this is counteracted by a long tradition of draining and filling wetlands for agricultural, industrial, residential and sanitary purposes.

"There are some people who want all wetlands set aside as hands-off biological preserves," said Stute. "But the major public concern at this time is to protect the wetland's value as a flood and pollution control agent, while still permitting the greatest possible uses of the land."

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Environmental Studies

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For further information, contact Jean Lang, Institute for Environmental Studies (608) 263-5599

MADISON--Ninety-five percent of Iowa's wetlands have been drained. Wisconsin has lost over half of its original wetlands. Members of the Illinois Natural Areas Survey claim that wetlands in that state are being destroyed faster than the survey can locate them. And prospects for quickly bringing remaining wetlands under legal protection are not good.

These were some of the messages coming from a recent three-day conference on wetlands at the University of Wisconsin-Madison. The conference, sponsored by UW's Institute for Environmental Studies, attracted wetland experts from throughout the Midwest and East.

"We failed to preserve wetlands in the past and we are still lagging behind today," Iowa State botanist Arnold Van Der Valk told the conference. "Why is that? It's because, historically, wetlands in their natural state have not been considered of any value."

Van Der Valk contended that one way to get more protection for remaining wetlands was to prove their economic worth to the public. He noted that the few states that have taken steps to protect pothole marshlands did so for economic reasons. The potholes had been proven valuable in terms of waterfowl production and hunting revenues.

"What we need now is more research that proves the value of the other functions that wetlands perform," Van Der Valk said.

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Flood control, he noted, may be a very important role of river bottom wetlands. Preliminary evidence suggests that wetlands absorb excess waters like a sponge, preventing flood build-up.

"But," said Van Der Valk, "we need to prove this for a fact and to show what kinds of wetlands are most effective in holding flood waters."

Van Der Valk claimed that more evidence was also needed to define the part that wetlands play in cleaning up polluted waterways.

"The apparent ability of wetlands to collect and release water-borne nutrients could be very important economically, especially in the case of non-point sources such as agricultural run-off," he said. "But we have only now begun studies in this area, and many of them deal only with saltwater marshes.

"Again," he added, "we have recently begun to show the importance of saltwater marshes as fish nursery grounds. But we have done practically nothing to determine the importance of freshwater marshes to fish growth and reproduction."

Noting that there are more wetland ecologists in both Czechoslovakia and Rumania than there are in the whole of the United States, Van Der Valk called for more effort to uncover the crucial but subtle economic values of freshwater wetlands.

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uw news

From The University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: (608) 262-3571

Environmental Studies

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PROBLEMS ACCOMPANY NORTHERN WISCONSIN MINING BOOM

MADISON--Mining companies are currently waging a tough battle for a loose rein in northern Wisconsin. But some observers believe the handwriting is already on the wall--that the days of free-wheeling mining operations are over.

One spokesman for this position is Michael McNamara, author of a mining report recently released by the Institute for Environmental Studies at the University of Wisconsin-Madison.

"The times have changed and the public's mood has changed," says McNamara. "To use the Lake Superior basin as a tailing disposal area is now unthinkable, and to carry out copper mining under less than antiseptic conditions is unacceptable."

"The mineral economy of the region is no longer just the concern of the mining companies," adds McNamara, currently executive assistant to the chairman of the Wisconsin Public Service Commission. "Mining is increasingly the responsibility of public agencies and their constituencies."

In his report, "Metallic Mining in the Lake Superior Region: Perspectives and Projections," McNamara says that the Lake Superior region can produce iron ore for another 250 to 500 years. The lands bordering the lake also contain the largest nickel sulfide district in the world and substantial copper and zinc resources.

Because the copper and nickel reserves are low-grade deposits, their extraction will be more costly than the mining of richer veins. Consequently, large-scale development of these deposits hangs on the time when market prices make exploitation profitable.

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But that time is not far distant. In Wisconsin over 40 mineral firms have shown interest in the state's copper-nickel resources. Two of the companies appear firmly committed to opening mines. One is Kennecott Corp., which holds a copper-nickel deposit near Ladysmith. The other is Exxon USA, which holds one of the world's largest copper-zinc deposits at Crandon.

McNamara points out that the development of Wisconsin's low-grade ores means that more waste rock will have to be disposed of and more landscape damage coped with for each ton of metal produced. He says that, despite precautionary measures, there is the possibility that sulfur-bearing fluids may escape from tailings areas into ground and surface waters. There is also the prospect that much of the mined land will never be productive again regardless of reclamation efforts. And, should Exxon decide to install a smelter in the region, there could be problems of air-borne pollutants.

"The mining of low-grade ores also means that more energy is needed for extracting and processing the ore," says McNamara. "And that is a critical factor in these energy-tight times."

He adds that the mining industry is finding that it cannot command energy supplies and facilities as it did in the past. Here again, the industry must get the public sector's approval and cooperation in order to meet its energy needs.

According to McNamara, these growing energy needs are largely the result of new automated mining and extraction processes adapted to low-grade ores. He cautions that this trend to energy-intensive mining means a lot more than just greater demands on the public utilities. It also means relatively fewer new jobs for the region's unemployed workers.

"In fact, of the four states and provinces in this mineral-rich region, Wisconsin will feel the least employment impact from the developing copper-nickel industry," says McNamara. "New direct job estimates for northern Wisconsin range from 600 to 900, reducing only slightly the historical record of regional unemployment."

Based on the potential long-term social and environmental impacts of the new mining operations, it has been proposed that the mining companies bear a larger state tax burden than they would have in the past. In turn, the state would give a larger share of the mineral tax revenues back to local government to offset the public costs of mineral development.

A bill now before the Wisconsin legislature would place a net proceeds tax of from 8 to 16 per cent on mining companies.

"The mining firms do not relish this kind of restrictive situation," comments McNamara. "And they often respond with claims that taxes will drive them out of the region or out of business."

However, McNamara argues that a 1975 mineral taxation conference at UW-Madison made it clear that taxes are only one of many factors that a firm considers before opening a mine.

"At that conference, Desmond Kearns, an Arizona mining attorney stated, 'In the final analysis mines can only open where there are readily available mineral resources. And unless the mining taxes in the area are extremely oppressive, that is where the mine will go.'"

"The question," says McNamara, "then becomes one of deciding what kind of taxation will be easiest for the company to pay, will encourage the most efficient mining practices, and will bring the greatest benefit to the state and region."

"The public is insisting that mining firms become responsible members of the regional community," says McNamara. "One way to force that responsibility on to unwilling shoulders is through taxation and regulation."

McNamara's report is available from the Institute for Environmental Studies, Room 120, 610 Walnut st., Madison, WI 53706.

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research news

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Environmental Studies

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LESS ENERGY FOR TRAVEL USED IN MEDIUM-SIZED CITIES, RESEARCHERS SAY

MADISON--The medium-sized city has at least one inherent advantage over the major metropolis and the small town: it uses less energy for transportation.

That's the conclusion of University of Wisconsin-Madison researchers in the Energy Systems and Policy Research Group, which is studying ways to save energy in the state. The group is part of the Institute for Environmental Studies.

"We concluded that there's an optimum city size of about 50,000 to 100,000 which uses transportation energy most efficiently," says Prof. John W. Mitchell.

"In bigger cities people tend to live farther out, so they use more energy to commute. In smaller communities there apparently aren't the shopping and other cultural facilities, so people tend to drive other places for these services--this uses a lot of energy."

The study found that the medium-size city of Racine (pop. 95,000) used about 30 per cent less energy per capita for transportation than did Milwaukee (717,000) and Wisconsin Rapids (18,500).

We cannot change the size of our cities, the researchers note, but we can plan future growth with an eye toward saving energy.

Structure of a city is another important energy factor, says Mitchell: "A sprawling city will use considerably more transportation energy than a contained city of the same population."

Exurban development (beyond the suburbs) causes even greater energy use, he notes, since there is little alternative to automobile travel.

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The most immediate energy savings, however, can be obtained from more efficient cars and increased mass transit use, according to Mark E. Hanson, graduate student and co-author of the study. "If you want to save more, then you can get into planning city size and structure," he adds.

If 1975 patterns are maintained, the group estimates passenger energy use in Wisconsin will increase 25 per cent by the year 2000. Much of this would be due to population increases. The total for 2000 could be cut in half by taking the following measures:

(1) Introduce an "urban car" that gets 35 to 45 miles per gallon (similar to the Honda Civic) to comprise 30 per cent of autos on the road;

(2) Require an average of 20 mpg for all other cars;

(3) Double the present level of mass transit use; and

(4) Use car pools on 50 per cent of all work trips.

Most of the savings in transportation energy, says Mitchell, will come from individual choices rather than policy decisions.

Mitchell adds, however, that a tax on large cars as proposed by Governor Lucey would save energy if people switched to smaller cars. Some switch to small cars has already occurred, he notes, due to higher gasoline prices.

Other policy decisions, such as aid to mass transit, would also help save energy, Mitchell says.

Mitchell and Hanson prepared a study on transportation energy in Wisconsin at the request of the State Planning Office, Wisconsin Department of Administration. They studied energy use by various cities in Wisconsin and around the nation.

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Environmental Studies

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SELF-HELP GRANTS TO NORTHERN WISCONSIN BEGIN TO PAY OFF

MADISON--Between 1969 and 1974 the Upper Great Lakes Regional Commission (UGLRC) invested over $3 million in self-help projects in northern Wisconsin. According to a recent report, these investments are beginning to pay off in terms of increased employment and a more diversified economy.

The report, prepared by Farnum Alston and John Ross of the University of Wisconsin-Madison's Institute for Environmental Studies, indicates that the most successful UGLRC investments have been grants to aid existing industrial parks.

"The commission invested $1.5 million in 18 industrial parks, mainly for sewer and water services," says Alston. "These grants were matched by funds from other federal agencies and by private investments. In several areas, such as Marinette and Sturgeon Bay, the UGLRC grants were clearly an important factor, allowing new industries to move into the area and helping established industries make major expansions."

A goal of the UGLRC is to promote a diversity of industries in northern areas, so that communities do not become totally dependent on a single resource-based industry such as mining or lumbering.

"In this respect, the UGLRC has been fairly successful," says Alston. "Between 1970 and 1974, industrial parks aided by UGLRC grants had 27 per cent increase in process-based industries, such as chemical and machine manufacturing. Non-UGLRC parks had only a 9 per cent growth in these industries during the same period.

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Alston notes that the employment situation in these project communities is becoming more like that of the state as a whole. There is a healthier balance among the numbers of people employed in retail trade, process-based manufacturing and resource-based industries.

Alston and Ross claim there is a continuing need for public investments in the northland's economy. The UGLRC projects had helped create 1,854 jobs in industrial parks as of 1974. But the northern counties still fall behind the rest of the state in employment and income.

However, the authors urge that, before the commission grants more funds, it should critically evaluate where and why its investments have succeeded or failed

Alston cites the case of one poorly chosen investment in Sawyer County.

"In 1968 the UGLRC was asked to help fund an industrial park in the city of Hayward. The commission subsequently put $90,000 toward sewer and water services on the park site."

However, notes Alston, Hayward traditionally has been an important recreation community, and retail trade has been and continues to be the major employer there.

"The industrial park never materialized. As of 1974 no firms had yet located in the park despite the presence of sewer and water service," says Alston. "If the commission had carefully reviewed Hayward's economic characteristics in 1968 they might have invested that $90,000 in a more promising project, perhaps one that could have built upon the existing retail business."

Alston and Ross also urge that the UGLRC give greater attention to the long range costs and benefits of industrial development.

"For example, who gets hired as a result of new industry? Is it the local unemployed, or people from outside the community?" asks Alston. "And what are the hidden costs to the community in terms of additional public services and taxes?"

Alston stresses that the commission has made progress in northern Wisconsin. But he also emphasizes the need for thorough study of the economic, social, and environmental climate before local projects are funded.

Copies of the report, titled "Impacts of Upper Great Lakes Regional Commission Public Investments," are available from the commission office at 123 West Washington, Madison 53703.

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Environmental Studies

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For further information, contact Jean Lang, Institute for Environmental Studies (608) 263-5599)

MADISON, Wis.--Evidence from the ancient past suggests that future climate changes may have significant effects on society and economy.

This was the message of Reid A. Bryson, University of Wisconsin-Madison climatologist, who spoke this week at a gathering of meteorologists at Monash University in Melbourne, Australia.

"It is a fact that there have been dramatic climate changes in historic and prehistoric times, and that they have had major environmental and economic repercussions," said Bryson, director of University of Wisconsin-Madison Institute for Environmental Studies. "If such changes could occur in the past, there is no reason why they should not occur again."

As an example, Bryson cited a climatic change that occurred in the United States between about A.D. 1200 and 1400. It is believed that the dry westerly winds normally moving across southern Canada were pushed southward at that time into the northern United States. Bryson and others have speculated that this shift in winds reduced the mid-summer rainfall in the Midwest by as much as 50 per cent. In addition, the persistence of this climate caused major changes in the region's vegetation.

"For people living in the already marginal areas of this region, such a climate change would have been disastrous," said Bryson.

Archeological evidence shows that, in fact, it was. Ancient tribes of Indians who lived on the short-grass plains disappeared. And those tribes that lived at the eastern edge of the plains underwent a significant change in diet and population distribution.

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"Excavations at the Mill Creek Indian site in northwestern Iowa showed that the vegetation of the region changed from a mosaic of forest and lush prairie to dry short-grass prairie," explained Bryson. "Bone fragments from the campsites showed that the people shifted from a diet of deer--animals that browse the forest edge--to a diet of bison, grazing animals of the open grassland.

"Today the Mill Creek site is the heart of the fertile wheat, corn and soybean region of the U.S.," noted Bryson. "But it is important to remember that 600 years ago, it was dry grassland--and it could become grassland again with a shift in weather patterns."

Going back further in time, Bryson described dramatic changes in the climate and populations of northwest India and Pakistan. Over 2000 years before Christ, reliable monsoon rains made farming possible in this previously arrid region. While the monsoons continued, the Indus culture flourished for a thousand years.

"After that time, the archeological record is broken," said Bryson. "The monsoons shifted, the desert moved in and the Indus culture disappeared. Man was not able to re-inhabit the region until 600 years later when the monsoons returned and brought fertility back to the land."

Bryson added that a similar long-term failure of the monsoons today would bring great disaster to the now densely occupied desert.

Coming up to modern times, Bryson outlined the probable effects of a small but continuous climate change in the midwestern U.S. His analysis was based on a spring wheat production model developed by the Climate/Food Research Group at UW-Madison.

"We found that if rainfall were reduced 20 per cent each month and the average monthly temperature was above normal by 1°C, wheat yields would drop about 16 per cent," said Bryson. "This would amount to a loss of $275 million, a serious situation for wheat farmers who work on a narrow profit margin."

Bryson stressed that high-technology agriculture is not immune to climatic variations. But he also added that if the present North American climatic trend continues--cooler summers and earlier frosts--agricultural production, on the whole, would not suffer in the U.S.

However, for some other regions of the world, Bryson painted a rather bleak picture.

"The cultures that will be most affected are those situated in marginal areas, such as semiarid lands, or under other pressures, such as uncontrolled population," he said.

Bryson explained that when the climate changes, there must be an accompanying adjustment of food production to population and food demand. However, in some countries today, there is not the time to make this adjustment and a careful allocation of food resources will be necessary to avoid disaster.

But, added Bryson, for some cultures even this step is only a holding action, a means of buying time.

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Environmental Studies

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INSTITUTE FOR ENVIRONMENTAL STUDIES
For further information, contact Jean Lang (608) 263-5599

MADISON, Wis.--A study of the economic factors influencing wheat production has begun at the University of Wisconsin-Madison with the recent receipt of a $46,270 grant from the Charles F. Kettering Foundation of Dayton, Ohio.

The one-year study is being conducted under auspices of the Center for Geographic Analysis of the UW-Madison's Institute for Environmental Studies (IES). Prof. Peter G. Helmberger, agricultural economics, will head up the research.

"Our purpose is to measure the effects of both economics and climate on the amount of wheat acreage planted and the grain crop produced in North and South Dakota over the last 20 years," Helmberger said. "Special emphasis will be given to spring wheat, although we also will consider barley, oats, and corn."

Helmberger will be working closely with the Food/Climate Project of IES which is modeling effects of climate change on spring wheat production in the U.S.

"Our study will supplement the wheat model by providing information on the impacts of economic variables -- such as the amount of land available for planting and the costs of fertilizer, fuel, labor, and capital equipment -- as well as the climatic variables."

Helmberger also will look at the effects of recent government price support programs on crop production. These include acreage allotment and market quota system and the soil bank.

Data for this study will be collected from various agricultural records and censuses and ultimately will be fed into the spring wheat computer model.

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"With the model we hope to simulate the levels of production that one could expect if the climate changed," Helmberger explained. "If drought struck the Dakotas or there were prolonged cold wet springs, what kind of production could be expected, given our present technology and agricultural economics? And what would happen if fertilizer and fossil fuels were not only less available but more expensive?"

Helmberger noted that his study is viewed in part as a pilot for a more ambitious study of the impacts of climate and economics on all major crops and crop production regions in the United States.

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Environmental Studies

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EFFECTS OF COAL-FIRED POWER PLANT ON THE ENVIRONMENT TO BE STUDIED

MADISON--The federal Environmental Protection Agency (EPA) has granted $633,828 to the Institute for Environmental Studies (IES) at the University of Wisconsin-Madison to fund the first year of a study on the impact of coal-fired power plants on the environment, the UW reported Wednesday.

The study of the Columbia Power Plant I at Portage, Wis., is expected to produce some environmental benchmarks as the nation turns increasingly to coal as a fuel for production of essential power.

Investigators will follow chemicals leaving the plant and examine their effect on the adjacent water and land and their natural inhabitants. The scientists also will come up with recommendations on how to select sites for future plants.

The three-year study is projected to cost $2,252,818, including support from a consortium of three major Wisconsin utilities. It will be conducted by the IES Environmental Monitoring and Data Acquisition Group and will be managed by Prof. James Clapp.

The project will include a detailed modeling of the flow of chemicals through a coal-fired power plant in a wetlands ecosystem, and assessing the impact of the plant on the aquatic and terrestrial environment. Dr. Daniel Willard will be in charge of this phase as principal investigator.

A second part of the study will be development of a data base and siting criteria protocol for future plants now in the planning stages. Dr. Richard Timm will be principal investigator.

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Add one--environmental study

A subcontract covers the effect of hazardous chemicals on fish, with Dr. John Lech, Medical College of Wisconsin, as co-principal investigator.

More than a dozen UW-Madison faculty members from several departments and colleges participated in design of the project and will be co-investigators on specific aspects of the study.

The work will build upon experience gathered over the last three years by many of the same group on baseline studies before and during construction of the Columbia plant, which began operation two months ago. Previous research has been funded by the Wisconsin utilities.

Acknowledging the grant, UW-Madison Chancellor Edwin Young described it as evidence of high regard held in Washington "for the proven performance of Wisconsin researchers in the documentation and analysis of pressing problems posed by our energy development programs."

Young added, "This grant will carry forward our efforts to help meet the needs of our citizens in building a rational planning base for energy development with minimal environmental disruption."

IES leaders said the study is perhaps the most comprehensive undertaken on this subject with the findings expected to have national significance.

The utilities participating are the Wisconsin Power and Light Co., the Madison Gas and Electric Co. and the Wisconsin Public Service Corp. The utilities are planning a second such plant, Columbia II, scheduled to begin operation in three years.

The grant is scheduled for formal approval by UW System Regents at their next meeting.

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Environmental Studies Institute

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OCEANIC FISH DISTRIBUTION TO BE STUDIED BY UW-MADISON GRAD STUDENTS ON CRUISE

MADISON--Ten University of Wisconsin-Madison graduate students will be taking a 12-day cruise in the Atlantic beginning May 27.

But this cruise promises to be more work than pleasure. There will be no shuffleboard on deck, only a lot of research equipment.

Their ship is the Research Vessel Eastward. The 117½ foot craft is operated by the Duke University Marine Laboratory and financed by the National Science Foundation. Zoology Prof. John J. Magnuson said the students will board ship at the Duke Marine Station in Beaufort, North Carolina.

"At Cape Hatteras there is a complex ocean situation on the continental shelf. There are different types of water with different temperatures and sharp boundaries between them. We will look at one of these boundaries in detail and see if the changes in temperature influence the distribution of fish. We'll see if it acts as a barrier to certain types of fish, or if it is a unique habitat for concentrations of animals," Magnuson said.

The Wisconsin researchers hope to correlate fish distribution with data on surface water temperatures obtained by using satellites already in orbit, he said.

After returning to Madison June 9, the students will spend the summer analyzing their research results.

"The students will probably publish several research papers. They will have a chance to begin their academic writing careers," Magnuson said.

The students come from a variety of aquatic science majors, including oceanography, water chemistry, limnology and zoology. Besides Magnuson, Prof. James F. Kitchell, Institute of Environmental Studies, and Prof. William C. Burns, chairman of the zoology department, also are participating in the cruise.

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Environmental Studies

Release: Immediately 3/19/75

INSTITUTE FOR ENVIRONMENTAL STUDIES
(For further information, contact Jean Lang (608) 263-5599

MADISON--A mineral tax conference held at the University of Wisconsin-Madison Center concluded that taxes are not a major factor in a mining company's decision to come into a state.

At the meeting, sponsored by the Upper Great Lakes Regional Commission and the Lake Superior Project of the University's Institute for Environmental Studies, the mineral tax experiences of several states, including Minnesota and Montana, were described.

"These states have had major mining interests within their borders for many years and have considerable background in mineral tax systems," Brent H. McCown, program coordinator, said. "Wisconsin is just beginning to think about a mineral tax policy. We are hoping to take some lessons from our sister states."

Wisconsin policy is aiming at metal mining, particularly that of taconite, program chairman Michael D. McNamara noted. Minnesota, which has the region's largest and richest deposits of this iron ore, has an aggressive tax program in progress.

"Minnesota has traditionally placed a heavy tax on its iron ore mining industry," Andy Kozak, staff assistant to Minnesota Gov. Wendell R. Anderson, said.

Minnesota raised its taconite tax less than 10 years ago and now is planning to quadruple the production levy. However, Kozak indicated that Minnesota is not worried about losing the industry since mining operations are well established on rich ore bodies.

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"Minnesota's experience seems to show that mining companies are more concerned with the type and size of the ore body than with the tax system," Wisconsin state geologist Meredith E. Ostrum stated.

He added that while Wisconsin's total taxes on each ton of taconite are less than Minnesota's, Wisconsin still is unable to attract such mining operations into the state. The reason is that its deposits are harder to reach and more costly to mine.

Desmond Kearns, Arizona mining attorney, commented that the tax rate is only one of about 20 economic factors that a company considers before deciding where to open a mine.

"In the final analysis, mines can only open where there are readily available mineral resources. And unless the taxes in the resource area are extremely oppressive, that is where the mine will go."

If the tax rate does not make that much difference, then the question becomes one of deciding what kind of taxation will be easiest for the company to pay, what will encourage the most efficient mining practices, and bring greatest benefit to the state and region, McNamara contended.

Though there was disagreement over what is the best system, a number of participants felt that a severance tax, such as a set fee on each ton of ore extracted, was undesirable.

McCown stated that whatever system is adopted, Wisconsin is interested in cooperating with Minnesota and Michigan in establishing a regional metal mining policy that would reduce unnecessary tax rate competition among the Great Lakes states.

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Environmental Studies Institute

Release: Immediately 2/3/75

Institute for Environmental Studies
(For further information, contact Jean Lang 608-263-5599)

MADISON, Wis.--Methods for identifying geographic areas of special economic, ecologic and aesthetic value is the subject of a three day meeting being held this week at the Wisconsin Center, University of Wisconsin-Madison.

According to program director Jon Kusler, increasing demands on the nation's resources have brought about state and federal laws that require states to identify and map their so-called "critical areas," including wetlands, shorelines, flood-plains, and prime agricultural lands.

"Identifying critical resource areas is easier said than done," says Kusler. "For example, if you are surveying your state's wetlands, you have to know not only where they are, but also how much is there and whether they are of high or low quality."

Information about the American landscape is already being gathered by many agencies and in many ways. Among them are state soil districts with their soil maps, the U.S. Geological Survey with its geologic and groundwater maps, NASA with its satellite photos of Earth and the Corps of Engineers with its flood surveys.

"The big problem is knowing what kinds of information are available and choosing the kind that will be most useful in locating particular critical areas," claims meeting organizer, Bernard Niemann. "Will aerial photos tell you more about your waterways, or are satellite photos better? This workshop and a follow-up session in April are intended to answer this kind of question."

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The workshop will also attempt to define what role the federal resource agencies should play in providing states with data and helping them to identify their critical areas..

The workshop, being conducted by UW's Institute for Environmental Studies, will bring together 140 resource managers and data experts from over 40 state and federal agencies. Funding for the meeting is provided by the National Science Foundation, RANN Division.

Just what constitutes a critical area depends upon the locality, explains Niemann. In seaboard states, tidal marshes which are vital to healthy marine fisheries may be critical areas. In other states, sand and gravel deposits may be scarce and therefore critical.

"If you do not locate and protect a critical mineral deposit, someone is going to innocently build a shopping center on top of it and essentially wipe it out as a resource," he says.

Critical areas can also be critical problem areas, Niemann notes. Flood plains, for instance, are critical because of the tremendous property damage that occurs there.

Kusler claims that identifying and regulating the development of critical areas is really a means of protecting a region's economies.

"If the salt marshes are protected on the New England coast, the Atlantic shellfish industry benefits. And if the important scenic vistas are identified and protected in a region dependent on tourism, the tourists will continue to visit there."

He adds that some areas, like farmlands, that were not considered critical five or ten years ago, are critical today.

"There are states that now have to choose between strip mining parts of their land for minerals or farming it for food. The choice is easier and wiser if there is good knowledge of the land's actual agricultural and mineral values."

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INSTITUTE FOR ENVIRONMENTAL STUDIES
FURTHER INFORMATION: Jean Lang (608-263-5599)

MADISON, Wis.--Madison's Lake Wingra is a topic of discussion in New York City this week.

The occasion is the annual meeting of the American Association for the Advancement of Science. Featured on this year's agenda is a two and a half day session on the United States' contribution to the International Biological Program (IBP), a world-wide research program in which Madison's marshy pond played an important part.

Lake Wingra was selected in 1969 by IBP as a site for ecological studies on the behavior of an urban watershed. For four years Lake Wingra was examined inside and out by a team of University of Wisconsin scientists. The study, administered by UW's Institute for Environmental Studies, ranged from measurements of storm sewer run-off to estimates of fish production.

"Like hundreds of other lakes, Wingra has experienced the rapid conversion of its watershed from a woodland to a suburb," says Michael Adams, director of the study. "In this sense, Wingra typifies the continually disturbed condition in which much of the eastern and midwestern forest region exists today."

The effects of urbanization have been many. Since the turn of the century, 19 of the 27 springs that fed Wingra have dried up. Part of the cause, says Adams, is the increase of impermeable surfaces--roofs, asphalt pavements and concrete culverts--which prevent the return of water to the soil.

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The unyielding pavements have also caused a tripling in the rate of storm water run-off from portions of Wingra's watershed. This increased volume of water carries high loads of nutrients and debris from city streets and lawns into the lake. During one period of snow melt, IBP scientists measured 15 pounds of phosphorus entering the lake from a single storm drain.

"Somewhat to our surprise, we found that the lake has adjusted itself to high levels of phosphorus and other nutrients," says ecologist Orie Loucks who directed the program in its early years. "Unlike other highly fertilized lakes, Wingra remains free of nuisance scum algae."

One factor contributing to the lake's relatively good health are the large beds of aquatic weeds and cattails that fill the shallow reaches.

"While these weedy borders may be a bother to boaters, they protect the lake from excessive nutrients," claims limnologist James Kitchell. "The plants act like filters, removing phosphorus and nitrogen from the water and incorporating the minerals into their leaves and stems. Later, as the plants die and decay, the nutrients are slowly released back to the lake."

According to Kitchell, Lake Wingra's many small sunfish have also proved important in keeping the nutrient cycle in delicate balance. The fish store in their flesh about 50% of the phosphorus they take up in their food. This is phosphorus that otherwise would be free to support undesirable algae growth.

The final product of the Lake Wingra study is a finely tuned computer model that accurately stimulates the lake's physical and biological systems. Although only recently completed, the Wingra model has already proved itself to be more than an academic exercise.

"Insights gleaned from the model have been applied to other lakes with similarly disturbed surroundings," says Adams. "Parts of the model were used in studies of troublesome algae in Green Bay, Wisconsin, and of aquatic weeds in Lake Skadar, Yugoslavia."

But the model proved most valuable when the Institute for Environmental Studies began its analysis of future water quality in the proposed LaFarge reservoir on Wisconsin's Kickapoo River.

"The model had described very well how algae and aquatic plants respond to certain water depths, temperatures and nutrient levels in Lake Wingra," says Loucks. "We felt it could tell us the same things about other lakes, even lakes still on the drawing board."

Knowing the nutrient and sediment flow from the Kickapoo watershed, and the lake's intended depth and size, UW scientists used the model to estimate the probable rates of algae and weed growth and to predict the types of algae most likely to be a problem in Lake LaFarge.

The conclusion was that the Corps of Engineers' proposed lake would be highly eutrophic and would suffer large blooms of particularly noxious scum algae during late summer. Because of these findings, the value of continuing construction on the reservoir is now under debate.

"The Kickapoo dam study was just one of many uses that the Lake Wingra IBP model will have," claims Adams. "And we hope to ultimately reap the benefits from other IBP studies being completed across the U.S. and around the world," he adds.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

Environmental Studies, Inst. for

news release

Immediately

4/3/74 bba

MADISON--Recent scientific breakthroughs are enabling researchers a better look at forecasting climatic patterns. These breakthroughs involve using mathematical techniques to unravel information about past climates that is retained in geologic and biologic records such as tree rings, fossil pollen and plankton from the deep sea. Understanding past climatic change is necessary before predictions of future climates may be made.

A workshop for 40 of the world leaders in this area of climatic study, paleoclimatology, is being held at the University of Wisconsin-Madison campus April 3-5. This is the first time these scientists are together to share their information with others doing similar work.

Out of this meeting will come a report to promote wider use and understanding of these mathematical methods of understanding the climatic changes occurring on earth. This meeting is being coordinated through the Center for Climatic Research (CCR), Institute for Environmental Studies, and is sponsored by the National Science Foundation and Advanced Research Projects Agency.

Madison participants include: John Kutzbach, prof. meteorology; Wayne Wendland, ass't prof. meteorology and geography; Reid Bryson, prof. meteorology; Louis Maher, prof. geography; Ted Miller, ass't prof. geography; Tim Allen, assoc. prof. botany; Al Swain, CCR; Neil McDonald, CCR; and John Pollack, CCR.

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Other participating scientists are from Brown University, Rhode Island; Oregon State University; University of Arizona; Scripps Oceanographic Institute, California; University of Washington; Lamont-Doherty Geological Observatory, New York; University of Miami; US Naval Oceanographic Office, Maryland; Rensselaer Polytechnic Institute, New York; University of Rhode Island; Duke University, North Carolina; Yale University, Connecticut; University of Cambridge, England; and Afdeling Palynologie Hugo-deVries-Laboratorium, Netherlands.

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research news

Environmental Studies Institute

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Release: Immediately 12/16/74 alt

(For more information contact Warren Downs, 263-3259 or John Ross, 262-5957)

MADISON, Wis.--How knowledgeable are the public and its leaders about nuclear energy? Not enough to make the best long-range decisions, says John Ross, of the University of Wisconsin-Madison.

This verdict is based on a survey of over 264 Wisconsin citizens and community leaders, state regulatory officials, electric utility field managers and environmentalists.

"We wanted to see what kind of technical and environmental understanding those people living near an operating or proposed atomic power plant had," says Ross, associate director of the University's Institute for Environmental Studies.

Ross and graduate assistant Marjorie Beane conducted their survey in communities near the Point Beach Nuclear Power Plant, a controversial nuclear facility on the shores of Lake Michigan near Manitowoc, Wisconsin.

In the UW Sea Grant sponsored study, 190 nearby residents and civic leaders responded to a questionnaire on nuclear power and related energy systems. Results showed this group answered, on the average, less than one-third of the factual questions correctly.

In contrast, utility officials and environmentalists scored high, both groups averaging 67 percent correct answers.

"What is interesting is that these two factions differed widely in their attitudes toward nuclear power," says Ross. "Between such polarized viewpoints the public has difficulty sorting out the facts and making any informed judgements

Some typical survey questions included:

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'An atomic explosion is not possible in current light water nuclear reactors. (Answer: true)

'A fast breeder reactor produces more nuclear fuel than it consumes. (Answer: true)

'There is an established threshold below which radiation will not cause biological injury. (Answer: false)

The researchers suspect that the answers to such factual questions often reflect what the person wants to believe.

For example, none of the local residents answered the last question correctly while only nine percent of the local leaders and 15 percent of the utility officials answered it correctly. In contrast, 67 percent of the environmentalist correctly judged the danger of even the lowest levels of radiation — perhaps because of their skeptical view of nuclear power.

On the other hand, perhaps because of their favorable attitudes toward nuclear power, all the utility officials knew that fast breeder reactors produce more fuel than they consume; only 73 percent of the environmentalists knew this.

As a group, the state regulatory officials correctly answered 62 percent of the survey questions. This compared well with the 67 percent overall score of the utility officials and environmentalists.

On the federal level, officials in the Environmental Protection Agency, the Atomic Energy Commission and the Federal Power Commission generally declined to participate in the study. Spokesmen said that the questions were subject to outside interpretation of the "correct" answer and that many dealt with sensitive policy matters.

According to Beane, "Federal officials are cautious about being misinterpret or appearing to be biased or unknowledgeable outside their own fields."

Reflecting on their survey results, the UW researchers believe lack of information at the local level is due to superficial coverage of the technical issues by local news media.

Ross and Beane note that the utility promptly held public informational meetings for local residents when the Point Beach plant site was first announced. However, they believe that official hearings as well as environmental protest meetings generally occur too late to be useful to the public in the lengthy process of approving and licensing a proposed nuclear plant.

"By then local residents already have made up their minds," says Ross, "and intervening protestors are resented as outside meddlers."

The research was sponsored by the University of Wisconsin Sea Grant College Program, which has research interests in the Great Lakes and associated electric power issues.

The Sea Grant Program is funded by the National Oceanic and Atmospheric Administration, U.S. Department of Commerce and by the state of Wisconsin.

A 154-page report, "The Role of Technical Information in Decisions on Nuclear Power Plants," contains information on the study, including the survey questions and answers, and an analysis of research results. For a copy write: Communications Office, Institute for Environmental Studies, 610 N. Walnut St., Madison, Wisconsin 53706.

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news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: 608/262-3571

Environmental Studies Institute file

Release: Immediately 12/16/74

For further information contact James Knox (608) 262-1804

MADISON--Lake Superior, the single largest natural resource in the Upper Midwest, is susceptible to significant environmental changes by man. The vast area of the lake is an ecologically sensitive unit, according to a group of inter-disciplinary researchers in the University of Wisconsin-Madison Institute for Environmental Studies.

The group has just been awarded a grant of $250,000 by the Rockefeller Foundation for the continuation of a research program on environmental decisions in the Lake Superior region.

The grant continues work started in 1972. The project director is James Knox, associate professor of geography and director of the Center for Geographic Analysis in the institute. The project team is made up of staff from geography, law, biology, economics, and computer modeling led by Knox with assistant professors Thomas Heller, law; and Brent McCown, horticulture.

Completed work by the interdisciplinary group has shown that while Lake Superior is the most massive body of fresh water in the world, it is highly sensitive to environmental disturbances. Further, because of the slow rate of water turnover in the lake, pollution will tend to remain for hundreds of years.

With the new award, the research group will look at potential economic development in the region and the environmental tradeoffs involved. Of particular interest are the long-term problems posed by increased mining of copper-nickel and iron deposits, and associated smelting and refining operations in the region. The

- more -

University of Wisconsin-MADISON 1849-1974 125th Anniversary

researchers will look at the employment and tax base effects of industrial growth as compared to air and water pollution problems generated.

The group will also take a detailed look at shoreline protection problems. Also of interest are potential development of petroleum tanker traffic on Lake Superior, an extended navigation season beyond the traditional December closing date, the development of major electrical generating facilities on the lake, and the development of steel production in the Duluth-Superior area.

The program is building cooperative relationships with other groups in the University, in state government, and in local governments in northern Wisconsin as the work progresses.

The project is also being conducted in cooperation with the universities of Minnesota, Michigan, and Toronto and with state and provincial planning agencies involved in the region.

Edwin Young, chancellor of the UW-Madison, expressed appreciation to the Rockefeller Foundation following notification of the grant. Young said, "We are delighted to learn of this generous expression of confidence in our program. The Rockefeller Funds will provide substantial assistance in seeking ways to enhance the environmental quality of the Upper Great Lakes area."

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Environmental Studies Institute for

Release: Immediately

11/26/74 j1

INSTITUTE FOR ENVIRONMENTAL STUDIES
FURTHER INFORMATION: Wesley Foell (608-263-5556)

MADISON, Wis.--A unique precedent was set earlier this year when the California legislature created a permanent energy conservation commission with multiple powers to regulate energy use.

California Assemblyman Charles Warren who authored the legislation said recently the success or failure of the new energy commission will be closely watched by other states.

Warren made his comments in an address to a Workshop on State and Regional Energy Modeling and Policy Analysis at the University of Wisconsin-Madison. The workshop, conducted by the UW's Institute for Environmental Studies, was attended by over 60 persons from state governments and universities across the country.

According to Warren, the California Energy Conservation and Development Act concentrates within one agency all the energy planning authority that was previously dispersed throughout a number of state agencies.

"The disadvantage of dividing the responsibility among numerous agencies is that no single agency ever looks at whether the benefits of increased energy production are worth the costs," said Warren.

The powers of California's new five-man commission include estimating the state's energy supply and demand; regulating standards for heating, lighting, air conditioning and electric appliance efficiencies; granting permits and licenses for

- more -

new power plant construction; and preparing contingency plans for a state energy emergency. Finally, the commission is authorized to plan and coordinate state research and development in the areas of energy supply and conservation.

Warren said the research program would give special attention to both geothermal and solar energy. He added that the siting of future power plants in California was also a question needing careful consideration.

"In recent years we moved our power plants inland to desert areas in order to protect the coastline," said Warren. "This meant piping water from mountain areas to meet the plants' cooling needs. We now face a conflict of use as increasing food production requires more of that water for irrigation purposes."

In Warren's view, an important feature of the new commission will be its biennial energy forecasts. Every two years the commission will review the public utilities' estimates of supply and demand and pass these reviews along to the people of California. In addition, the commission will draw up forecasts which present alternative futures for energy demand.

These are futures that could be reached if certain energy policies were put into effect, explained Warren. The intent is to get away from the traditional single-choice energy demand forecast.

According to Warren, the energy conservation commission will emphasize the efficient use of electricity. Electricity makes up about 25 per cent of California's energy supply and Warren believes that consumption rate could be reduced by almost half without greatly changing people's lifestyles.

"There is a lot of fat in our energy system," said Warren.

But he noted that it was not enough just to study methods of trimming the fat.

"We also must create the institutions that will be responsible for taking the necessary action -- institutions that are obligated by law to seek and apply the knowledge that is available for energy conservation," concluded Warren.

The UW energy modeling workshop was sponsored by the RANN division of the National Science Foundation and by the Upper Great Lakes Regional Planning Commission.

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Environmental Studies, Inst. for

Release: Immediately 11/26/74 jl

INSTITUTE FOR ENVIRONMENTAL STUDIES
FURTHER INFORMATION: Wesley Foell (608-263-5556)

MADISON, Wis.--Poor building design can "lock in" wasteful energy usage for as long as the building stands.

And, according to University of Wisconsin-Madison engineers Wesley Foell and John W. Mitchell, an effective way to curb such waste is to improve building codes.

Foell and Mitchell stressed the need for a re-evaluation of existing codes in an address to the Workshop on State and Regional Energy Modeling and Policy Analysis in Madison. The workshop, conducted recently by UW's Institute for Environmental Studies, was attended by over 60 persons from state governments and universities across the nation.

Mitchell explained how he had used an energy model to find the kind of building design that would minimize heat loss.

"The most energy efficient building is generally cubicle," said Mitchell.

"As a building becomes taller or becomes low and sprawling, it becomes less energy efficient.

"For example, in Wisconsin a building of roughly cubicle shape with windows occupying no more than 40 per cent of the wall area would need about 25 per cent less energy for space heating than most current buildings."

Mitchell added that with the reduced ventilation requirements recently recommended by the Wisconsin Department of Industry, Labor and Human Relations, the heating needs for a public building could be reduced by another 25 per cent.

- more -

Add one--building codes

According to Foell, last winter's energy shortage spurred the DILHR into an examination of the state's present building code for commercial and public buildings.

As a result of the DILHR studies, a new code has been recommended which should make future public buildings much more energy efficient.

Foell noted, however, that to create a similar code for residential dwellings will be much more difficult. There is no existing state level legislation governing the heating, lighting or air conditioning requirements for private residences.

The UW energy modeling workshop was sponsored by the RANN division of the National Science Foundation and by the Upper Great Lakes Regional Planning Commission.

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Environmental Studies Institute for

Release: Immediately 9/17/74 alt

(For more information contact Linda Weimer, U. W. Sea Grant Program, 263-3260 or Jean Lang, Institute for Environmental Studies, 263-5599)

Madison, Wis.--This week marks the start of the third year of a unique radio program being produced at the University of Wisconsin.

The program, "Earthwatch," is a daily, two-minute public service feature about the environment and the Great Lakes.

Over the past two years, the number of stations carrying Earthwatch has grown from 12 to 70. Earthwatch is now the largest public service radio program produced in Wisconsin and is carried by stations in Iowa, Illinois, Minnesota and Michigan as well.

The program is written and produced jointly by the U.W. Sea Grant College Program and the Institute for Environmental Studies at the U. W. Madison.

Program content varies. Many shows are based on interviews with scientists, state government and industry officials and others. Other shows deal with environmental topics in the news and some even take a look at the lighter side of environmental affairs. The program is recorded in conjunction with WHA radio in Madison.

Last spring, the program received a special citation from the Wisconsin Natural Resources Foundation for bringing "objective information about current environmental issues and research to the general public."

Although several other universities around the country produce science shows and other public service radio programs, U.W. produces the only regular large-scale radio program, dealing just with the environment.

The program's content and fast-paced two-minute format have been quick to catch on. Oregon State University is about to initiate a new program called "Coastwatch," and the University of Washington and several other schools have expressed interest in producing similar programs for their areas.

- more -

I.E.S. and Sea Grant have published a collection of 200 scripts broadcast during the first 18 months on Earthwatch. The book, Earthwatching, amounts to an environmental diary of 1973, a year which saw the eruption of the energy crisis, the end of a fierce battle over the trans-Alaskan oil pipeline, and the continuation of national efforts to cope with pollution and manage our resources more wisely.

These subjects and many more are discussed in Earthwatching, which is available for one dollar from the Sea Grant Communications Office, 1225 West Dayton Street, Madison, Wisconsin 53706.

Funding for the book and the radio program has come from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce and the National Science Foundation.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

Environmental Studies Institute for

news release Immediately

7/30/74 jl

For further information: Jean Lang (608-262-0886)

CONFERENCE ON CLIMATE CHANGES SLATED AT UW-MADISON

MADISON, Wis.--Some people believe we are still in the Ice Age and our climate is merely a pleasant pause before the next onslaught of glaciers.

We cannot know for sure what climates the future has in store, but scientists are getting some insight into how the climate has changed in the past.

This new knowledge is due largely to the detective work of scientists whose special interest is the Quaternary, the period from the beginning of the Ice Age to the present.

A group of these scientists will gather in Madison July 30 for a three-day biennial meeting of the American Quaternary Association.

"The meeting will focus on the last 10,000 years, the post-glacial period," Reid A. Bryson, director of the Institute for Environmental Studies at the University of Wisconsin-Madison and a speaker at the conference, said.

"The landscape of North America has changed dramatically since the Ice Age. By piecing together many small bits of evidence we can see that the continent went through a number of climatic and vegetation changes before it reached its present state."

Among the "bits of evidence" that will be discussed at the meeting are the uses of pollen grains and mammal bones as indicators of past climate.

"Because pollen grains collect and are preserved in the peaty soil of bogs, they can tell us which plants once grew in the vicinity," Bryson explained.

- more -

Add one--Quaternary meeting

A pollen expert can reconstruct the sequence of plant communities that appeared in the area over long periods of time. With that data he can estimate the probable climates under which the plants grew.

Mammal bones gathered beneath hawk and owl roosts also tell a story of the past. Roosts which are on rocky outcrops may be used by generations of predatory birds over hundreds of years. The proportion of rabbit versus flying squirrel bones can tell a scientist whether the surrounding area was a grassland or forest in the past. This, in turn, says something about the climate of the time.

The sediment accumulations in river beds and the variation of the width of growth rings in trees are climatic records too.

Anthropologists believe the food habits of primitive people reveal what the climate was. For example, the abundance of land snail shells in some Mediterranean archeological sites suggests a more lush vegetation once existed than the land now supports.

The meeting will be held at the State Historical Society in Madison and visitors are welcome.

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feature story

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Environmental Studies Institute for

Release: Immediately 7/9/74 rl

COMPUTER WILL PREDICT EFFECTS OF POLICY PLANS

MADISON--Researchers at the University of Wisconsin-Madison are studying ways to use a computer to forecast effects of land use, tax structure, city planning, and other policy decisions.

The computer is programmed to act as a model of economic activity in the Yahara River Basin (Madison and central Dane County).

For example, the researchers might ask the computer program, nicknamed the "Yahoo model," what effect will be felt in 10 years from the new state law that gives farmers a tax break. Conceivably, it might stop urban sprawl. Or, it could cause a "leapfrogging" of urban development, depending on the conditions.

"You can get crazy things that you don't really expect," says J. Barkley Rosser, Jr., who works on the project. The researchers hope policy-makers and planners can use their methods to test ideas before they are tried on the "real world," where the effects can be irreversible.

So far, the model has been tested only on the past--from 1940 to the present. The researchers now feel confident the model will give accurate projections for the future.

They aren't pushing any political cause or idea, and emphasize the model is not a cure-all.

"A model is just one tool," says Calvin B. DeWitt, environmental studies professor and project director. "If you use it as 'the' tool, you can get in trouble."

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The main advantage of a computer model, DeWitt says, is that it brings people together from various fields, "because things work together in the model.

"You don't have economists or environmentalists working off in a corner by themselves," he says. "The model cries for data to fill the gaps. It helps you discover what data you really need to understand the system."

The research studies growth and changes in 10 areas of economic activity in the Yahara River Basin: state government, local government, university, high-skill manufacturing, low-skill manufacturing, support activities (including retail stores), investment, agriculture and meat packing.

Changes in technology, population, or economic conditions will affect future conditions in all 10 areas. The researchers will use at least three estimates of the amount of change: one high, one low, and one in the middle.

Madison has a high percentage of people who migrate here from other areas, which affects the 10 economic areas, too. The influx of high-skill and white collar activities and the expansion of government and university have served to drive out lower-paying, low-skill manufacturers.

The Yahara River Basin Study, a project of the Institute for Environmental Studies, was begun with a grant from the National Science Foundation.

Researchers include James M. Sinopoli, Thomas B. Starr, specialists, David Iaquinta, botany graduate student from Waunakee,and Lea S. VanderVelde, a 1974 English education graduate, Monona.

# # #

uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Environmental Studies Institute

Release: Immediately 6/6/74 meb

MADISON--A group of University of Wisconsin-Madison professors who are researching energy policies and environmental impact problems via a unique computer program will be able to expand and accelerate their studies with grants received recently from the National Science Foundation and the Upper Great Lakes Regional Commission.

The director of the multidisciplinary program, Wesley K. Foell, professor of nuclear engineering and member of the Institute for Environmental Studies, announced grants of $237,000 from the Research Applied to National Needs Division of NSF and $64,000 from the commission. The project was begun with a NSF grant to the Institute for Environmental Studies here.

With the computer program, referred to by the scientists as a simulation model, researchers can forecast environmental effects and economic implications of various energy decisions in Wisconsin. They can compare projected demands if current use patterns continue with what would happen if those patterns of energy use were changed. The program and the accompanying data collection also can be used to study the effects of economic controls and energy price fluctuations, regulatory codes and legislation, population shifts, and other social and economic factors.

The goal of the program is to provide a better basis for making predictions about the consequences of a variety of energy policies. The predictions will be a valuable aid for policy makers in government and industry, Foell said.

- more -

Add one--energy grants

Another project to be financed by the grants is a French-American conference on energy planning and pricing policies at the UW-Madison next fall.

"In comparison with the United States, Europe has for many years treated energy as a scarce resource, allocated it by the market system at substantially higher prices, and in general treated it as part of the public sector. Until now we have not had to do this in the United States, but the French have given it considerable study and experimentation. Although their approaches may not fit the conditions here, we believe we can learn something of value from their experiences," Foell said.

The French representatives will be from the nationalized electricity company, Electricite de France, and the University at Grenoble. American representatives will come from universities, industry, and government agencies.

A third project is a series of workshops for decision-makers from other states who are interested in the UW-Madison group's energy models. General public information efforts on energy policies are planned as a part of the overall research program.

Members of the UW group are Profs. Foell; Charles J. Cicchetti, economics and environmental studies; John W. Mitchell, mechanical engineering; James L. Pappas, business; Arne Thesen, industrial engineering, and Donald A. Frey, visiting professor in the Institute for Environmental Studies and anthropology.

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e University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release immediately 4/30/74 bba

MADISON--A unique survey for determining that elusive characteristic of "quality of life" has been conducted recently with the help of 400 people in four Wisconsin counties: Ashland, Burnett, Rusk and St. Croix.

This survey is unique because, unlike most attempts to describe quality of life in an area, "this survey includes all aspects of an individual's life: job, family situation, recreational activities, church, etc., not just economic factors," explains Eugene Wilkening, University of Wisconsin-Madison prof. of rural sociology and environmental studies, and leader of the survey work.

The four counties in the survey were selected to represent a wide range of economic and social conditions in the 19 county area of Wisconsin's northwest region. Wilkening describes them:

"Ashland county, on the lake and in the cut-over area, has a declining population, plenty of space, and a shortage of jobs. Burnett county had a declining population but now is attracting second and permanent home development. Pollution and population problems are beginning to appear.

"Rusk county has a declining population, some agriculture and is poor economically. However, copper mining may move into the county near Ladysmith. St. Croix county is within the metropolitan area of Minneapolis/St. Paul. There is stiff land use competition between agriculture and home development. Also,

-more-

quality of life--add one

the county has public service and tax problems with the increasing population, but there are jobs for those who wish to commute to the twin cities."

When asked what the most important problem facing their community was, most respondents in Ashland, Burnett and Rusk counties said lack of jobs. However, in St. Croix, lack of public services was the main concern, and environmental and crowding problems got the highest percentage here than in the other counties--13%. No one interviewed in Rusk felt they had environmental or crowding problems. In Ashland, 4% thought the environment was the number one problem, and 12% thought so in Burnett.

When asked what the number one <u>environmental</u> problem was in their area, Ashland county respondents said reduction of wildlife was their main concern. Burnett, Rusk and St. Croix residents felt stream and lake pollution was their highest environmental concern.

When the question of new industry coming into the area was asked--answers differed somewhat if the industry was a polluting one or if it would bring little or no increase in pollution to the area. If the industry was a polluting one, Ashland, Burnett and St. Croix residents were opposed, but in Rusk, almost an equal number were in favor as were opposed. All counties were highly in favor of new industry if it were only a small polluter.

To the question of what services should be cut or expanded--all counties wanted programs for youth and drug programs increased. And all counties wanted welfare aids decreased.

In St. Croix, twice as many respondents were opposed to second home development

-more-

as were in favor. In Burnett and Rusk, more were in favor of this type of development, and in Ashland, three times as many were in favor as were opposed.

St. Croix respondents were about evenly divided when it came to encouraging tourism. But Burnett, Rusk and Ashland people were all highly in favor of doing this.

A detailed report of the survey, correlating regional characteristics with opinions on quality of life, will be available from Wilkening at the end of the summer.

This survey was taken to establish baseline information in order to measure the effects of changes in the region due to rural development programs, increasing recreational activities and population pressures of seasonal and permanent residents.

The work is part of the Lake Superior Project, which is studying many aspects of the economic, environmental and social characteristics of the region.
The Lake Superior Project is supported by the Rockefeller Foundation through the Institute for Environmental Studies, UW-Madison. Some survey support was also provided by the Agricultural Experiment Station.

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news

Environmental Studies

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 4/19/74 lw

For more information contact Peyton Smith (263-2580) or Herb Young (263-4971)

SPECIAL TO THE STATE JOURNAL, CAPITAL TIMES FEATURE SECTIONS

MADISON--A special University of Wssconsin radio documentary will be aired during Earthweek (April 21-27) by Madison area radio stations.

The half-hour program, "Earth Day Plus Four," looks at progress made in environmental affairs since the first Earth Day in 1970.

It highlights environmentally-oriented changes in government, industry practices, education, the media and the American life style.

The special program was put together by the producers of "Earthwatch," a regular radio feature of the UW Sea Grant Program and the Institute for Environmental Studies at the UW-Madison.

"Earth Day Plus Four" will be aired on WNWC-FM, Sunday (April 21) 9:30a.m.; WMAD-AM &MFM, Sunday (April 21) 12:30 p.m.; WIBA-FM, Wednesday (April 24) 1:05 p.m.; WHA-AM & FM, Saturday (April 27) 11:00 a.m.

The program will also be aired by 28 other stations throughout the state of Wisconsin.

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University of Wisconsin-MADISON 1849-1974 125th Anniversary

1849-1974: 125 Years of Searching, Teaching, and Serving at the University of Wisconsin-Madison

research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Environmental Studies

Release: Immediately 3/25/74 meb

Contact: Mary Ellen Bell (608-262-3571) or Prof. Wesley Foell (608-263-1759)

EXPERTS TO USE COMPUTER TO CHART WISCONSIN'S LONG RANGE ENERGY NEEDS

MADISON--Today's decisions will determine how much energy the state of Wisconsin will need in the future.

For example, if people begin buying small gas-saving cars now, when 80 per cent of all automobiles on the road are small ones, we will need less gasoline than we now use, even if the number of miles people drive continues to increase at the current rate.

Six University of Wisconsin-Madison professors are working on a computer program that can make predictions about how much energy will be required in the next three to 30 years, depending on population growth, changes in the economy, fuel prices, environmental standards, lifestyles and any other variable that might affect energy demands.

Prof. Wesley K. Foell, a nuclear engineer, is director of the project, sponsored by a National Science Foundation grant. He said the project marks the first time adequate information has been made available to the people who make policy decisions about energy. Previously, the only source of information about future energy needs has been the utility companies.

"Energy decisions now are made piecemeal, without any accurate information, on a very short term basis," Foell said. "We are trying to provide information for looking at the consequences of energy decisions.

- more -

"Now we're finding that, depending on the decisions we make, there can be a tremendous range of energy demands in the future."

Foell and his associates have looked at the energy resources being used for air conditioning, household appliances, industry, heat for houses, transportation systems, and dozens of other uses of power. They project increased energy demands if current use patterns continue and compare what would happen if those patterns on energy use were changed. Changes in the economy would also have an effect of energy use and the computer program can predict the results of things like price fluctuations as well as show the effect of different energy use policies on the economy. Another part of the program predicts the environmental impact of various decisions.

Each of these components in the program is being worked out separately. When the entire program is complete, Foell said it will be possible to combine the components to get a realistic prediction of the results of a total energy use policy.

Foell believes the predictions will be a valuable aid for policy makers in agencies like the Public Service Commission and the Department of Natural Resources. Information from the computer could be used to verify the environmental impact statements required for all state approved programs under the Wisconsin Environmental Protection Act, and provide evaluation of the long range plans for power plants required by the Power Plant Siting Bill.

Other members of the faculty group developing the computer program are Profs. Charles J. Cicchetti, economics; John W. Mitchell, mechanical engineering; James L. Pappas, business; Arne Thesen, industrial engineering, and Donald Frey, visiting professor in the Institute for Environmental Studies.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

Environmental Studies Institute

news release Immediately 7/9/73 nsf/bba

COMPUTER HELPS PREDICT CONSEQUENCES WHEN LAKE BASIN IS DISTURBED

MADISON--University of Wisconsin-Madison scientists have built a computer model designed to simulate a lake basin ecosystem and help environmentalists predict the consequences when the delicate balance of nature is upset in the basin.

The model is proving so useful, the scientists reported, that it will be used in the study of several lakes, including Lake George in Upstate New York and Lake Skadar in Yugoslavia. The model's usefulness has been checked by comparing its predictions with data obtained from the basin of Lake Wingra in Madison.

Dr. Michael Adams, associate professor of botany and project leader of the Lake Wingra study, said the model is based on studies of the interactions between the lake and its urban watershed. Basically, a model imitates the processes important for the behavior of a physical system. The Lake Wingra model, Dr. Adams said, includes physical, chemical and biological features of the lake, a small, shallow body of water surrounded by both wetland and urban development in the city of Madison.

To develop the model, the resources of plants and animals, both living and dead, to changes in temperature, nutrients and sunlight were measured over a four-year period and expressed as equations. The information from all components of the lake basin, Dr. Adams said, has been tied into a system which enables the researchers to predict what will happen to Lake Wingra with any sudden change in nature.

Development of the Lake Wingra model was part of the Eastern Deciduous Forest Biome study funded by the National Science Foundation (NSF) through the University of Wisconsin Institute for Environmental Studies. The biome study is part of the International Biological Program (IBP), an effort organized to study the

-more-

biological structure and functions of ecosystems snd develop man's relation to them. One of the IBP goals is to predict the consequences of natural or man-provoked changes brought on specific ecosystems. The NSF is the lead agency in the United States for the IBP.

Lake Wingra was chosen for one study area because it typifies the disturbed state in which much of the eastern and midwestern region exists today. Despite a history of dams, fills, aquatic weed growth and increased nutrient load, the lake has remained relatively healthy.

The Wisconsin researchers are now using the computer to forecast effects of future alterations to the lake, such as weed cutting and partial drainages. The model also will be applied this summer to Lake Skadar in Yugoslavia which has problems similar to Wingra.

Portions of the model also will be combined with an IBP model of Lake George, a cold, deep, relatively undisturbed lake in upstate New York. By joining the two models, IBP scientists hope for a better understanding of environmental factors affecting all lakes in the Eastern deciduous forests.

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EDITORS: Simultaneous release is being made by the National Science Foundation, Washington, D.C.

The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone (608) 262-2860

Environmental Studies Institute

news release

Immediately 6/21/73 bba

MADISON--A 15-month impact study requested by the Army Corps of Engineers will be conducted by the University of Wisconsin-Madison Institute for Environmental Studies on the proposed LaFarge Dam across Wisconsin's Kickapoo River.

Pending regents' approval, the IES Center for Biotic Systems will receive a grant of $204,000 for an "Environmental Analysis of the Kickapoo River Impoundment."

Grant Cottam, professor of botany and principal investigator, explains that the ultimate objective of the study is to assess the projected water quality of the Kickapoo impoundment. The researchers will develop recommendations for the management of the lake and its surrounding watershed. These will include recommendations for land use: farming practices, woodlot use and revegetation. Also, impact of human use of the area will be examined: building lot sizes, recreational facilities and sewage treatment requirement. Water levels and stream flow from the dam will also be studied.

"This study will give us the opportunity to determine the quality of the reservoir before the dam is constructed, and enable us to make recommendations for land use and recreational development, to insure that this facility will have the highest possible quality. As far as I know, this is the first time in the Midwest that the Corps has requested a study of this kind. Hopefully, future Corps projects will have this kind of study before the final decision to go ahead is made," Cottam says.

- more -

Add one--LaFarge Dam

Four aspects of the proposed reservoir will be carefully examined: 1) prediction of available nitrogen and phosphorus, 2) past, present and predicted changes in land use, 3) hydrology and sedimentation patterns and 4) biological aspects of the reservoir.

Others involved in the study include: Dennis Keeney, professor of soil science; James Knox, professor of geography; Joseph Koonce, assistant scientist, environmental studies; John Magnuson, professor of zoology; Raymond Penn, professor of agricultural economics; Jim Peterson, project associate, environmental studies; and Orrin Rongstad, professor of wildlife ecology.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone (608) 262-2860

news release

Immediately

4/20/73 ba

ENVIRONMENT LECTURE

MADISON--Canada's leading environmental researcher will be on the University of Wisconsin-Madison campus Wednesday to give a lecture on "Environmental Research in the North." F. Kenneth Hare, director-general of the Research Coordination Directorate, Department of the Environment, Toronto, will speak at 4 p.m. in Room 2650 Humanities Building.

Hare, active in international environmental affairs, has a distinguished record as a geographer.

The lecture is sponsored by the Committee on University Lectures under auspices of the Institute for Environmental Studies. It is free and open to the public.

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Environmental Studies Institute for

Release: Immediately 2/16/73 hh

EDITORS: Contact Heidi Holler, 608-262-3571, for further information.

NOTE: Background material on Prof. Reid Bryson follows story.

ENERGY SHOULD BE NEW MONEY STANDARD SAYS LEADING ENVIRONMENTALIST

MADISON--Problems of U.S. economic growth cannot be separated from problems of energy and the environment, insists a leading environmentalist at the University of Wisconsin-Madison.

"Money stands for energy. It's a little absurd to talk about gold being the basis of our money, when we probably ought to have the calorie, the BTU, or the kilowatt-hour as the basis of our currency," maintains Prof. Reid A. Bryson, director of environmental studies.

Gross national product and use of energy are "absolutely related," he says. "If you're talking about a growing economy, you're also talking about a growing energy use, and you're talking about growing pollution, unless you pay to clean up pollution production."

Bryson suspects if Americans conceived of energy as money, they'd think differently about leaving lights on or using fossil fuels like coal or petroleum.

"If you think of energy as representing money, then the fossil fuels in the ground are our bank account--and we're living way beyond our income when we dig them out and burn them up at the rate we're doing now."

Bryson suggests the only way to reconcile apparent trade-off between a growing economy's energy needs and concern for the environment may be to restrict growth to parts of the economy that don't use up so much energy--such as the arts, or providing of low-energy use recreation facilities.

- more -

He agrees with President Nixon that air pollution measures have brought cleaner air, but notes that much of the improvement is due to use of cleaner fuels like natural gas--now in short supply, and being abandoned by some large energy users whose "interruptible" contracts with fuel suppliers have forced them to begin using coal once again.

Bryson criticized the Administration's proposal to cut out federal aid for local construction of waste disposal facilities. To arguments that increasing the demand for sewage plants will only make them more expensive to build, he replies:

"Nobody ever suggested that cleaning up the rivers, cleaning up the waters by putting in sewage plants was going to be free or cheap. It's simply a matter of 'let's pay the real price,' which includes the environmental price."

He noted that localities which have already contracted for or begun construction of the costly facilities, counting on substantial federal support, would be "left in midstream" by the proposed aid cut-off.

Local government's chances of recapturing the funds via revenue sharing, Bryson says, seem slim in view of the general determination to use the flowback of federal money to cut property taxes. "How I interpret the President's comment of greater self-reliance is, 'You want it, you pay for it.'"

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BRYSON PROFILE

Dr. Reid Bryson is a professor of meteorology and geography and has directed the UW-Madison Institute for Environmental Studies since 1970. He is widely known for world climatology research, particularly climatic changes brought about by man's activities. He established the meteorology department here in 1948, the Center for Climatic Research in 1962. A third of the nation's Ph.D's and M.A.'s in meteorology are earned at Madison--it is the largest meteorology department in the U.S.

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Environmental Studies Institute

Release: Immediately 1/23/73 dh

MADISON--Environmental studies at the University of Wisconsin-Madison have shown a steady increase in the last three years, despite reports of increasing apathy toward such concerns.

Prof. Charles R. Stearns, chairman of the academic staff of the UW's Institute for Environmental Studies, predicts in spite of problems, the increase will continue.

The institute offered its first course in 1970. Now 30 undergraduate courses and 34 faculty members are associated with it.

One of the problems the institute faces, according to Stearns, is many of its courses are cross-listed with departments in the College of Letters and Science and many of the environmental courses can not fulfill L&S degree requirements. As a result, many students become cautious.

But Stearns still feels there is growing interest, citing a new course, issues of human population control. Not available for requirement credit in L&S, and not even included in the timetable, the course drew 25 students by word-of-mouth and a few posters put up by the institute.

The interdisciplinary course is taught by 14 faculty with interests from rural sociology to medicine. Stearns claims that 99 percent of all cultures throughout history have been concerned with population control, and current interest in the area is not unique.

Another new institute course, titled the earth's supply of natural resources, has the current fuel shortage and food production and supply among its topics. Stearns noted that a food shortage might be closer than many realize.

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Environmental Studies Institute

Release: Immediately 1/12/73 dh

MADISON--An atlas of the greater Lake Superior Region and a booklet of lectures on urban air pollution are now available from the Institute for Environmental Studies at the University of Wisconsin-Madison.

The atlas includes information on population, transportation, planning and land ownership in the Lake Superior region. It was prepared by Peter H. Van Demark as part of a study of that region for the institute. Free single copies of the atlas are available on a limited basis at 5145 Helen White Hall on the campus or by phone to 263-2070.

The booklet, "Particulate Matter in the Urban Atmosphere," is a collection of lectures sponsored by the Midwest Universities Committee on Air Pollution. Topics include the laws of pollution control, regional approaches to pollution control, and measurement and monitoring of pollution.

Single copies of the 214-page booklet are available on a limited basis from Prof. Kenneth W. Ragland, 421 Engineering Research Building, 1500 Johnson Drive, Madison, or phone 263-1996.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release

Immediately

12/29/72 bba

WASHINGTON, D.C.--The complexities of aquatic life cycles in Madison's Lake Wingra are beginning to be untangled by University of Wisconsin-Madison researchers. They have been working for two years as part of the scientific team of the International Biological Program.

Of the many IBP sites scattered throughout 60 countries, Lake Wingra is one of only a few highly urbanized lakes being studied. Another urban lake being studied in the U.S. is Lake George, N.Y., a large, deep, and relatively infertile lake, quite different from Wingra and its shallow, marshy reaches.

Wingra, with its flourishing aquatic life, offers the UW scientists ample opportunity to study the lake's life system and develop a predictive model of the lake.

Through refinement of these modeling techniques it will be possible to determine, for example, the effect of a power plant's effluent on an aquatic environment by manipulating mathematical equations, rather than by building the plant and observing what happens, a Wingra scientist said.

Recent advances in integrated experimentation and modeling research made in the Lake Wingra study were reported here at the annual meeting of the American Association for the Advancement of Science.

The papers describing these advances were read as part of a one-day symposium of the IBP research efforts. The University's Lake Wingra Study is one of five sites in IBP's Eastern Deciduous Forest Biome.

- more -

Lake Wingra researchers were invited to contribute papers on the following four topics: nutrient cycling experiments, algal and macrophyte (submerged weeds) production models in aquatic ecosystems, models of predator-prey interaction in aquatic systems, and microbial decomposition and nutrient dynamics in aquatic ecosystems.

In all these subject areas, the IBP research team approach has produced a rapid building of systems analysis and modeling of energy flow, primary and secondary production, decomposition, and nutrient cycling. This better understanding of ecosystem structure and function will have broad implications for many current environmental problems, Prof. Michael S. Adams, Lake Wingra site coordinator and botanist, stated.

Prof. James R. Boyle, soil science department, discussed the research being done on terrestrial nutrient cycling. Nitrogen and phosphorus, essential growth elements, are being followed through forest ecosystems. This includes measuring the amount of nitrogen in different parts of a tree, then following the nitrogen to the forest floor (litter of fallen leaves, twigs, etc.). Then the soil profile is examined to understand how and when the nitrogen is leached through to the ground water and eventually into Lake Wingra.

Noe Woods in the UW's Arboretum in Madison is the site of the Lake Wingra program's main investigation on terrestrial nutrient cycling. Boyle also reported data from four other IBP sites, comparing research techniques and differences that are being discovered among different forest ecosystems. One of the objectives of this characterization of natural systems is to establish baseline data so that effects of new forest management technology and policies can be assessed.

Joseph F. Koonce, project associate, John E. Titus, a graduate student, and Adams collaborated with scientists from two other IBP sites on the paper on primary production which Titus presented. Primary production processes capture energy for growth through photosynethesis. Macrophytes (rooted aquatic plants) and

phytoplankton (tiny floating aquatic plants) are primary producers. In this area, the researchers have constructed mathematical models of these primary producers which are being applied to and compared with actual field observations in Lake Wingra.

James F. Kitchell and James L. Peterson, project associates, along with two IBP scientists from New York, prepared a paper on secondary production. Secondary producers depend on primary producers for their existence. This predatory-prey relationship has been modeled for many aquatic and terrestrial animals. Kitchell reported on his successful modeling of the blue gill's life cycle in Lake Wingra.

Kitchell and Koonce emphasized that these models on primary and secondary production are significant because natural occurrences can be rigorously charted. Then, man's influence on an ecosystem can be more easily identified because of observed changes in the natural parameters.

The state of the art for research on the decomposition of organic matter by microorganisms in an aquatic environment was reported by Lenore Clesceri, a microbiochemist from Rensselaer Polytechnic Institute. Her paper includes work done by another Troy scientist and three UW researchers--Profs. Jerald C. Ensign, bacteriology department; Dennis R. Kenney, soil science department; and David E. Armstrong, water chemistry department.

These researchers have been analyzing microbial activity as it relates to modifying influences of chemical and physical variations in nutrient-rich Lake Wingra and nutrient-poor Lake George. The major variables being examined are the nutrients nitrogen and phosphorus, and physical properties such as water temperature, water alkalinity, and the amount of oxygen dissolved in the water.

The IBP-Lake Wingra study, supported by the National Science Foundation, is administered locally through the UW Institute for Environmental Studies.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone (608) 262-2860

Environmental Studies Institute

Immediately

10/31/72 bba

news release

MADISON--Levels of phosphorus coming into Madison's Lake Wingra from storm sewer runoff frequently are hundreds of times higher than phosphorus levels in the lake itself, according to University of Wisconsin-Madison researchers Robin F. Harris and Keith Syers.

They found that more than 80 per cent of the dissolved phosphorus is in an inorganic form. This means it is readily available for uptake by algae and aquatic weeds and can have a direct effect on their growth.

The research on phosphorus levels in local storm waters is being conducted by the Institute for Environmental Studies, under a grant from the National Science Foundation.

Two storm sewers draining runoff from residential areas into Lake Wingra were monitored intensively during fall storms, snowmelt, and spring and summer storm runoff events. The samples obtained were characterized in detail for form and amounts of phosphorus. During one fall storm an estimated six pounds of phosphorus entered the lake from the Manitou Way outlet, which drains less than one-tenth of the urban part of the Wingra watershed, Syers said.

Samples were taken every four or five minutes during a storm's peak water flow and at longer intervals over the entire length of the storm so that concentrations of phosphorus in the water, and the total amount of phosphorus leaving the storm drain, could be determined. The soil science investigators found that the total quantity of phosphorus leaving the storm drain was largely dependent on the water flow rate--the greater the flow, the more phosphorus.

Phosphorus levels in the runoff were highest in the fall and spring, immediately following leaf and seed fall. However, the actual amount of phosphorus added to the lake was greatest during the snowmelt period because of the large volumes of water discharged in this period. During the 1972 snowmelt period, 15 pounds of dissolved phosphorus entered the lake from the Manitou Way outlet alone. This input is important because the algae and aquatic weeds may be able to take advantage of the additional phosphorus to produce more early spring growth.

However, since the amounts of phosphorus in runoff depend on the amount of water flowing through a storm drain, Harris explained that the phosphorus amounts recorded in their investigation could change, given different seasonal storm patterns. If there had been more fall and spring storms, then much more phosphorus could enter the lake because of the high levels in the leaf, fruit, and seed litter.

Harris said not much is known about how a marsh affects nutrient flow, but preliminary results show that, given certain conditions of water saturation, a marsh could release more phosphorus into the lake than the amount entering the marsh from urban runoff.

The overall purpose of the research in the Lake Wingra Study is to develop the necessary procedure for collecting and analyzing samples to measure accurately and efficiently the input of phosphorus to lakes.

"Information onthe contribution of urban runoff as a phosphorus source to lakes is essential for rational decision-making regarding control of other urban, industrial, and agricultural sources of phosphorus to lakes," Harris added.

J.C. Ryden, a graduate student from Lancashire, England, assisted in the study.

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research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Environmental Studies Institute

Release: **Immediately** **10/26/72 dh**

MADISON--Man's use of the land in Wisconsin has drastically affected the state's rivers and streams, a University of Wisconsin-Madison geographer has discovered.

Prof. James C. Knox is engaged in a two-year research project on man's effect on rivers for the UW's Institute for Environmental Studies. He has been doing his research on the Platte River in Grant County.

"We have discovered that since man first settled in southwestern Wisconsin in the early 19th century, tributary streams have become considerably wider and the main channels have got much narrower," Knox explained.

He said the reasons for the drastic changes are a combination of man stripping the land of trees and natural grass and natural fluctuations in climate. With less vegetation on the land to catch water, more debris flow into a stream following a storm.

The heavier debris, such as large stones, flow down the steeper, quicker tributaries and collect at the junction of the tributary and the main stream, according to Knox. This clogs the channel and causes the tributary to widen.

The finer debris, however, such as clay and silt, continue to flow down the main stream and are deposited on flat land on the river banks during floods, causing the river to get narrower over a period of time.

About 150 years ago, the lower part of the Platte River was 125 feet wide. Today the same part of the river is between 35 and 45 feet wide. Many tributaries leading into the Platte River were only three to six feet wide, but now are 12-20 feet.

- more -

Add one--Knox

Knox said the practical application of the project will be to determine what alterations man can make to both rivers and land without affecting natural waterways. Knox noted that too much tampering "could wreak havoc."

He cited one example in Iowa where man's use of the land caused the natural water table to be lowered, making water more expensive and difficult to obtain.

Knox is particularly interested in channelization and construction of dams. He hopes that when the project is completed, he will have full data about the effects of such projects on Wisconsin's waterways.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-3860

Environmental Studies Institute

Immediately 10/26/72 ba

news release

MADISON--Paul G. Hayes, environmental reporter for the Milwaukee Journal, has been named the sixth Leonardo Scholar by Chancellor Edwin Young of the University of Wisconsin-Madison campus.

As the newest participant in the Leonardo Seminar, Hayes will be working with five faculty members to identify national resource policy needs and alternative resource goals. Industry and government representatives also will be appointed.

The objective of the seminar, which will begin in January, is to develop and publish criteria and procedural methods which can be used to establish long-term resource policies.

It will be the first of a continuing series allowing faculty members and non-University representatives to participate full-time in interdisciplinary approaches to major problem areas, according to Prof. Reid A. Bryson, director of the Institute for Environmental Studies which will support the project. The Milwaukee Journal is contributing support for Hayes' participation.

Hayes has been a reporter with The Journal for 10 years and has specialized in public planning, transportation, natural resources, and environmental issues. Before he began at The Journal, he worked for three years on the Des Moines Register.

Hayes was graduated from the University of Illinois College of Journalism in 1957 and did graduate work at Drake University in 1959-61. He participated in the American Political Science Association Congressional Fellowship Program, Washington, D.C., 1968-69.

- more -

Last year he received the Medical Scribe award of the Milwaukee County Medical Society for environmental reporting and this year the Gordon MacQuarrie Medal of the Wisconsin Natural Resources Foundation for conservation coverage.

Other Leonardo Scholars will be: Profs. Wesley K. Foell, nuclear engineering; Matthew Holden jr., political science; James B. MacDonald, law; Van R. Potter, oncology; and Jan M. Vansina, history and anthropology.

The seminar is named after Leonardo da Vinci, 15th century Italian artist, architect, engineer, and scientist.

"This seminar can be the beginning of a 'university for professors' within the University, providing a mix of backgrounds to give each participant a chance to learn something of the concepts and attitudes of other disciplines--an overview now needed in attempting to understand and solve the complex problems of today's world," Chancellor Young stated.

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research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Environmental Studies, Institutes for

Release: Immediately 10/27/72

UIR SCIENCE WRITING DIVISION
University-Industry Research Program (608) 263-2811, 2876

By HANNAH PAVLIK
UW Science Writer

MADISON, Wis.--ERTS-I, an unmanned satellite circling the earth at an altitude of 562 miles, may help land-use planners in Wisconsin.

This prediction comes from the University of Wisconsin's Institute for Environmental Studies and the Environmental Awareness Center in Madison where researchers are studying how successfully the recently launched Earth Resources Technology Satellite, ERTS-I for short, can monitor our land resources.

"When completed, the project will be a great help in measuring such factors as the impact of agriculture and urbanization on natural vegetation and water quality," James L. Clapp, head of the study and professor of civil and environmental engineering, said.

"It should also be of aid in managing watersheds, monitoring state wetland and forest patterns, and relating geologic structure with soil and lake patterns."

ERTS-I was launched by the National Aeronautics and Space Administration July 23. It is the first unmanned satellite specifically designed to monitor earth resources and has an anticipated life of about one year.

During this time, the satellite will circle the earth once every 103 minutes in a fixed orbit close to the poles, continuously taking photographs from an altitude of approximately 562 miles. This means that it crosses over any given area on the globe every 18 days.

- more -

The UW-Madison project will compare ERTS-I's nine by nine inch photographs with geographical data already collected on the ground. For the most part, the study is concentrating on areas which have been studied previously using more conventional land survey methods. These areas contain a variety of natural and cultural resources, and they represent many different regional planning problems currently facing Wisconsin.

The satellite's photographs are being taken by two remote sensing devices on board: a television system and a multispectral scanner unit. The multispectral unit allows investigators to view photographs individually at a number of wavelengths. In this case, both sensors operate in the green, red, and infrared wavelengths.

Researchers involved in the study, including state groups from the Department of Natural Resources, Geological and Natural History Survey, and the Department of Administration, are enthusiastic about usefulness of the satellite data.

"In fact," Clapp added, "the resolution of the photos, which is a measure of how precisely objects can be detected, is in some cases much better than we had originally anticipated. We find this very encouraging."

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research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Environmental Studies, Institute for

Release: 11 a.m. Tuesday, Sept. 26 9/25/72

UIR SCIENCE WRITING DIVISION
University-Industry Research Program
(608)--263-2811, 2876

By JEAN LANG
UW Science Writer

CINCINNATI, Ohio--(Advance for 11 a.m. Tuesday, Sept. 26)--Satellites orbiting the earth continuously fill computer banks with vast amounts of detailed data. Meanwhile man struggles with the problem of interpreting and distributing this vital information to the people who need it.

Information retrieval--or finding what you want when you want it--has become a critical step in solving environmental problems, claims John Ross, associate director of the University of Wisconsin Institute for Environmental Studies, Madison.

Leading a panel at the Environmental Protection Agency's National Environmental Information Symposium this week, Ross explained the difficulties universities and research organizations face in managing overwhelming volumes of environmental data.

Sorting and sifting information is the biggest task. A scientist may ask a computer to list all current research on water pollution in the Great Lakes. He may get a list of 1500 titles from which he will select 100. For each of these 100 the computer will give a brief description.

"But the computer cannot tell the scientist the quality or reliability of the research. This is still a human decision and requires hours of reading," says Ross.

Ross believes this weak link in data retrieval points out the need for a specialist to work between the data banks and the client.

- more -

"Such a person would be trained in a particular branch of science, as well as in library and computer sciences, and would be able to screen information for the client."

The specialist also would be valuable in the equally difficult task of throwing out useless data, says Ross.

"Knowing when to dump data is a major problem that few organizations have solved. One exception is the weather bureau whose experience with weather satellites has taught them what to dump and how fast to dump it."

Another problem is that environmental data useful to scientists may not be in a form useful to the planner, legislator, or consultant, states Ross.

"Land planners in New York, for example, have gathered geographical data on which to predict growth and future needs of their state. The data is recorded in meters and kilometers. Minnesota has collected the same kind of information but in 40 acre parcels. Because of this difference in units of measure, it is impossible for the two states to compare data though their problems may be similar.

"Wisconsin is about to make a land survey and must decide which unit to use. This is a very tough problem."

Ross contends there is a tremendous amount of untapped environmental information in data banks that could and should be applied to everyday problems of agriculture and commerce.

The information is there, but the people are not getting it, says Ross. This again is largely due to the lack of an adequate go-between.

Ross predicts that private consultants highly trained in information retrieval will offer a solution to this problem. Large agricultural operations will be able to hire their own consultants while small farmers and businesses will use co-operative services.

"What is really needed is imagination in using data," stresses Ross. "If people do not or cannot use the knowledge available, the system is useless."

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone (608) 262-2860

Environmental Studies Institute for

news release

Immediately 9/21/72 bba

MADISON--The University of Wisconsin-Madison Center for Climatic Research (CCR) has been awarded a grant to reconstruct past climates and past climatic changes by the Advanced Research Projects Agency (ARPA) of the Department of Defense.

The one-year $80,560 grant, accepted recently by UW System regents, will be monitored by the Air Force Office of Scientific Research and administered locally by the UW-Madison Institute for Environmental Studies. The work will be done in collaboration with Prof. Harold Fritts, Laboratory for Tree-Ring Research, University of Arizona.

John Kutzbach, director of CCR, professor of meteorology and environmental studies, and principal investigator of this study, explains that reconstruction of past climates involves studying proxy series. These are records of environmental occurrences that reflect, in some manner, the changing climate of a particular site. Throughout much of the world, actual weather records are available only for the past 100 years, so information about earlier climates can only be obtained from proxy records.

Past climatic information is of practical use for planning in such areas as agriculture, water use, recreation, transportation and construction, Kutzbach explains. Also, since considerable national effort is being devoted to the study of man's possible impact on climate, it is essential that a parallel effort be devoted to obtaining actual climatic records for determining the range of natural climatic variability.

-more-

Add one--Past Climates

Kutzbach explains that several methods are used to determine proxy series. Tree growth rings are valuable for studying short-term climatic variability over the past 1000 years. For long time scales -- pollen type and distribution and shellfish remains in bogs or lake bottoms can provide indications of climatic variability on time scales of about 100 years over the past several thousand years.

Also of use are historical records--quality and quantity of harvest, phenological events, and reports of unusual changes in local flora and fauna. However, these historical records are often difficult to interpret, could be due to factors other than climate, and don't go back very far in time, Kutzbach says.

After a proxy series is identified it is then calibrated with actual climatic data. These relationships are then used to estimate climatic variation in the past for time periods where there is little or no climatic data.

Initial reconstruction of these series will focus on North America; subsequent ones will cover large portions of the Northern Hemisphere for the past several hundred years. In selected regions climate patterns will be reconstructed for the past several thousand years.

Profs. David Baerreis, anthropology, and Reid A. Bryson, meteorology and director, Institute for Environmental Studies, are also investigators on this study. Also participating are Wayne Wendland, meteorology and geography, and Dr. Albert M. Swain, Raymond L. Steventon and Lawrence A. Conrad, Center for Climatic Research.

# # #

The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release Immediately

4/21/72 bba

MADISON--The Rockefeller Foundation has awarded a major research grant to the Institute for Environmental Studies at the University of Wisconsin-Madison, pending regents' approval, to investigate growing pressures on the resources of the Lake Superior region.

The two-year grant of $656,000 will be concerned with research on ore extraction, recreational development, urbanization, and forest production as related to the environmental impact of these on the lake and surrounding terrain.

Lake Superior, the largest and purest of the Great Lakes, is a unique natural resource within 300 miles of approximately 50 million people, according to Prof. Robert J. Muckenhirn, principal investigator of the project. This expanding population is markedly increasing the demands on land and water resources.

Muckenhirn explains that the primary goal of the study is to identify environmentally sound, realistic alternatives to consider during the decision-making process in the region.

A feasibility study has identified three general needs in the Lake Superior region:

1) To guide the improvement of socioeconomic conditions while protecting and enhancing the region's environmental character. Economic development may increase environmental deterioration if not properly planned.

- more -

2) To provide recreational resources for the large and growing megalopolis areas (including Milwaukee, Madison, Minneapolis, Chicago, Detroit, and Cleveland). Recreation pressure on the natural resource base of the region is increasing rapidly.

3) To supply the southern megalopolis' increasing demands for natural resources. Supplying pure cold water, iron ore, copper, paper, and electrical energy will generate additional environmental stresses in the region.

Ten UW-Madison and Extension professors are working with Muckenhirn on sub-projects. They include: Profs. Theodore K. Miller, geography; Calvin B. DeWitt, environmental studies; Warren P. Porter, zoology; Duncan A. Harkin, agricultural economics; Rollin B. Cooper, Extension; Carlisle P. Runge, law and urban and regional planning; Marvin T. Beatty, Extension Environmental Resources Unit; Harold C. Jordahl, Extension and regional planning; Robert Ragotzkie, meteorology and director, Sea Grant Program; and John Ross, agricultural journalism and associate director, IES. (The team will work with local government, regional planning commissions, and others in the region as the research program develops.) Its objectives are to:

1) Utilize systems analysis and computer modeling to identify and understand the size and scope of environmental problems.

2) Estimate the carrying capacity or "sustained yield" of material and non-material resources.

3) Estimate present and potential demands for both renewable and non-renewable natural resources.

4) Evaluate existing institutional arrangements--legal, educational, political and economic--and propose arrangements which would favor balanced management of natural and human resources.

5) Apply data and modeling in an initial limited test area with the help and cooperation of local policy leaders.

The region to be studied includes the northern parts of Minnesota, Michigan, and Wisconsin, and the Canadian province of Ontario. A pilot study of several counties in the area of the Wisconsin-Minnesota border is part of the program.

The Center for Urban and Regional Affairs at the University of Minnesota is collaborating with UW-Madison in this study. Its centralized data system called the Minnesota Land Management Information System, will be tested in Wisconsin.

In response to the awarding of the grant, Madison Chancellor Edwin Young said: "I am delighted with the affirmation from an outside group of the quality of the program we have put together in the institute."

Gov. Patrick J. Lucey, in a letter to the Rockefeller Foundation supporting the proposal, said: "The institute's project will, I feel, generate valuable data that could enable Wisconsin to offer important leadership in analysis and planning designed to protect the region's high quality natural environment while promoting orderly resource development within an economically depressed area.

"Particularly encouraging is that the study shows promise of helping us get better access to information necessary to state government in its short and long-range planning and decision-making."

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release

Immediately 7/25/72 tb

MADISON--With the orbiting of the Earth Resources Technical Satellite (ERTS), man can now view his planet in a completely new way.

Launched Sunday (July 23) from California, ERTS provides for the first time an overview of earth's environmental resources over sequential periods of time.

While the implications seem great, it is still uncertain how valuable the resource satellites will actually be. It is this question that an interdisciplinary team of Wisconsin scientists hopes to answer during the next year.

"We will be comparing data from ERTS with information already gathered by conventional methods to determine the accuracy of satellite data," says University of Wisconsin-Madison scientist Michael McCarthy. "In this way, we hope to determine the usefulness of such satellites in regional land use planning."

Working on the project, funded by NASA through UW's Institute for Environmental Studies, are scientists representing the Environmental Monitoring and Data Acquistion Group of IES, Civil and Environmental Engineering, Marine Studies Center, Meteorology, Landscape Architecture, Environmental Awareness Center, and also the Wisconsin Geological and Natural History Survey.

The team, headed by James Clapp and including McCarthy, R.W. Kiefer, B.J. Niemann, Theodore Green and M.E. Ostrom, will examine primarily south central and south eastern Wisconsin. Members have been gathering data in this area since 1969 and have several hundred types of natural and cultural resources inventoried and stored in a computerized, spatial data bank.

-more-

Wisconsin is one of the only groups in the ERTS project looking at land allocation problems. This new satellite is the first in a scheduled series of resource monitoring satellites to be launched.

Basically, this is how ERTS works:

The satellite travels in orbit over the poles about 500 miles above earth, passing over Wisconsin every 18 days. Scanners record with electronic signals the various resources and structures.

The signals are relayed to the Goddard Space Flight Center in Maryland, where they are converted by computers into pictures and other useable forms of information.

The pertinent segments are then sent to Wisconsin for comparison with data already stored. This will indicate the kinds of resources discernable from ERTS, the degree of accuracy of the data obtained, and the seasons best suited for efficient interpretation.

Although the effectiveness of ERTS in land use planning is not yet known, the team notes, it appears to offer a number of better ways to gather information needed about an area.

Since it passes over Wisconsin regularly, ERTS will provide repetitive information which no agency has been able to gather economically. In this way it is possible to determine the effects of man's activities as time passes.

ERTS will also make it possible to gather complete information about a large area, an important benefit for decision-making since many events can not be evaluated except on a large scale. For example, this will show autumn color changes or the snow fall and spring melt over the entire state.

To aid in the research, the team has established an advisory committee with members representing the various types of land use activities, such as state

and federal agencies, private recreation industries, public utilities and conservation groups. The committee will advise the team as to the types of information most important in making land use decisions.

Another interdisciplinary steering committee will offer guidance on how the research can best be conducted.

"If ERTS proves as successful as we hope," McCarthy says, "it will represent significant progress toward better management of the environment."

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone (608) 262-2860

Environmental Studies Institute for

news release Immediately

6/28/72 bba

MADISON--University of Wisconsin-Madison Chancellor Edwin Young has appointed five Leonardo Scholars to participate in an intensive seminar on identifying national resource policy needs and alternative resource goals.

No long-term national policy concerning wise management of national resources now exists, Young noted.

The seminar hopefully will be the first of a continuing series allowing faculty members to participate full-time in inter-disciplinary approaches to major problem areas, according to Prof. Reid A. Bryson, director of the Institute for Environmental Studies which will administer the project.

Profs. Wesley K. Foell, nuclear engineering; Matthew Holden jr., political science; James B. MacDonald, law; Van R. Potter, oncology; and Jan M. Vansina, history and anthropology, are the first Leonardo Scholars.

"These men are outstanding in their fields and are well-qualified to participate in such a broad-based effort," Young said. Two or three participants representing industry and government also will be appointed.

The objective of the seminar is to develop and publish criteria and procedural methods which can be used to establish goals necessary to the protection of the environment. It will begin second semester of the next academic year and run full-time through the following summer. No state funds will be required.

- more -

The Leonardo Seminar is named after Leonardo da Vinci, 15th century Italian artist, architect, engineer, and scientist, who symbolizes the intellectual "universal" man.

"This seminar can be the beginning of a 'university for professors' within the University providing a mix of backgrounds to give each participant a chance to learn something of the concepts and attitudes of other disciplines--an overview now needed in attempting to understand and solve the complex problems of today's world," Young stated.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release

Immediately

6/12/72 bba

MADISON--If you live on Madison's west side, you might see a man strolling through your backyard this summer taking notes. Don't be alarmed, he's not a crook casing you out, but one member of a two-man soil survey team studying the slope changes, soil properties, and land uses in the Lake Wingra Basin.

This work is part of the University of Wisconsin-Madison Lake Wingra Study. Orie L. Loucks, professor of botany and coordinator of the project, explains that through the combined efforts of UW researchers, the entire watershed will be studied to predict what will happen to the lake if urbanization in the basin continues.

The survey team will be mapping soils and slopes on large air photographs taken of the area in 1968, and making notes on types of vegetation and land use. This is an extension of a study on soil properties begun in the Arboretum last summer by Prof. Herbert Huddleston, a UW-Green Bay faculty member.

Besides visually studying the area, Huddleston and David B. Lesczynski, a graduate student in soil science from Abbotsford, will be observing the soil at selected sites with a small hand probe. This will provide necessary information on top soil properties, depth of fill in a particular area, and characteristics of the soil which will affect infiltration rates and runoff. Most of the work can be done from the sidewalk and permission from individual property owners will be obtained if the survey work extends into lawns.

- more -

The probe removes a small soil core that is about one inch in diameter and no more than 42 inches deep. Only one or two corings will be taken in one yard, and not everyone's yard will be sampled. Huddleston estimates there will be about 1,000 samples taken in the whole watershed, which is roughly the area between Raymond Road on the south and Mineral Point Road on the north, and West Towne on the west to the eastern shore of Lake Wingra.

Later individual property owners will be contacted again for permission to do more detailed work on a few selected sites. This will include taking a slightly larger core of soil for analysis--a maximum of two inches in diameter, and some large equipment will be brought in to simulate rainfall so infiltration rates can be monitored in the field. These tests will only slightly disturb lawns, Huddleston says.

The study, supported largely by the National Science Foundation through Oak Ridge National Laboratory, is part of the International Biological Program. It is administered locally by the UW-Madison Institute for Environmental Studies.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2360

Environmental Studies Institute for

news release Immediately

4/14/72 bba

MADISON--Three evenings of international films will be shown April 20-21-22 as part of Earth Week III. These films, many being shown in America for the first time, illustrate an increasing world-wide awareness of environmental issues.

The films to be shown include: "For the Love of an Eagle"--a South African documentary, seven years in the making, about a duel culminating in an understanding between a woman and a ferocious Black Eagle on a mountain in Napal, and "Man in the Desert"--an Australian film about how aborigines, cattlemen, and miners adapt to the wasteland of Australia's deserts.

Of the American films being shown, "Say Goodbye" is a nature special featuring rarely seen footage of wildlife around the world. It is the story of animal species vanishing from the earth and the brutality they encounter in their relationship with man. "Tragedy of the Red Salmon" shows the life history of the salmon and raises the question of how much man should permit himself to meddle with natural events.

Over 20 feature and short-length films will be shown free from 7 until 11 p.m. on the three nights. Thursday's films will be shown in room 105 Psychology; Friday and Saturday showings will be in room 3650 Humanities. Most of the foreign films are dubbed in English. Many of the American films will be making their Wisconsin premiere.

This festival is sponsored by the Institute for Environmental Studies, University of Wisconsin-Madison.

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Environmental Studies Institute

Release: Immediately 4/18/72 wf

MADISON--CERG, the Campus Environmental Research Group, is sponsoring a Madison campus clean-up and scheduled tours through the Biotron as part of Earth Week activities at the University of Wisconsin.

The student group, which evolved out of a class offered by the Institute for Environmental Studies last semester, is coordinating a clean-up of the inner campus to be done by dormitory, fraternity, and sorority volunteers, and student ecology groups this Friday.

"Each group will be assigned an area of the campus. Housefellows are recruiting volunteers now, and we hope to have several hundred people working most of the day," Terry Bertsen, a junior from Madison, said.

The group is concerned with other ecological problems on the campus and hopes to work on them after Earth Week is over. They want to find other means of campus transportation besides buses, get the division of residence halls to stop using plastic and other non-recycleable items in its food service, and work on the sewerage problems in the Picnic Point marsh area.

People wishing to volunteer for the clean-up or to tour the Biotron can call Dan Swanson at the CERG office in Union South at 263-2590.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2830

Environmental Studies Institute

news release

Immediately

4/11/72 bba

MADISON--The Institute for Environmental Studies is sponsoring open forums on environmental research, a visit by U.S. Sen. Gaylord Nelson (D-Wis), founder of E-Day, and three evenings of American and foreign environmental films as part of Earth Week activities on the University of Wisconsin-Madison campus April 17-23.

On April 18 Sen. Nelson will be on campus for a brief news conference. He and Lt. Gov. Martin J. Schreiber also will meet with IES students and high school editors from around the state to discuss environmental issues.

IES project leaders will describe their research in two sessions to be held in Room 202 Union South on April 19 and 20. These reviews have been planned to provide the campus community and interested citizens of Dane County with an opportunity to ask questions about ongoing environmental research.

The schedule:

Wednesday, April 19

Time	Speaker	Topic
1:00 p.m.	Dennis R. Keeney, soils	"The Nitrogen Cycle"
1:30 p.m.	David A. Baerreis, anthropology	"Sensitivity of Cultures to Environmental Change"
2:00 p.m.	James L. Clapp, civil engineering	"Remote Sensing for Water Quality Management"

- more -

Wednesday, April 19 (continued)

Time	Speaker	Topic
2:30 p.m.	John J. Magnuson, zoology	"The Biology of Lake Wingra"
3:00 p.m.	Mark D. Menchik, geography	"Environmental Perception"
3:30 p.m.	Edwin M. Larsen, Chemistry	"Trace Elements in the Environment"
4:00 p.m.	Robert J. Muckenhirn, IES and soils	"Environmental Decision-making in the Lake Superior Region"
4:30 p.m.	Carl R. Loper, minerals and metals engineering	"Metals Recycling"

Thursday, April 20

1:00 p.m.	Kenneth W. Ragland, IES	"Air Pollution Control Modeling in Wisconsin"
1:30 p.m.	Wesley K. Foell, nuclear engineering	"Energy Consumption Modeling"
2:00 p.m.	Daniel E. Willard, Environmental Awareness Center and IES	"Columbia Power Plant Monitoring"
2:30 p.m.	Warren P. Porter, zoology	"Quantitative Ecosystem Modeling"
3:00 p.m.	Bassam Z. Shakhashiri, chemistry	"Mercury on Campus"
3:30 p.m.	William B. Lord, ag economics	"Chippewa Flowage Seminar"
4:00 p.m.	Carlisle P. Runge, law and urban and regional planning	"Land-Use Seminar"
4:30 p.m.	John E. Kutzbach, meteorology and director, Center for Climatic Research	"Center for Climatic Research Projects"

The film festival will illustrate a worldwide cinema movement toward environmental themes. Over 20 feature and short films will be shown free from 7 to 11 p.m. April 20 in 105 Psychology Building and in 3650 Humanities Building April 21

and 22. These include: "Tragedy of the Red Salmon"--U.S.; "Terra Fertilis," a Dutch film; and "Paradise Lost" from Canada.

Two lectures on energy will be co-sponsored by the IES and the nuclear engineering department. Gordon R. Corey, of Commonwealth Edison Co., New York, will speak on "Financial Aspects of Electrical Supply in Today's Environment" at 11 a.m. April 19, in Union South. He will also present some of his views on the relationship between electricity production and environmental degradation.

"Energy Use as a Function of Architectural Design" will be discussed by Richard G. Stein of Richard G. Stein and Associates, New York, on April 21, at 2:30 p.m. in Union South. He will talk about the possibility of saving on energy costs through better design.

All Earth Week activities are free and open to the public.

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TO: Madison Campus Faculty

FROM: Irving Shain, Vice Chancellor

SUBJECT: A Report to the Faculty on the Origins and Organization of the Institute for Environmental Studies

ORIGINS

Two converging trends of thinking by some faculty groups occurred in the early 1960's. The Interdisciplinary Studies Committee, appointed by the President in 1962, was concerned with the role the University should play in the emerging need for combining the expertise of different disciplines towards the understanding and solution of a number of problems of our times that transcended our traditional disciplinary boundaries: poverty, racism, war and peace, land use and misuse, environmental deterioration, etc. By about 1964 it had become apparent that the University had great strength in the component disciplines concerned particularly with those issues on the environment. Several truly interdisciplinary programs were in operation and there had been some significant accomplishments. However, the Committee concluded that better mechanisms for coordination and communication to bring this variety of strengths to bear on the emerging broad environmental problems should be developed. They suggested to the University administration that the time was ripe to organize an effort to capitalize on these strengths to make possible a major effort in interdisciplinary environmental studies.

About the same time an ad hoc faculty group largely from Agriculture, Engineering, Law, and Letters and Science (known informally as the Hougas Committee) was putting together plans for a pilot project in environmental studies, to involve the collaboration of a number of disciplines in a series of interdisciplinary environmental studies. This led eventually to the establishment of an Institute for Environmental Studies under the supervision of the Graduate School, directed by Professor Gerard A. Rohlich. The Pilot Project and later Institute were funded by a grant from the National Institutes of Health.

These two developments led the Chancellor to appoint the Madison Campus Special Committee on Environmental Studies in November 1965. This committee consisted of two faculty members appointed by each Dean plus a chairman appointed by the Chancellor. It was charged with reviewing environmental research proposals and recommending long-term administrative arrangements for capitalizing on the great strength of the campus disciplines in the environmental area.

The Madison Campus Special Committee on Environmental Studies adopted, on March 15, 1966, a series of defining statements about environmental studies. The essential elements of concern, quoted from that document, are as follows:

1. We are concerned with the environment of man.

2. We are concerned with the total environment: its social, cultural, economic and esthetic, as well as its physical and biological aspects.

3. We are concerned with interdisciplinary studies.

4. We are concerned with integrated studies that have as their ultimate rationale the development of open-ended solutions for environmental problems, rather than short-term solutions.

5. While we recognize the essential importance of strengthening existing disciplines, we look toward teaching, research, and extension configurations that will transcend traditional lines of endeavor, and be concerned with the wholeness of the relationship between man and the total environment. In a real sense, we seek to provide a University environment in which integrated environmental studies can be accomplished and in which the fruits of such research can be reflected in improved campus teaching and community service.

This last thought is echoed in Faculty Document 279, which was adopted by the faculty on December 1, 1969, defining the purpose of the University:

"The primary purpose of a University is to provide an environment in which faculty and students can discover, examine critically, preserve, and transmit the knowledge, wisdom, and values that will help ensure the survival of the present and future generations with improvement in the quality of life."

That document goes on to say:

"Ways should be found to allow students and faculty to engage in the interdisciplinary efforts that are implied by the statement of purpose."

The Madison Campus Special Committee on Environmental Studies recommended to the Chancellor on November 17, 1966, that:

1. The University of Wisconsin, based on the broad spectrum of skills and programs in environmental studies which are already present, should establish as soon as possible a budgeted administrative unit charged with the development of teaching, research and service in interdisciplinary environmental studies.

2. The initial focus of this administrative division should be on research and graduate instruction, allowing more time for the orderly development of extension and undergraduate programs. Service functions should be coordinated with the Extension system.

3. In view of the inherent nature of environmental studies, transcending colleges and disciplines, it is recommended that the director of the program report directly to the Chancellor and serve as ex officio chairman of an advisory committee established by the Chancellor.

4. The orderly transfer or affiliation of appropriate existing environmental studies activities to this new administrative unit should be programmed in due course.

5. Applications for new monies for interdisciplinary environmental studies should be coordinated by the new director.

6. It is suggested that the director initially appointed should be a member of the present faculty, for familiarity with the University and its environmental programs appears necessary.

This proposal was not acted upon during the troubled times of the next few years, although the School of Natural Resources was established within the College of Agricultural and Life Sciences at about that time.

In 1968, a new Committee on Environmental Studies advisory to the Chancellor was appointed consisting of faculty members active in the general environmental area. This committee, under the chairmanship of Professor J. B. Wilson, submitted a report to the Chancellor on December 19, 1969. The report of the committee (known as the "Wilson Report") proposed that the Institute for Environmental Studies, which had been operating as a research unit in the Graduate School, be restructured along the lines indicated in the specific recommendations that follow.

RECOMMENDATIONS OF THE "WILSON REPORT" OF DECEMBER 19, 1969

1. THAT THE INSTITUTE FOR ENVIRONMENTAL STUDIES BE ESTABLISHED AS A UNIT WITHIN THE UNIVERSITY OF WISCONSIN-MADISON TO INITIATE, CONDUCT, AND COORDINATE INTERDISCIPLINARY PROGRAMS IN ENVIRONMENTAL STUDIES.

   THAT ALL ELEMENTS OF THE MADISON ACADEMIC COMMUNITY COMMITTED TO ENVIRONMENTAL STUDIES SHALL BE ELIGIBLE TO BE SERVED BY THE RESOURCES OF THE INSTITUTE AND TO PARTICIPATE IN ITS PROGRAMS AND THEIR DEVELOPMENT. IN TURN, ALL ELEMENTS SHALL RECEIVE THE BENEFITS PROVIDED BY THE INSTITUTE LEADERSHIP, CONSISTENT WITH THE PROVISIONS OF THIS DOCUMENT.

2. THAT THE INSTITUTE SHALL HAVE AS ITS FUNCTIONS:

   PROVIDING LEADERSHIP IN INTERDISCIPLINARY, ENVIRONMENTAL RESEARCH FOR MADISON CAMPUS.

   INITIATING AND SUPPORTING CROSS-DISCIPLINARY UNDERGRADUATE AND GRADUATE DEGREE PROGRAMS AND CROSS-DISCIPLINARY COURSES AT THE UNDERGRADUATE AND GRADUATE LEVEL.

   IMPROVING INTERNAL COMMUNICATION AMONG GROUPS INVOLVED IN ENVIRONMENTAL RESEARCH, TRAINING, AND EXTENSION PROGRAMS OF THE UNIVERSITY.

3. THAT THE INSTITUTE WILL INITIATE NEW AND COORDINATE EXISTING RESEARCH PROGRAMS IN THE ENVIRONMENTAL SCIENCES.

4. THAT THE INSTITUTE HAVE THE AUTHORITY TO INITIATE INTERDISCIPLINARY COURSES AT THE UNDERGRADUATE AND GRADUATE LEVEL AND UNDERGRADUATE AND GRADUATE TRAINING PROGRAMS IN ENVIRONMENTAL STUDIES IN ACCORD WITH THE PROCEDURE OF THE COLLEGES, INCLUDING THE GRADUATE SCHOOL.

5. THAT THE INSTITUTE WILL DEVELOP AND FOSTER PROGRAMS OF INTERNAL COMMUNICATIONS AMONG THE CAMPUS FACULTY MEMBERS ON QUESTIONS OF ENVIRONMENTAL RESEARCH AND EDUCATION AND ADULT EDUCATION.

6. THAT THE INSTITUTE SHALL HAVE A DIRECTOR WHO WILL BE APPOINTED BY THE CHANCELLOR AND WHO WILL REPORT TO HIM.

7. THAT THE INSTITUTE BE THE ADMINISTRATIVE ORGANIZATION FOR THOSE EXISTING OR NEW CENTERS, RESEARCH PROGRAMS, AND CURRICULAR PROGRAMS THAT MAY ELECT TO JOIN THE ORGANIZATION.

8. THAT THE INSTITUTE COULD INITIATE RECOMMENDATIONS FOR ACADEMIC APPOINTMENTS WITHIN THE INSTITUTE OR IN CONCERT WITH OTHER UNIVERSITY ORGANIZATIONS.

9. THAT FACULTY REVIEW BE ACCOMPLISHED BY THE INSTITUTE AND THE EXISTING DIVISIONAL COMMITTEES.

10. THAT THE INSTITUTE DEVELOP A BUDGET.

11. THAT THE INSTITUTE DIRECTOR AND EXECUTIVE COMMITTEE SHALL SERVE AS A COMMITTEE TO COORDINATE AND REVIEW THOSE PROGRAMS AND POLICIES IN ENVIRONMENTAL STUDIES REFERRED BY THE CHANCELLOR.

These recommendations were accepted by the Chancellor in January 1970 and reported to the Regents in February 1970.

ADMINISTRATION OF ENVIRONMENTAL STUDIES

The Wilson Committee Report also made two additional recommendations on administration of the Institute, as follows:

1. THAT THE INSTITUTE HAVE A BOARD OF DIRECTORS COMPOSED OF THE ACADEMIC DEANS DESIGNATED BY THE CHANCELLOR.

   As the Institute attains balance and strength in its programs and curricula, the responsibility of the Board of Directors can be reviewed by the Chancellor.

   The organization chart provides for an Institute Board of Directors. The membership could be either Deans and/or Associate Deans designated by the respective Deans, and a representative from University Extension designated by the Chancellor of that unit. The Board of Directors would be responsible for review of policies, budgets, staffing and curricular matters which involve the programs of the various colleges.

2. THAT THE INSTITUTE HAVE AN ADVISORY COMMITTEE AND AN EXECUTIVE COMMITTEE.

   The Advisory Committee and its chairman would be appointed by the Chancellor. It would be composed of 20-24 individuals representing the biological, physical, and social sciences and the humanities as well as programs in environmental studies.

Its responsibilities would be to:

a. review programs of units directly affiliated with the Institute;
b. develop interdisciplinary curricula; and
c. advise the Director on program and curricula.

The Executive Committee would include seven tenured members elected by the advisory committee. The Executive Committee would be chaired by the Director of the Institute. The committee would perform those functions normally performed by an executive committee:

a. set policy and budget;
b. advise on administrative appointments;
c. review overall program;
d. review and recommend faculty salaries and promotions where pertinent; and
e. assist Director and advise in applications for funds.

These recommendations were adopted for the governance of the Institute for Environmental Studies during its formative period between February 1970 and the present time. The structure which evolved from the recommendations of the Wilson Report has provided adequate procedures for initial program planning in IES, but based upon the experience of the last two years, it now seems appropriate to revise the administrative structure of the Institute and at the same time broaden the mechanisms available for campus-wide review of programs in environmental studies. Therefore, we are making the following changes relating to these two recommendations.

ADMINISTRATIVE STRUCTURE OF IES

With regard to the operational program of IES, it is important to identify two distinct functions: the instructional program, staffed primarily by faculty members with academic homes in various departments, but funded primarily through IES resources; and the research program, made up of the several programs formally associated with IES (Figure 1).

A. Instructional Program

The instructional program, having developed a series of courses with substantial enrollments, taught by a staff of 32 individuals including 7 lecturers and 25 in the professorial ranks, now merits full departmental status. This will provide for a stable internal management, in accord with the procedures of the UW-MSN, with an appropriate committee structure for course development, and an executive committee to act on personnel matters. The initial members of the executive committee will be designated by the Chancellor; its initial chairman will be the Director of IES.

Establishment of the departmental status of the instructional program of IES does not imply that there will be very many appointments to tenure track positions solely in the Institute. Rather, as indicated in the Wilson Report, it is intended that most of the faculty members will have joint appointments in regularly constituted departments in the various schools and colleges. Recognizing the key element of exposing interested faculty members to interdisciplinary

INSTITUTE FOR ENVIRONMENTAL STUDIES STRUCTURE

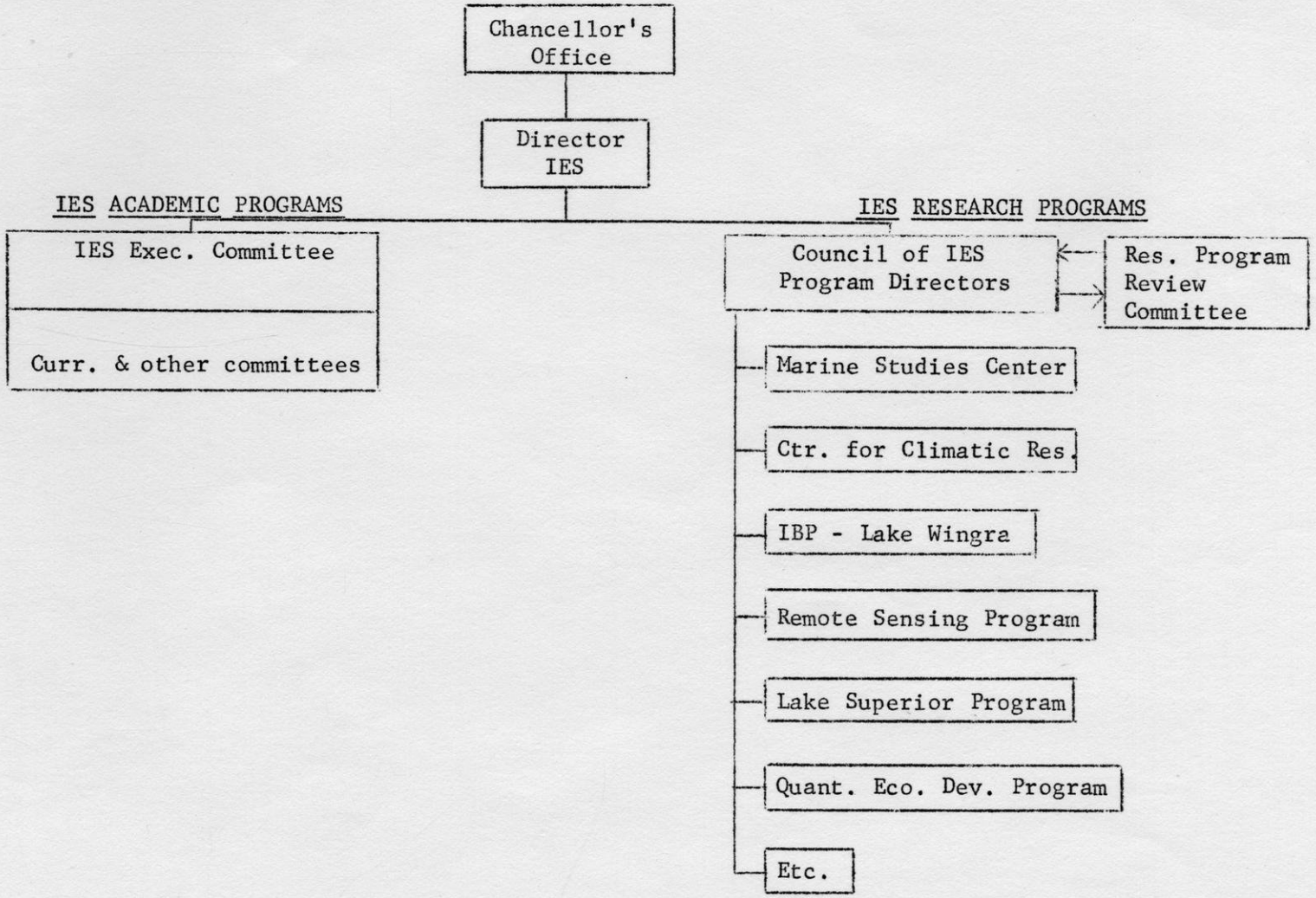

Figure 1

teaching and research programs, to the benefit of themselves and their departments, it is essential that departments and other units of the Madison campus provide for limited-term support, either full or part time, for their faculty members whose talents and interests fit the interdisciplinary programs of the Institute for Environmental Studies to participate in those programs. Mechanisms will be provided so that the individual faculty members can help structure new interdisciplinary courses and research programs, or join in programs already underway. The involvement of such a faculty member normally would tend to be for not less than one semester nor more than three years. A faculty member on such a joint appointment would be eligible for membership in the IES academic staff.

B. Research Program

The research program of IES involves an extension and coordination of several individual programs and centers which have the common goal of seeking to solve environmental problems. The coordination of these research programs will be performed by the Director of the Institute and promoted by the establishment of a Council of IES Program Directors, (the principal investigators or directors of the several research programs directly associated with IES). In addition, a Research Program Review Committee appointed by the Director will be responsible for evaluation of IES research proposals and performance.

CAMPUS-WIDE PROGRAM REVIEW

The original administrative structure of IES provided for an Advisory Committee, a broadly constituted group of faculty members from all parts of the campus, interested in utilizing the resources of the campus in the most effective way to solve environmental problems. This committee has attempted to provide guidance for the development of environmental studies programs within IES, but since complementary environmental programs developed in other parts of the campus have not been reviewed, it has not been possible to attain the level of communication and coordination originally sought. Therefore, several changes are being made to broaden the function of the original IES Advisory Committee in order to provide a campus-wide advisory group for the review of instructional and research programs in environmental studies wherever they might be located administratively on the campus. This new committee will be called the Environmental Programs Advisory Committee.

The revised structure is shown in Figure 2. A campus-wide "resource" faculty for environmental programs will be identified consisting of all Madison campus faculty members engaged in environmental research and teaching. The individuals will be those involved in environmental research projects or academic programs in operation or developing in any academic unit of the Madison campus. Most of these faculty members are readily identified, inasmuch as they are formally associated with environmental programs in various parts of the campus, including IES, the Department of Civil and Environmental Engineering, the Department of Urban and Regional Planning, and larger units such as the School of Natural Resources. Other members of this faculty, however, may be individual faculty members working in environmental programs in a unit not otherwise involved. All such individuals committed to teaching or research on environmental problems would be encouraged to participate in the campus-wide environmental faculty group.

To review, coordinate and encourage the activities of this resource faculty for environmental programs the former IES Advisory Committee will be changed to

ENVIRONMENTAL PROGRAMS ADVISORY STRUCTURE

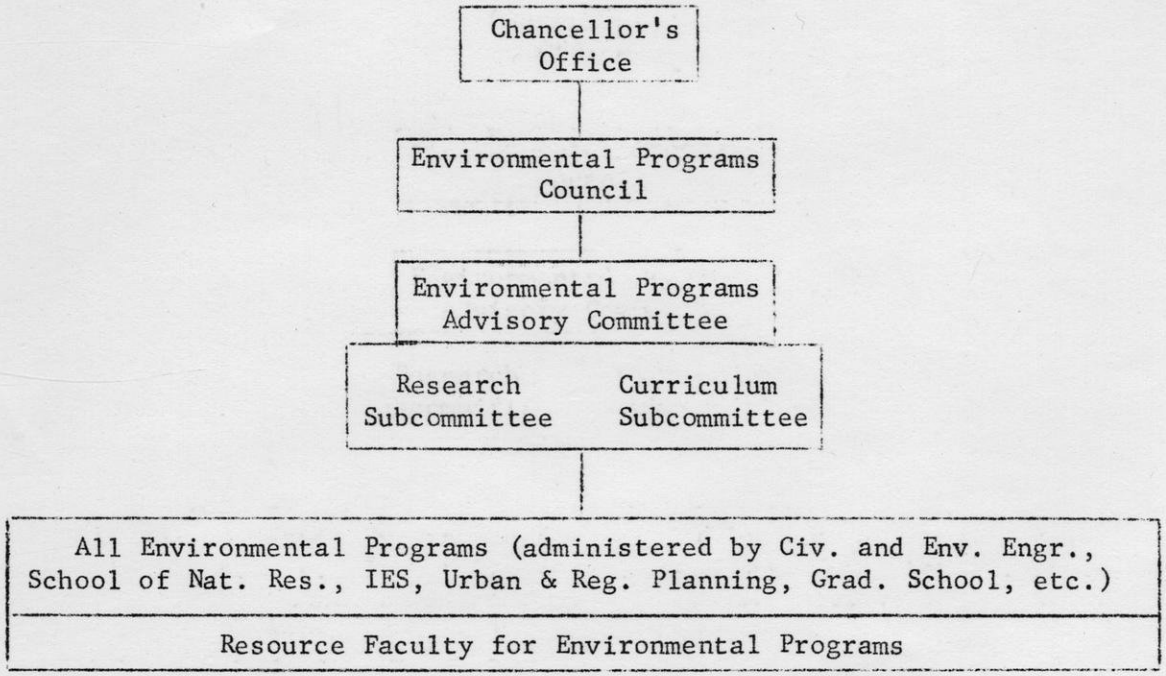

Figure 2

a campus-wide Environmental Programs Advisory Committee. The members of this committee will be appointed by the Chancellor from nominations submitted by the resource faculty. The committee will have broad responsibilities for program review, with the major goal of encouraging the development of interdisciplinary projects which make the best use of the resources of the Madison campus. These responsibilities will include both instructional and research program reviews, to be carried out by two appropriate subcommittees. These subcommittees will identify all on-going and developing environmental programs in all parts of the campus. Recommendations on proposed program developments will be routed to the Chancellor's Office through the Environmental Programs Council. Thus, the recommendations of the Environmental Programs Advisory Committee will have a major impact on budget decisions affecting the development of interdisciplinary programs.

The Environmental Programs Council will include the Deans of Agricultural and Life Sciences, Engineering, Graduate School, Letters and Science, Medicine, two positions rotated among the other deans, the Chairman of the Advisory Committee and its two subcommittees, and the Director of IES. The Vice Chancellor will serve as the Chairman of the Environmental Programs Council.

This council will review recommendations of the Advisory Committee, implement programs through the joint use of resources available, and make recommendations to the Chancellor on broad policy issues on environmental programs and the resources needed to sustain them.

This administrative reorganization becomes effective second semester 1971-72. The other recommendations of the Wilson Report on purpose and function of IES, and the long-range goals of environmental programs will remain in effect.

January 24, 1972

Environmental Studies Institute

The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release

Immediately

3/25/71 mel

MADISON, Wis.--A new emphasis on interdisciplinary study of man and his environment is becoming evident in midwestern universities.

This intellectual focus on environmental studies is apparent at all the Big 10 schools and the University of Chicago which comprise the Committee on Institutional Cooperation.

"In response to widespread concern, almost every CIC campus is heading toward an environmental studies center or institute," report Kenneth W. Ragland and Thomas W. Smith of the University of Wisconsin, in a CIC-sponsored survey of the 11 schools.

"The universities are moving in this direction partly because of federal funding changes, with decreased emphasis on basic research," they state. "A second motivation to establish such centers is the feeling among faculties that it is important to work on real-world problems. Third, students are pushing universities to establish environmental studies programs."

Dr. Ragland and Smith are associated with Wisconsin's Institute for Environmental Studies, one of four actively functioning centers in the CIC.

The emphasis on environmental studies has sparked innovative attempts to establish interdisciplinary courses and degree programs.

"It is encouraging to see the many new environmental courses being offered at all the CIC schools," Ragland said. "These courses have been overwhelmingly successful in attracting students."

- more -

The 11 schools carry out hundreds of diversified, interdisciplinary environmental research programs. These include water resources centers at eight schools, agricultural research at six, remote sensing programs at four, and Sea Grant programs at two.

Advisory and information service is a third major function of CIC universities, along with teaching and research.

"It is a function with a long history in the CIC but which carries with it a new sense of urgency in the face of an environmental crisis, which is truly every man's crisis," Ragland and Smith note.

"It is to the university that the government looks for expert information and scientists without conflicting interests; it is to the university that the public looks for interpretation of science and of policy related to science."

"Student advising in this area is sadly lacking in all the schools," Smith says. "Environmental studies is obviously so complex, and it potentially covers such a large segment of the university that a major effort in time and manpower is needed simply to advise students."

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(Single copies of the report, "Environmental Studies at the CIC Universities: A Survey for the Conference Group on Environmental Studies, Committee on Institutional Cooperation, January 1971" are available from Institute for Environmental Studies, 1225 West Dayton St., Madison, Wis. 53706).

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release

MONDAY, FEB. 8 2/5/71 mel

MADISON, Wis.--(Advance for AMs of Monday, Feb. 8)--A number of ecologists deeply concerned about the seriousness of environmental problems are taking broad steps to establish a unique Inter-American Institute of Ecology.

The independent, non-profit organization, being developed by the Ecological Society of America, will bring together the best ecological talent to study the multiple ills of the environment in the entire western hemisphere. IAIE will conduct large-scale, multidisciplinary research on ecosystems of the biosphere and will apply the knowledge to critical local problems.

Prof. Arthur D. Hasler, noted University of Wisconsin limnologist, chaired the recent IAIE founders' conference to formally initiate the institute. He helped develop the inter-disciplinary Institute for Environmental Studies at Wisconsin, and is now a member of its executive committee.

IES director Reid A. Bryson is Wisconsin's representative to the IAIE. The other 32 founding institutions include U.S. and Canadian universities, natural history museums, research and oceanographic centers, and national laboratories.

IAIE has now been incorporated in Washington, D.C., as an autonomous research organization. A director and site for the institute laboratory will be selected in a few months. It may be located near a major university in the Great Lakes area. Research activities are planned to begin in July.

The IAIE differs significantly from the Environmental Policies Institute to be announced by Pres. Nixon Monday in his environmental message to Congress. This new body will be making policy recommendations to the executive branch through the Council on Environmental Quality. It will not be involved in basic research.

- more -

The Ecological Society of America, which has been planning IAIE for 10 years, believes the institute is critical if society is to be made capable of arriving at wise public decisions in the face of the enormous complexities of environmental problems.

"The IAIE will have to get moving on environmental problems that are of global importance to society," Prof. Hasler said. "One of the major functions of the institute will be a research laboratory to study critical, but badly neglected, biospheric problems and to interpret the interactions of ecosystems, including man-dominated ones."

Problems that need to be studied at the biospheric level include the production and recycling of essential nutrient elements such as carbon, nitrogen, phosphorus, and sulfur; and the biological effects of toxic materials as heavy metals, pesticides, and detergents.

"The laboratory will also undertake research on certain ecosystems, such as coastal wetlands and estuaries now facing great jeopardy from pollution pressures and heavy recreational demands," Hasler said.

"Formation of the IAIE is a necessary step toward increasing the rate of development of ecological knowledge, which is so critically needed in facing environmental problems," Dr. Bryson pointed out.

"This new institute should make possible a more rapid interchange of ecological information, and will aid in focusing the efforts of our national ecological expertise on some of the important unresolved questions about the environment."

IAIE will be set up to conduct multidisciplinary research on a much more complex level than could be attempted in a single university or research institute.

Add two--ecologists

"The IAIE would be able to continue the work of the International Biological Program on biome systems after support for that program phases out in several years," Hasler said.

One of the largest IBP projects is the Lake Wingra Ecosystem Study being conducted by IES Prof. Orie L. Loucks and 30 other UW scientists. It is the only IBP project that includes man as a major component of interactions in the ecosystem, and it is the only IBP study of a complete water system.

IAIE has a planned operating budget of $3.4 million the first year, increasing by the third year to $12.5 million with an anticipated staff of 150 professionals. Both private and federal funds are being sought to guarantee independent existence of IAIE for at least five years.

IAIE trustees are Hasler; Cong. John Brademas (D-Ind.); Dr. Donald Chant, University of Toronto; Dr. Barry Commoner, Washington University; Dr. Bostwick H. Ketchum, Woods Hole Oceanographic Institution; Dr. Thomas F. Malone, University of Connecticut; Dr. Robert F. Inger, Field Museum of Natural History, Chicago; Dr. Ruth Patrick, Academy of Natural Sciences of Philadelphia; Dr. Frederick E. Smith, Harvard University; and J. G. Speth, Natural Resources Defense Council.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

Environmental Studies Institute file

news release

Immediately

11/30/71 bba

MADISON--Wisconsin researchers will be among the first to see what Wisconsin looks like from earth orbit. They will evaluate information collected by satellite to see if it can be useful in regional land-use planning.

Researchers hope satellite data can be used to describe land-use characteristics, soil type, geologic structure, and man's impact on land and water. This would mean remote sensing data could add a new dimension to conventional ground-level methods of resources inventories which presently are slow and incomplete.

Beginning next spring, they will receive photographs from the Earth Resources Technology Satellite as part of a grant from the National Aeronautics and Space Administration. This is the first satellite research package NASA has designed to examine specifically ground features. It will photograph selectively individual color bands of the light spectrum--including infrared.

A multidisciplinary group of 14 scientists, engineers, and planners from the University of Wisconsin-Madison, State Department of Natural Resources, and the Geological and Natural History Survey will be involved in comparison of satellite photographs with existing measurements and descriptions of ground characteristics (ground truth) in three regions of Wisconsin.

ERTS will orbit the earth in such a manner as to provide data covering Wisconsin once every 18 days. Satellite photographs of Madison and surrounding counties, the area between Milwaukee and Green Bay, and the area bordering the

- more -

Great Lakes will be examined closely because extensive ground truth in these areas has been or is being established in computer data banks by other research efforts.

This project is being coordinated by UW-Madison civil engineering Prof. James L. Clapp of the remote sensing group in the Institute for Environmental Studies.

The following University groups also will be contributing to the project: Lake Wingra Study Group of the International Biological Program, Space Science and Engineering Center, Marine Studies Center, and Environmental Awareness Center, all in Madison.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

Environmental Studies Institute for

news release

Immediately

10/12/71 ba

MADISON--National Science Foundation recently announced continuing support for the second year of the Lake Wingra Ecosystem Study, a University of Wisconsin-Madison research project which is part of the International Biological Program.

Prof. Orie Loucks, program coordinator, said the study was awarded $488,000 pending approval of the UW Board of Regents. The grant is for continued research efforts as part of IBP's Deciduous Forest Studies, which received a total grant of $2 million.

The researchers on Lake Wingra are studying natural systems and man's impact on the rural-urban watershed. This project is the largest of the four Deciduous Biome studies and is the only one which includes man as a factor of the environment.

In addition to extending the monitoring of the lake basin, the second year's work will emphasize analyzing and coordinating data already collected, Prof. Loucks explained. Thirty investigators are involved with 24 projects.

He added that he expects the researchers to know enough about the Lake Wingra basin to begin designing a predictive model of a similar inland lake basin by January.

The three other Deciduous Forest Biome sites are located in Tennessee, North Carolina, and Georgia. The $2 million grant will be administered by the Atomic Energy Commission's Oak Ridge National Laboratory. The Lake Wingra Study is administered by the Institute for Environmental Studies at UW-Madison.

# # #

feature story

Environmental Studies Institute

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Release: Immediately 10/1/71

By BARBARA B. ABBOTT

MADISON, Wis.--It takes a lot to make Estella Leopold move very far from her ranch in Colorado high country, but the challenge of working at the Center for Climatic Research did it.

She is now on a six-month leave of absence from the U.S. Department of Interior-Geological Survey in Denver to work with Drs. John E. Kutzbach and Reid A. Bryson of the University of Wisconsin CCR and the Institute for Environmental Studies in Madison.

Daughter of the late Aldo Leopold, famed Wisconsin naturalist, Estella is a research botanist and palynologist studying post-Paleozoic pollen and spores. She speaks excitedly of the work she has come to do--investigating possible dynamics of major climatic changes in the American mid-continent that occurred during the Eocene period, some 50 million years ago.

By studying and comparing the paleoecology of the Rocky Mountain region with climatic models that Bryson and Kutzbach are working on, she hopes to come up with some clues and answers.

Miss Leopold is also helping with curriculum planning for the IES undergraduate course 101--Forum on the Environment and is teaching one section.

"What is particularly impressive to me about the course is the fact that the small discussion groups work under an important premise: everyone is expected to contribute equally--including the staff member," she explains. "The atmosphere this premise creates makes for excellent cross-communication between all participants. It obliterates the podium routine."

- more -

In 1969 she shared the Conservationist-of-the-Year award from the Colorado Wildlife Federation for her role in saving a fossil bed near Florissant from the bulldozers of a land developer and having the area declared a national monument. But a date can't be put on Miss Leopold's activism--she is an enthusiastic conservationist. She helped lead Colorado conservationists' efforts to stop the Grand Canyon Dam projects and assisted in organization of the Colorado Open Space Council.

She is conservation chairman of the Denver Audubon Society and was involved in the Wyoming eagle kill investigations. Colorado's governor asked her to serve on his environmental impact task force concerned with development of the state's oil shale lands. And she is a director of the National Nature Conservancy.

Besides her work with conservation groups and with the Interior Department in Denver, she is also an adjoint professor in the department of biology at the University of Colorado at Boulder.

She received her bachelor's degree from the University of Wisconsin, M.S. from the University of California-Berkeley, and Ph.D. from Yale University, all in botany.

After receiving her master's degree, she was assistant research hydrologist at the Laboratory of Tree Ring Research at the University of Arizona in Tucson. She then conducted research projects on timberline growth rates and climatic correlation on Pike's Peak in Colorado.

She was in Madison in 1952 as an experimental mycologist studying wood rot at the U.S. Forest Products Laboratory.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

Environmental Studies Institute for

news release

Immediately 9/20/71 bba

MADISON--Four small platforms that appeared on Lake Wingra recently could have world-wide significance. They are an important part of the University of Wisconsin-Madison's Lake Wingra Ecosystem study--one of the most complete studies ever made of a land and lake system.

Research on the lake and the rural and urban lands that make up its watershed is attracting national and international attention as one of the largest projects in the International Biological Program. The Lake Wingra study, administered by the Institute for Environmental Studies, is the only IBP project that takes man into account as a disruptive force in the ecosystem, Prof. Orie L. Loucks, director of the study, said.

One aspect of the research is development of a complete water budget model of the lake basin by Prof. Dale D. Huff, civil engineering, and the U.S. Geological Survey. This is important because water serves as a carrier for other materials such as nutrients and pollutants transported through the system.

An essential part of the water budget model is rainfall and the evaporation of water from the lake, and the exchange of heat between water and the atmosphere. UW meteorologists, particularly Prof. Charles Stearns, have had a great deal of experience in meteorological measuring on Lake Mendota and are conducting this portion of the study.

The evaporation from Lake Wingra is determined by instruments installed on eight foot by eight foot floating platforms. The instruments operate continuously

- more -

and measure wind speed six feet above the lake surface, air and water temperatures, water currents, moisture content of air, and net radiation (amount of heat available to warm the air and water and to evaporate water from the lake).

This information is transmitted by cable to shore, where it is recorded on automatically punched computer cards for rapid analysis. A second cable carries power to provide lights and run equipment on the platforms. Both cables, sunk in the bottom mud, are well insulated with rubber and will not pose any hazard to fishermen or swimmers. Lights on the weather platforms serve as navigational aids for boaters. University staff will keep the equipment under surveillance to insure minimal inconvenience to the public.

The platforms and automatic data collection will serve other aspects of the study, and thus are essential for the success of the entire project. Submerged portions of the platforms will support instruments for Prof. John A. Hoopes of civil engineering to analyze water circulation patterns and temperature gradients in the lake itself.

"These must be known if we are to ascertain how rapidly nutrients from adjacent surface waters are carried to the central portion of the lake," Prof. Hoopes explained.

Some 15 to 20 other researchers depend on data gathered by the monitoring platforms for their studies of other aspects of the watershed. Edward Dettmann, Institute for Environmental Studies,will determine how evaporation of lake water affects the concentrations of nitrogen and phosphorus. Prof. John J. Magnuson, Prof. Arthur D. Hasler, Ray J. White and Dr. James F. Kitchell, all of the UW Limnology Laboratory, are studying the movement of aquatic organisms by wind action and lake currents. Profs. Michael S. Adams and Michael D. McCracken, botany, are analyzing the nutrient and carbon dioxide concentrations in water available for algal and weed growth.

Most of the research on Lake Wingra, involving 30 professors from ten UW-Madison departments and the U.S. Geological Survey, got underway last fall with grants totaling $360,000 from the National Science Foundation. A proposal for the second year of the intensive study totals nearly half a million dollars for 24 projects.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Environmental Studies Institute for

Release: Immediately 7/13/71

By KARL S. GUTKNECHT

MADISON--University of Wisconsin undergraduate chemistry students are tackling an environmental problem in the University's backyard.

Their initial findings have been published in a booklet, "The Fate of Mercury on Campus-A Preliminary Report."

The investigation into mercury was an extra-curricular outgrowth of a junior-senior seminar, Chemistry 698, held during the second semester on the Madison campus.

"Members of the academic community should examine their own surroundings prior to joining the pollution bandwagon and pointing the finger at others," the booklet's introduction asserts. "As members of the academic community, we have the responsibility of disseminating reliable information so that judgments and decisions can be made on sound bases."

Fourteen students surveyed the campus for mercury users, collected information about the amounts of mercury and its compounds being used, and attempted to determine the amount of mercury being recycled. The survey was conducted by means of a questionnaire distributed to departments which had purchased mercury compounds through the UW General Purchasing Office since July 1, 1970.

Findings indicated that although many users took special care to avoid spillage, most of them disposed of small amounts of mercury compounds by pouring them down the drain. The report notes the absence of State of Wisconsin and City of Madison regulations for the disposal of mercury and its compounds. Besides a recycling operation, the UW conducts periodic vapor tests upon request in buildings where mercury is used.

- more -

Add one--Mercury

Among points raised for consideration by the report were:

* Although large amounts of elemental mercury are recycled, few attempts are made to recover the smaller amounts used by students in chemistry laboratory experiments.

* The amount of mercury vapor emitted when coal is burned by the UW heating plant is not known.

* Amounts of mercury buried in the University's garbage disposal system, the fate of mercury batteries and switches used on campus, and the amount of mercury unleashed into the environment by broken thermometers in laboratories and hospitals were other areas that need further investigation.

Chemistry Prof. Bassam Z. Shakhashiri, who directed the students on the project, praised their work: "This project is a most worthwhile effort on the part of potential chemists. The students have acted in a responsible and professional fashion by initiating this study and collecting the facts about mercury and its possible adverse effect on the ecosystem."

Shakhashiri's investigation into the fate of mercury on campus will be expanded immediately with the cooperation of the UW Institute for Environmental Studies, the Wisconsin Department of Natural Resources, and other campus individuals and environmental groups. A forthcoming report is expected to detail specific recommendations for courses of action.

Students participating in the study were: Steven J. Borchert, Sun Prairie; Gary G. Girdaukas and Robert C. Keppert jr., Sheboygan; Stephen A. Mohr, Green Bay; William N. Calkins, Wauwatosa; Roger A. Koenecke, Sauk City; George W. Oliver, Delavan; Jeffrey D. Rand, Brooklyn, N.Y.; John W. Vorpahl, Eau Claire; Paul G. Gertenbach and Roberta A. Jacques, Madison; Mark H. Johnson, Greenfield; John C. Kutt, Plainfield; and David R. Picard, Wisconsin Rapids.

Copies of the report are available from the UW Department of Chemistry, 1101 University ave., Madison 53706.

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NEWS OF THE UNIVERSITY OF WISCONSIN

Environmental Studies Institute file

From the University's Statewide Communications Service, 1752 Van Hise Hall, Madison 53706

Release Immediately 6/18/71 ca

GIFTS AND GRANTS

MADISON--University of Wisconsin regents accepted $12,775,213 in gifts, grants, and contracts Friday including $8,374,084 from federal agencies and $3,520,000 from the Wisconsin Alumni Research Foundation.

Of the total, more than $268,000 came from Wisconsin sources other than WARF. Almost half of those Wisconsin gifts were for student aid.

Friday's acceptances brought the total for the fiscal year to $81,747,087, more than $3 million above last year's total at this time.

Among the Wisconsin gifts was $18,838 from the Riverview Boatline and Quandrant Corp. to the Madison campus Environmental Awareness Center for the study of land use in accordance with the natural environment in the approach zone to Wisconsin Dells. The Madison campus Institute for Environmental Studies received a $1,490,000 grant from the National Science Foundation.

The federal Office of Economic Opportunity provided $1,089,685 for basic research related to the nature, causes, and cures of poverty by the Institute for Research on Poverty, also in Madison.

The Association of College and University Concert Managers gave $12,000 for the Arts Administration Program in Madison; the Wisconsin Architects Foundation provided $5,000 for the UW-Milwaukee School of Architecture. The Oscar Rennebohm Foundation gave $7,500 through the UW Foundation for conducting tours of the Elvehjem Art Center.

- more -

Gifts-in-kind accepted included 216 color slides of European and American architecture and furniture for the Waukesha County Campus, UW Center System, from Mrs. Mary Ellen Wietczykowski, Milwaukee; and 38 books for the UW-Parkside Library from Mrs. Samuel J. Cole, Drexel Hill, Pa.

Among other gifts was $2,500 from the Wisconsin Pickle Packers Association and $500 from the Wisconsin Muck Farmers Association. The Joseph Schlitz Brewing Co., Milwaukee, gave $250 for a study of hair removal from pigs.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Environmental Studies Inst. for

Release: Immediately 5/18/71 mcg

MADISON--Dr. Garrett Hardin, professor of human ecology at the University of California-Santa Barbara, will discuss "Population, Pollution, and Political Systems" at the University of Wisconsin Monday at 8 p.m.

The UW Laboratory of Limnology and Institute for Environmental Studies have reserved the Stock Pavilion for the speech, which they are sponsoring with the help of a grant from the Federal Water Quality Administration.

Author of several books and more than 70 articles, Dr. Hardin recently published "Population, Evolution, and Birth Control: A Collage of Controversial Readings," hailed as "a brilliant summation of his life-long willingness to speak, as a biologist, on the social issues to which biological research is relevant."

The scientist began his research career in the field of experimental microbiology, turned next to an emphasis on genetics and evolution, then to concern with questions "related to the logical basis of the sciences and to the cultural, ethical, and emotional values involved in scientific thought and discovery."

The public is invited to the lecture.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

Environmental Studies Institute

news release Immediately

5/18/71 ml/jb

MADISON--Wisconsin Gov. Patrick J. Lucey and University of Wisconsin Pres. John C. Weaver Tuesday hailed the $1.49 million grant to the Institute for Environmental Studies as a significant indication of the UW's capability to solve today's environmental problems.

The grant from the National Science Foundation will enable the institute to develop problem-solving research programs on the Madison campus. These programs, Gov. Lucey stated, "will provide essential information to assist the state in carrying out its programs." He also noted:

"The grant demonstrates the capability of the IES to conduct inter-disciplinary research of complex environmental problems."

Pres. Weaver said he would recommend acceptance of the grant to the UW regents "with great pleasure, since it indicates how effectively the University has responded to the growing public interest in current problems and how our institute has demonstrated our special ability for work in this area in just 15 months."

Rep. Robert Kastenmeier (D-Watertwon), who announced the grant in Washington, D.C., said "the interdisciplinary approach is our best hope of finding solutions to man's complex relationship with his surroundings."

Dr. Reid A. Bryson, IES director, commented:

- more -

Add one--IES grant

"We seek to provide a university environment in which integrated environmental studies can be accomplished, and in which the fruits of such research can be reflected in improved campus teaching and community services.

"The three-year grant is a major element in the IES' plan to strengthen its present capabilities and undertake new programs in the environmental studies area."

Madison campus Chancellor Edwin Young said:

"It is particularly gratifying that this program capitalizes on the great strength of the Madison faculty in the environmental area, and that it focuses on problems important to the people of Wisconsin."

Dr. Bryson outlined IES projects, these including population redistribution; management of residuals from urban, agricultural, and industrial wastes; recycling specific wastes; quantitative systems description and simulation of land-water interactions; the social processes of regional space utilization and resource distribution; and time-lags in detecting critical environmental consequences of technological innovations.

Associated units of IES also have active, interdisciplinary programs on the environment. The Marine Studies Center, the Center for Climatic Research, Remote Sensing Group, and the Lake Wingra Ecosystem Project of the International Biological Program are now administered by the institute.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release

Immediately

2/23/71 mel

CONTACT: PROF. REID BRYSON
(608) 262-2860 (Office)

MADISON, Wis.--Madison has a carbon monoxide problem comparable to that in large, highly polluted cities--including New York, Chicago, Los Angeles, Cincinnati, and Philadelphia--according to results of a study announced today by the University of Wisconsin's Institute for Environmental Studies (IES).

Carbon monoxide (CO) concentrations as high as 160 parts per million (ppm) were recorded in rush-hour traffic along East Johnson st., while the maximum eight-hour average for State st., a shopping area, was 33 ppm. This exceeds the California state air quality standard of 30 ppm.

These concentrations are high enough to cause serious physiological effects in all persons, particularly drivers in heavy traffic, cigaret smokers, pregnant women, and persons with coronary heart disease, severe anemia, cardiovascular disease, or abnormal metabolic states.

Sharon Nicholson Hastenrath, now a graduate student, conducted the study as an honor's thesis for a bachelor's degree in meteorology at Wisconsin.

"We were alerted to the possible magnitude of CO in Madison by measurements taken by the Wisconsin Department of Natural Resources," said Prof. Reid A. Bryson, IES director, who supervised the study.

Mrs. Hastenrath took 568 CO measurements using a stain-length colorimetric test at four principal sites in Madison. Average CO levels at the State st. sampling station were 15 ppm; an east side residential area, 10 ppm; University Arboretum,

- more -

6 ppm; and on the roof of a 15-story campus building, 4 ppm. Peak concentrations at street level occur around 8 a.m. and 5 p.m.

In spot checking, she recorded measurements of 13 ppm inside University Hospitals, 44 ppm in a service garage, and as high as 59 ppm on sidewalks and street corners.

Highest concentrations were obtained by measuring CO at car window level while driving in traffic. Levels of 160 ppm were obtained in East Johnson st. traffic, and 64 ppm in East Gorham st. traffic.

Maximum five-minute CO concentrations in traffic in various other cities are: Los Angeles, 81 ppm; Chicago, 78 ppm; Philadelphia, 67 ppm; and Cincinnati, 50 ppm.

"Even more important in terms of health effects are the CO levels maintained over periods of time," Mrs. Hastenrath reported. "The daytime eight-hour average on State st. is generally 21 ppm but sometimes is as high as 33 ppm. The four-hour averages vary between 13 and 37 ppm."

By comparison, eight-hour averages for Cincinnati are 21 ppm; Chicago, 44 ppm; Philadelphia, 36 ppm; Los Angeles, 28 ppm.

CO combines with the pigment hemoglobin in blood, displacing the oxygen that hemoglobin normally transports. The CO-hemoglobin bond is 200 times tighter than the bond with oxygen, so even small amounts of CO can hinder the supply of oxygen to tissues.

When the oxygen supply to tissues is reduced, the heart and lungs must work harder, and this may produce a critical strain in persons with heart and lung diseases.

Symptoms of CO poisoning often experienced by people in traffic jams and on freeways include loss of visual acuity, decreased muscular coordination, and increased reaction time, headache, and nausea.

Persons with increased susceptibility to CO may be adversely affected by eight-hour levels such as those recorded on State st.

Mrs. Hastenrath next correlated CO levels with both urban and meteorological factors. She found that CO levels in the Arboretum and on the rooftop are highest during periods of predominantly south and southeast winds.

"The strong correlation of CO at these sites with south and southeast winds leads us to believe that highly industrialized centers to the southeast, particularly the Chicago area, are contributing to Madison's pollution problem," she said.

She carried her study one step further and analyzed visibility data for Madison, Lone Rock (a relatively pollution-free city 40 miles west of Madison), and Chicago. Low visibility in relatively dry air is strongly related to atmospheric pollution.

Low visibility--and hence high pollution--in both Madison and Lone Rock is significantly correlated with south and southeast winds, she found.

"Thus the CO levels in the Arboretum and on the rooftop are very likely influenced by pollution from sources outside Madison," she said.

Prof. Bryson said: "We know we're getting particulates in Madison from Chicago industry, and now we think we can detect CO from Chicago when the winds are from the southeast. This suggests that we ought to find out whether Madison may also be getting sulfur dioxides from there."

Mrs. Hastenrath added: "However, the main source of Madison's CO pollution, 99 per cent of it, is still the automobile. Low route speeds, heavy idling, and large traffic volume account for the high CO levels on State, Johnson, and other busy streets."

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

Environmental Studies Institute for

news release

Immediately 2/2/71 mel

MADISON, Wis.--Geophysicist Richard R. Doell of the U.S. Geological Survey, Menlo Park, Calif., will be an honorary fellow in the University of Wisconsin's Institute for Environmental Studies for the coming year.

Dr. Doell will participate in the activities of the institute, including a seminar on Society and Technology, and will study practical problems related to use of earth science resources. He is widely known for his research on the magnetic field of the earth, paleomagnetism, and natural thermoluminescence.

One of the younger members of the National Academy of Sciences, Dr. Doell is a fellow of the Geological Society of America, Royal Astronical Society, and American Geophysical Union. He is also a member of Sigma Xi, Phi Beta Kappa, and the Society of Terrestrial Magnetism and Electricity of Japan.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Environmental Studies Institute

Release: Immediately 1/14/71 jb

MADISON--The University of Wisconsin-Madison Institute for Environmental Studies is sponsoring a student-organized course investigating various aspects of two prime means of energy production--fossil and nuclear-fueled power plants.

Five students began the project last fall, and more students are desired to make it an interdisciplinary approach to current problems. The work is expected to continue through the summer and possibly next fall.

The three major areas of concern for the students are the biological effects of atmospheric contamination, occupational risks to employees in industry, and environmental effects resulting from the production, utilization, and disposal of energy sources.

The variable credit course is supervised by Dr. Seymour Abrahamson, professor of genetics and zoology. Information relating to the course may be obtained at his office, 221 Zoology Research Building, or by calling 262-2506.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release

Immediately 12/18/70 mel

MADISON, Wis.--"Synthesizing sciences" are needed in universities to tackle the vast environmental problems of the 1970s, a University of Wisconsin plant ecologist believes.

Such a synthesizing discipline would include specialists in many fields to focus attention on a single environmental problem. A few universities today are taking such a multidisciplinary approach in developing the environmental sciences.

"The problems involved in improving the environment, in a technological society, are necessarily multidisciplinary as opposed to the traditional partitioning of knowledge into engineering, natural science, humanities, and so forth," says Orie L. Loucks, professor of botany, on the staff of the Institute for Environmental Studies.

"The most serious problems of our times have arisen because narrowly conceived technological innovations have failed to take account of the powerful side effects that accompany technological change."

To confront environmental problems, Loucks calls for:

"Clearly nothing less than the application of the full intelligence of our society to something very similar to a mobilization of scientists in industry, government, and the universities for appropriate research and curriculum development."

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As an example, he cites the rapid development of sonar, radar, and atomic energy during World War II, by 10,000 scientists mobilized for war research.

One of the best examples of the coalescing of university environmental scientists from a dozen disciplines to one common goal was in the recent DDT hearings in Wisconsin, Loucks points out.

"The most significant aspect of these hearings on whether DDT constitutes a pollutant in Wisconsin waters was the unusual breadth of scientific specialization needed to complete the story of the movement and impact of DDT," he says.

"To my knowledge, never before has so wide a range of scientific capability been assembled on any single conservation issue."

A second example of a synthesizing discipline is the systems analysis of eutrophication, or enrichment of lakes and streams, now underway at the University of Wisconsin. The program involves a civil engineer, a statistician and former electrical engineer, an aquatic biologist and zoologist, and a botanist.

A third example is the International Biological Program, a highly integrated program of studies in biological production and the impacts that man and technology are having on it.

Loucks is director of Wisconsin's IBP study, the Lake Wingra Eco-system Study of an urban-rural watershed. More than 50 scientists from 13 Wisconsin departments are participating in the study.

Wisconsin's new Institute for Environmental Studies is a good example of a synthesizing discipline, Loucks points out. It was established to integrate man with his environment, and to combine the bits and pieces of research into a broad understanding of the whole man-environment system.

Universities must now accept a goal of national mobilization toward integrating the technological power now vested in many disciplines dealing piece-meal with the environment, Loucks concludes.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Environmental Studies Institute for

Release: FRIDAY, NOV. 6, NOON 11/5/70

UIR Science Writing Division (262-5984)

By LINDA WEIMER

MADISON--(Advance for release at noon, Friday, Nov. 6)--The United States is the most densely populated country on earth, a University of Wisconsin professor said Friday.

Reid A. Bryson, addressing the president's luncheon at the annual Community Newspaper Conference on the UW Madison campus, noted that population is too often mistaken to mean only the number of people living in a given area.

"While the United States has only about 60 people per square mile, each one of those people has roughly 150 'energy slaves' working for him -- cars, washing machines, electric lights -- all of which require food, in the form of fuel, and all of which have metabolic wastes," he said.

"In essence, our country is supporting an equivalent population closer to 9,000 per square mile -- or nearly half the world's total for the U.S. as a whole."

With such a load, it is no surprise that we are facing an environmental crisis. "There are sewers for human waste," Bryson remarked, "but where are the sewers for our machine wastes?"

Bryson said that while the number of people is doubling about every 50 years, the number of energy slaves is doubling every 10 years. Thus, he estimated that resulting problems of fuel supply and waste disposal are going up by 100-fold every half century or so.

Bryson, director of Wisconsin's new Institute for Environmental Studies, divided his talk to the group into two general areas -- the nature of environmental problems, and what the University is doing to help solve them.

- more -

Add one--Bryson

Bryson feels a major environmental problem is the compounding effects of pollution and overpopulation.

"In the next 20-30 years," he told the newspapermen, "Wisconsin's human population will double, which means the circulations of your newspapers will probably double. But the number of your advertisers will probably also double. Thus, we will probably have twice as many readers reading papers twice as large."

"With twice as many readers reading twice the current size newspaper, publishers will need four times the amount of paper. So, we will have to cut down four times as many trees and dispose of four times as much paper waste. In short, we will be taxing the environment four times as heavily even though there are only twice the number of people."

Bryson pointed out that this geometric progression is at the core of many environmental problems. "It wouldn't be quite so bad if having twice the number of people meant twice the amount of pollution, but this is never the case."

In discussing what Wisconsin is doing to alleviate environmental problems, Bryson said that for years, University scientists have been looking at bits and pieces of these problems, and as a matter of fact, doing very well on these pieces.

Unfortunately, universities are historically set up by disciplines, he noted. However, if we consider the major problems of society, including those of the environment, none lie within a single discipline.

As a result, the newly founded Institute for Environmental Studies is concerned now with tying together research skills around the campus and coordinating interdisciplinary attacks on environmental problems in such areas as pollution, population growth and distribution, and ecological disturbance.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Environmental Studies Institute for

Release: Immediately 10/6/70 jb

MADISON--Given a choice, most persons prefer variations in the design and appearance of homes in their environment, a University of Wisconsin study shows.

But they are not as concerned with greater space diversity.

The study was conducted by Dr. Bernard Pyron, research associate in the Madison campus Institute for Environmental Studies. It was funded by the National Institutes of Health.

To gather his conclusions, Dr. Pyron arranged for 120 persons to view 13 different housing environments shown on a movie screen. The different neighborhoods were built and shown as scale models, and were viewed as though the participants were atop a truck moving through the areas.

Pyron stated:

"The environments with four different floor plans and four different elevation forms were thought to be more diverse, more imaginative, and better for the play of children. The participants felt the courtyard designs did fulfill community needs.

"Privacy was judged to be greater in the non-court designs.

"We also learned that persons from central areas of large cities and those from the country judged courtyard designs as more diverse, imaginative, and fulfilling of social interaction than did participants from towns and suburbs."

- more -

It is believed, Pyron continued, that a varied environment will stimulate people to be open to the environment, more aware of the beauty and feeling of the landscape.

"When people live in an open environment, their stress levels may be lower than when they are preoccupied with various worries, fears, hopes, anxieties," he said.

Further studies in the future are expected to explore the relationship between stress and environmental monotony.

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Environmental Studies Institute for

The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

news release September 16, 1970 mel

MADISON, Wis.--The University of Wisconsin catalog has a new listing this fall, one that will be of particular interest to students.

The subject is the environment, and the University's Institute for Environmental Studies (IES) will offer courses for the first time this fall. A group of students and faculty has been holding daily discussions during the summer months to help assure that the courses will be pertinent to the needs of students concerned about environmental problems.

The student-faculty group is also taking advantage of the opportunity for integrating innovative methods of teaching into the new Environmental Studies Curriculum currently being developed at Wisconsin.

"The opportunity to generate a new curriculum does not often arise at an established university," explains John S. Steinhart, professor of geology and geophysics and chairman of curriculum development for IES.

"When it does, one is usually confronted with existing vested interests, courses, and a host of traditional ideas not easily changed. Such an opportunity for educational innovation now exists in the Institute for Environmental Studies at Wisconsin."

The IES was restructured earlier this year to provide improved impetus and leadership to the University's research and teaching efforts in the

- more -

environmental area. The IES is now a divisional unit directly responsible to the chancellor of the Madison campus.

Students have already expressed their great interest in the offerings of the Institute--last spring hundreds of students pre-registered for the fall semester courses in environmental studies.

Early last spring a small group of students, frustrated by their individual attempts in pursuing interdisciplinary environmental programs, gathered and took the initiative in developing a new environmental curriculum.

The students, headed by Richard D. Holland, graduate student in Urban and Regional Planning, worked independently of faculty for more than three months.

"Their work in exploring new approaches to environmental education was impressive and responsible," Steinhart says.

As a result of the students' interest, Steinhart organized a task force to develop a new environmental education program for IES. The U. S. Office of Education provided an $18,000 grant to support the efforts of the group.

The task group is probably unique among universities planning new curriculum programs, for it consists largely of students. The only faculty members are Steinhart, Prof. John DeLamater of sociology, and post-doctoral fellow Kenneth R. Bowling of history.

Graduate students in the group are Holland; Robin L. Dennis, physics; Nancy E. Field, urban and regional planning; and Binda C. Reich, environmental interpretation.

Undergraduate student participants are Rae Ann O'Brien, Judy A. Seidman, Michael G. Sievers, Marc D. Kaufman, Dustin Lewis, Barbara A. Shindell and Will Weber. Incoming freshman participants are Barbara Olson and Robert Seltzer.

Since the task group began meeting in June, other students and faculty members volunteered to work part time on the project, including Prof. Robert H. March of physics, Prof. Max R. Goodson of educational policy studies, and Alisdair MacCormick, statistics. Work will continue through the coming academic year.

The task group has three basic goals: developing an introductory course, assessing the opportunities in environmental education that are available to students beyond the first course, and designing a general curriculum in environmental studies.

"Our group is concerned with the shortcomings of education. The students became concerned about the environment, and they became aware that educational changes were needed to confront the vast environmental problems of today," Steinhart explains.

Summer discussions of the group were focused on developing the new course, IES 101, Forum on the Environment, which will be open to freshmen and sophomores this fall. The course will relate to the interdisciplinary nature of man and his total environment.

The students studied the teaching of other interdisciplinary courses as well as the usefulness of new educational techniques such as individual student "contracts" rather than tests, presentation of the course in intensive eight-hour sessions, and various types of learning based on experience.

The task group is also concerned with the opportunities available in environment studies beyond the introductory course. Besides assessing the value of existing University courses which are relevant to environmental studies, the group is considering innovations such as work-study programs, research involvement for undergraduates, and community involvement programs.

The third and most long-range task of the group is planning a general Environmental Studies Curriculum, primarily on the undergraduate level.

Add three--environmental studies

The student group wants to avoid a structured curricular program that must be rigorously followed. Instead, the students are interested in permitting more freedom in the learning process, but they also feel that some guidelines are necessary.

In its recommendations for an Environmental Studies Curriculum the group might very well depart from the traditional practice of developing "laundry lists" of required courses. Suggestions might range from completely individualized programs to development of a recommended pattern of experiences, such as seminar and course experience the first two years; field or work-study experience the third year; and research, community action, and knowledge integration the fourth year.

"Our goal," Steinhart explains, "is to define the options available to entering students in environmental studies. We want to tell the student how to go about constructing his own environmental curriculum, and make the student play an active role in finding the alternatives available to him as a student.

"The more personal contact a student has with faculty members, the more freedom he has in planning his college program," he adds.

The task group students are vitally concerned that the content of the Wisconsin environmental studies program will be relevant to the needs of today's students. They want to develop a program that will prepare students for living in today's world, for finding jobs in today's environmentally-conscious industries.

This is the key to the student-faculty task group: making certain that the wave of environmental interest on university campuses will be as meaningful in ten years as it is today.

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For more information, contact:

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Release: Immediately 8/13/70 jfn

MADISON--A "programmed growth" of the Madison campus for the coming 15 years, emphasizing studies "to improve the quality of life" of Wisconsin citizens, was outlined Thursday by Vice Chancellor Irving Shain to University of Wisconsin Regents at 1971-73 budget hearings.

Top priority would be given to environmental studies and to new programs in health related fields, as well as to the education of rural and urban disadvantaged and minority group students, Vice Chancellor Shain explained.

"These program will have a strong bias toward preservation of our natural heritage, our personal health, and the culture and tradition that have been responsible for the evolution of our society," he said.

The administration's statement of long-range plans, aimed at what Shain called "a new era" for the Madison campus, accompanied requests totaling some $6.9 million in program improvements for 1971-73.

The "programmed growth" would link student admissions policy and teaching-research-public service resources to the development of interdisciplinary programs "seeking solutions to the major problems facing society," the vice chancellor said.

Growth in enrollment and academic offerings largely followed student preferences during the decade of the 1960s when the Madison student body almost doubled, Shain noted. With UW-MSN enrollments expected to level off in 1971-73, the time is right for a re-evaluation of admissions policy to lay the groundwork for "programmed growth," he suggested.

- more -

Add one--Madison growth

Environ. Studies Institute for

The departmental structure, stressing quality in every discipline, has been the basic strength of the Madison campus, and would be maintained, the vice chancellor explained. "Students must be brought to an advanced level of competence in at least one area before they can make useful contributions to society," Shain commented. However, little expansion is anticipated in the individual disciplines.

Rather, enrollment will be matched to available resources, and growth will be encouraged in such areas as medicine and the related health fields, Shain explained. Graduate and undergraduate studies would be expanded through such interdisciplinary efforts as the Institute for Environmental Studies, the School of Natural Resources, the Bio-engineering program, and other "Problem-solving" areas.

"Staff additions will be made primarily in those areas where programmed growth will be encouraged," the vice chancellor said. Need for added faculty, he explained, stems from these factors:

(1) The student-teacher ratio has worsened since 1966, with enrollment growing by 4,400 while total tenure track faculty increased by only 50; and

(2) The trend on the Madison campus is toward professional and graduate instruction, which requires smaller advanced classes.

Vice Chancellor Shain called the requested $6.9 million for 1971-73 progra improvements "a bare minimum." He said original requests from deans and directors totaled some $21.3 million before the UW-MSN chancellor's office made sharp cuts.

Largest single request was for a program "to substantially increase the number and proportion of low income minority group students on the Madison campus," estimated to cost $547,705 in 1971-72 and $764,905 in 1972-73.

The request for new programs in health related fields totaled $557,100 in 1971-72 and $971,600 in 1972-73.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Environmental Studies Institute

Release: Immediately 7/3/70 jp

MADISON--An Environmental Education Teach-In will bring about 15 Wisconsin elementary school teachers and administrators to Madison July 21-24.

The teach-in is being planned by the Wisconsin Research and Development Center and the Center for Environmental Communication and Education Studies in co-sponsorship with the University of Wisconsin's department of curriculum and instruction, the Wisconsin Department of Public Instruction, and the Wisconsin Department of Natural Resources.

Research and Development Prof. Allen M. Voelker and Project Assistant John McDowell are recruiting the small task force for seminars and discussions on state and nation environmental education developments, funding possibilities, and curricular needs of local school systems.

Feedback from the educators will help the Research and Development Center develop new curriculum and teaching materials for environmental education.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Environmental Studies - Institute for

Release: Tuesday noon, May 19th 5/18/70 ms1

Institute for Environmental Studies
1225 West Dayton St., Madison, Wis.
(608) 262-2860
Contact: Marlette Larsen

WASHINGTON, D.C.--(Advance for release at noon, May 19)--Universities have a major responsibility to mobilize their resources to aid in solving environmental problems, a leading environmental scientist testified Tuesday before a congressional committee.

Comprehensive, interdisciplinary programs of education and research are needed to deal effectively with the intricate features of the environment and their social, economic and political consequences, stated Reid A. Bryson, director of the University of Wisconsin's Institute for Environmental Studies.

He testified before the Subcommittee on Education of the U.S. Senate in a hearing on Senate bill 3151, the Environmental Quality Education Act.

"It is apparent that man has begun to tear apart the fine fabric of the very resources upon which he is so totally dependent. Yet the environment is rapidly deteriorating at a time when ever increasing numbers of people depend upon it and are seeking greater uses of it," Dr. Bryson said.

The University has a clear responsibility for the survival and improvement of life for civilized man.

"Our entire educational system," he pointed out, "has a responsibility not only to preserve and transmit the knowledge, wisdom and values of the past, but also to discover and develop that which will ensure the survival of the present and future generations with improvement in the quality of life.

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"We can no longer afford the luxury of assuming that the future will take care of itself," Bryson warned.

"We need a better understanding of the physical and biological effects of the natural and man-made environment upon man.

"We must gain a clearer understanding of the relationships of all living things to their physical and biological surroundings.

"We must learn how to keep the earth's environment in a condition capable of maintaining life throughout the decades and centuries of the future."

Bryson pointed to the general lack of understanding of the nature of the man-environment system by both the public and academicians.

"There is widespread public concern over environmental quality today, which will continue and increase, but there is considerable dissonance because of the complexity of the problem and the lack of knowledge," he said.

The lack of rational solutions for environmental problems has created a sense of frustration in individuals, Bryson emphasized. Environmental education that elucidates problems or makes people more aware of them will only increase this frustration unless the educational process also deals with means and methods for solution.

Further, Bryson observed, much of the material on environmental problems has been rhetorical. Environmental education must deal with the need to quantify the factors influencing the environment and their interrelationships by constructing models of ecosystems.

"A prime purpose of education is to help the citizen discover who he is and how he relates to the rest of the world," he said.

Yet lack of integration of traditional university discipline-oriented courses and research is probably the most important reason for the general lack of understanding of man as an integral element of a complex system, he pointed out.

"Integrative environmental curricula can do much to alleviate the general failure of traditional curricula to achieve this goal."

Thus, new curricula aimed at environmental understanding and ecological awareness should not be composed of "shopping lists" of traditional courses and subjects.

As an example of the new, integrative approach to environmental education, Dr. Bryson explained the goals and functions of the University of Wisconsin's Institute for Environmental Studies. Integrating focus of the Institute is the man-environment system: the relationships between man, individually and collectively, and his natural and man-made environment.

The University of Wisconsin has a long-standing reputation in the environmental studies area, Bryson said, and establishment of the Institute now makes it possible to integrate its environmental research and education effort into a broad understanding of the man-environment system, in all its biological, physical, social and cultural aspects.

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Ed. note: Copies of Dr. Bryson's statement are available from the Institute office.

uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Environment Studies Institute for

Release: Immediately 2/24/70 bi

For further information contact:
Bruce Ingersoll, UIR Science Writing Division (262-5984)

MADISON, Wis.--Prof. Reid A. Bryson has been named director of the University of Wisconsin's growing Institute for Environmental Studies, Chancellor Edwin Young announced Tuesday.

Bryson, founder of the UW meteorology department, replaces Prof. Gerard Rohlich who resigned Feb. 1. Rohlich, director of the Water Resources Center, has taken a leave of absence this semester to be a visiting professor at the University of Helsinki, Finland.

Prof. John E. Ross, chairman of the agricultural journalism department, will continue as associate director of the interdisciplinary institute, which was established two years ago.

On the recommendation of the chancellor's Advisory Committee on Environmental Studies, the institute has been moved out of the Graduate School and attached directly to Chancellor Young's office.

The organizational change enables the institute's new director to encourage additional undergraduate and graduate courses in environmental studies.

"It is quite possible that the institute in the near future would seek authority so that the undergraduate courses could lead to degree-granting programs in the environmental sciences," Prof. Joe B. Wilson, chairman of the environmental studies committee, noted.

- more -

Add one--Bryson

Bryson and Ross will also be responsible for fund-raising and coordinating interdepartmental research on environmental problems.

They met today with National Science Foundation officials in Washington to learn how the University can better qualify for research grants.

"The Institute for Environmental Studies is Wisconsin's answer to the call for a Survival U," said Bryson. "I hope to make it the best of its kind in the country."

He envisions in the near future 5,000 undergraduates taking broad-based courses in the environment taught by faculty members in existing colleges and schools.

"We have one of the best staffs of ecologists in the U.S. here at Wisconsin. I want to see it put to effective use," Bryson said.

Bryson came to the Madison campus as an assistant professor of geology and meteorology in 1946. After receiving his Ph.D. in meteorology from the University of Chicago, he established the UW meteorology department in 1948 and organized the Center for Climatic Research in 1962. Associate Prof. John E. Kutzbach has just taken over for Bryson as director of the center.

Ross obtained his UW Ph.D. in mass communications in 1954 and has been a member of the agricultural journalism department since 1950.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies

Release: Immediately 3/14/90

CONTACT: Daniel W. Bromley (608) 262-6184; John Wiley (608) 262-1044

BROMLEY NAMED ACTING DIRECTOR OF IES

MADISON--Daniel W. Bromley, a University of Wisconsin-Madison professor of agricultural economics and natural resources policy, has been named acting director of the UW-Madison Institute for Environmental Studies (IES) by Chancellor Donna E. Shalala.

Bromley, 49, is an authority on the legal and economic aspects of natural resource use and environmental policy, and on the natural resource problems of developing nations.

A member of the UW-Madison faculty for 21 years and currently the Anderson-Bascom Professor of Agricultural Economics, Bromley possesses outstanding credentials as an administrator, researcher and teacher, Shalala said.

He has taught numerous courses in environmental economics and has published widely on water, agricultural and land management policy, and environmental quality analysis.

A former chair of the department of agricultural economics, Bromley has guided some 30 UW-Madison students to the successful completion of their doctoral degree programs and has been cited twice by students for outstanding teaching.

In an interview, Bromley said a top priority is to ensure that IES students have access to the wealth of UW-Madison faculty and staff who teach and conduct environment-oriented research in a vast range of disciplines.

-more-

"We need to make sure that UW-Madison undergraduates are exposed to the very best scholars," he said.

He also stressed that IES undergraduates should have a solid grounding in the social sciences as well as the natural sciences. The social ramifications of environmental issues, Bromley said, are increasingly important as society grapples with the difficult choices imposed by a degraded environment and limited resources.

Bromley will succeed Arthur Sacks, who has directed the Institute since 1986 and who will become a special assistant to Graduate School Dean John Wiley.

Bromley's IES appointment will take effect July 1 and he will report directly to Wiley.

The appointment is for two years and, according to Shalala, a national search for a permanent IES director will be initiated within the next 18 months.

In naming him to the IES post, Shalala said Bromley will build on the strengths of the Institute to develop programs of research and training that will meet the pressing environmental needs of the 1990s.

"We see environmental studies as a key area for this university and a high priority for society at large," Shalala said. "Professor Bromley is an outstanding member of our faculty and he'll provide the leadership necessary to bring the resources of this university to bear on some of the most critical problems of our day."

The Institute for Environmental Studies, founded in 1970 by the renowned climatologist Reid Bryson, is one of the nation's leading centers of environmental learning and research.

It houses internationally acclaimed programs of research and training in climatology, environmental monitoring, water resources management and land resources.

In the area of research, Bromley said an emphasis is likely to be placed on the relationship between technology, public policy and the environment.

"I see a very great need to strengthen the policy side of the Institute," Bromley said, "and one of the things we can do is look closely at such things as technology and the influence it exercises on society and the environment."

In addition, Bromley said the Institute needs to begin presenting environmental information in a broader context. The message that the environment is in trouble is simply not enough, he said.

"We need to move beyond telling people how important the environment is. They know that. What needs to be done is for scholars to frame our social and environmental choices in terms of public policy."

Bromley is the author of two books and the co-author of two others. He has also written numerous journal articles and has authored, edited or contributed chapters to more than 20 books.

He is widely recognized for his work on public decision making, natural resource economics and economic development. He is presently an associate fellow of the London Environmental Economics Center.

In addition, he has been a consultant to the World Bank, the U.S. Congress Office of Technology Assessment, the Ford Foundation, the Agency for International Development and the U.S. Water Resources Council.

Bromley has also served as an environmental consultant to the governments and environmental organizations of more than a dozen developing nations.

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-- Terry Devitt (608) 262-8282

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Institute for Environmental Studies

University of Wisconsin-Madison

Dr. Arthur B. Sacks, Director

The Institute for Environmental Studies (IES) was created as a research program of the Graduate School at the University of Wisconsin-Madison in 1967. Three years later it was reorganized as a comprehensive, independent academic unit designed to study the interrelationships between people and the environment. It has three important missions: (1) to educate graduate and undergraduate students, (2) to conduct interdisciplinary research, and (3) to share its expertise with the public.

Below is a brief description of how IES carries out those missions.

Instruction

Highly diverse is perhaps the best way to describe the variety of courses -- more than 100 in all -- on environmental subjects available through IES. Many of them are offered in conjunction with other UW-Madison departments. They range in topics from pollution to ethics, from energy resources to environmental health, from minerals to land use.

About 40 courses are taught each fall and spring semester; another 15 are taught each summer. Most are open to all UW-Madison students who meet the prerequisites.

IES also administers three graduate degree programs, a special graduate-level curriculum, and an undergraduate certificate program. All are interdisciplinary.

Environmental Monitoring Program. Students may earn master's and/or doctoral degrees in this program. They learn to use remote sensing technology -- particularly instruments aboard aircraft and satellites in combination with computers -- to inventory and monitor natural resources and environmental conditions. Master's theses and doctoral dissertations are required.

Land Resources Program. Also offering both master's and doctoral degrees, this program accommodates students with a broad range of interests in land and natural resources. Students, according to well-developed guidelines and with faculty consultation, design study plans to suit their own needs. Master's theses and doctoral dissertations are required.

Water Resources Management Program. Designed to train water resources practioners, this program offers master's degrees only. Students end their coursework with a group practicum that focuses on an actual public water resource problem.

Energy Analysis and Policy Curriculum. This master's-level curriculum is for graduate students who wish to learn about energy problems and management. The curriculum is an option in IES's Land Resources Program and in the master's programs of the Department of Urban and Regional Planning and the LaFollette Institute of Public Affairs. Program requirements vary.

Environmental Studies Certificate Program. Any UW-Madison undergraduate can earn a special environmental studies certificate by completing at least 26 credit hours of courses recommended by IES.

Enrollment in IES's three graduate programs, including Energy Analysis and Policy Curriculum students in the Land Resources Program, reached an all-time high of 180 students at the beginning of the 1990s. Meanwhile, 116 undergraduate students were enrolled in the Environmental Studies Certificate Program. Between 1970 and 1990, more than 800 persons earned IES degrees or certificates.

More than 70 professors from approximately 25 UW-Madison departments and schools teach IES's courses and direct its graduate and undergraduate programs. Their academic backgrounds include agricultural economics, agricultural engineering, agricultural journalism, botany, business, civil and environmental engineering, economics, forestry, geography, geology and geophysics, general engineering, history, horticulture, journalism and mass communication, landscape architecture, law, philosophy, physics, political science, preventive medicine, rural sociology, soil science, urban and regional planning, water chemistry, wildlife ecology, and zoology.

Research

The range of problems and issues explored by IES researchers is vast: Agricultural impacts of climate change. Uses of remote sensing technology in natural-resource management. Health risks from air and water pollution. Better measures of human well-being and environmental

quality. New ways to organize, store, and retrieve resource-related information. Earth systems science and sustainable development of the biosphere. These things -- and many more -- are under study in the institute.

IES is home to seven research centers. Each draws professors, staff scientists, and graduate students from a variety of academic disciplines to explore a different realm of the "human-environment system."

Center for Biotic Systems. Ecosystems and biological aspects of the environment are the focus of study. Recent research revolves around aquatic plants, wetlands, and restoration of terrestrial ecosystems disturbed by human activity. The center also has extensively studied wetlands, rivers, eutrophic lakes, and the environmental impacts of dams. Although much of its work has concentrates on Wisconsin ecosystems, the center is increasingly involved in projects in Europe, Central America, the Caribbean, and Asia.

Center for Climatic Research. Understanding the causes, mechanisms, and evolution of world climate patterns and the impact of climate on ecosystems are this center's objectives. Its researchers diagnose and model the behavior of past and present climates and attempt to improve the reliability of long-range seasonal forecasts. The center leads an international scientific effort to document the last 150,000 years of world climate change. It operates several laboratories and is connected with the supercomputing facility of the National Center for Atmospheric Research.

Environmental Policy Studies Center. Environmental policy problems and solutions are the purview of this center, whose research endeavors range from local to global proportions. The most ambitious current project in the center is an attempt to evaluate and refine statistical indicators of human well-being and of the long-term ability of the planet to sustain major human activities.

Environmental Remote Sensing Center. Closely tied to IES's Environmental Monitoring Program, this center conducts research to improve the gathering and analysis of remotely sensed data, to apply remote sensing technology in new ways to the measurement, study, and management of Earth resources, and to incorporate these data into multipurpose geographic information systems. ERSC has pioneered the development of image-processing software for microcomputers.

Center for Human Systems. Social, cultural, and behavioral aspects of people's interactions with the environment are examined in this center. Environmental health questions, especially the potential health effects of air and water pollution, are typical research topics. In conjunction with state government, researchers also focus on environmental risk analysis, assessment, and management.

Center for Land Information Studies. Researchers in this center attempt to solve technical and institutional problems associated with the development of modern land information systems -- mechanisms for acquiring, storing, retrieving, and exchanging geographic information of all types. The North American Institute for Land Information and the Land Information Assembly have designated UW-Madison a North American "center of excellence" in this field.

Marine Studies Center. Resource problems and policies related to the oceans and Great Lakes are the subject of this center's research. In recent years, researchers have investigated ways to re-establish self-sustaining populations of lake trout in Lake Michigan and compiled information to help formulate government policy on potential diversions of Great Lakes water.

IES has received more than $40 million in research grants since 1967. Major grantors include the National Science Foundation, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration; the U.S. Departments of Agriculture, Education, Energy, and the Interior; the U.S. Environmental Protection Agency, U.S. Office of Naval Research, and U.S. Army Corps of Engineers; the Wisconsin Departments of Administration, Agriculture, Natural Resources, and Transportation; the Rockefeller Foundation, William and Flora Hewlett Foundation, Jesse Smith Noyes Foundation, Wisconsin Alumni Research Foundation, Pew Charitable Trusts, Brittingham Fund, and Evjue Foundation; Union Carbide Corporation, Wisconsin Power & Light Company, Wisconsin Electric Power Company, and Madison Gas & Electric Company.

Outreach

An award-winning radio program. A technical report series. Special periodicals. Public lectures. These are just a few of the channels through which IES reaches beyond the UW-Madison campus to share its expertise with the rest of the world. Since its inception, the institute has given high priority to public outreach activities.

Earthwatch. IES and the University of Wisconsin Sea Grant Institute coproduce this series of two-minute radio features on environmental issues and research. Heard five times a week on 110 stations in 10 states, *Earthwatch* has been on the air for more than 17 years, is widely recognized in the upper Midwest, and has won a number of awards.

IES Reports. These technical reports -- 136 to date -- feature research by IES faculty, staff, and graduate students and proceedings of special IES-sponsored seminars. Copies are distributed on request from the IES Office of Publications, Information & Outreach. Nearly 50 libraries -- 40 in the United States and eight in foreign countries -- are depositories for IES's report series.

Guest Lecturers and Lecture Series. The institute hosts a number of public lectures each year on environmental topics related to its instruction and research programs. In the summer of 1987, IES sponsored a major eight-week lecture series, "Environment and Development: Building Sustainable Societies," featuring prominent national and international speakers. In 1990, the institute organized a similar series entitled "Earth Day 1990: Global Environmental Issues" to mark the 20th anniversaries of Earth Day *and* IES.

Periodicals. The institute publishes several newsletters. One, *Environmental Job Opportunities*, regularly lists job openings in environmental fields and and circulates nationally. Others, aimed at a mix of internal and external audiences, report on the institute's activities. IES also houses the editorial office of *URISA Journal*, a semi-annual publication of the Urban and Regional Information Systems Association.

Student Projects. Some IES courses put students to work on community environmental problems. In the annual practicum of the Water Resources Management Program, a student research team works with one or more Wisconsin communities, usually in concert with a state agency, to solve a significant water-resource problem. The practicum has produced many lake- and stream- management plans to protect and improve water quality, recreational opportunities, and other public benefits.

Special Projects. The institute often shares its expertise with other institutions. IES scientists, for example, recently helped Indonesia's agricultural university establish an image-processing laboratory for remotely sensed data and train people to operate it. Other faculty and staff have recently begun cooperating in the field of environmental education with educators in the Soviet Union.

Public Service. Many IES faculty and staff serve in scientific, professional, and other public-service organizations ranging from the National Science Foundation and the American Congress on Surveying and Mapping to the North American Association for Environmental Education and The Nature Conservancy. The institute encourages faculty and staff to participate in such organizations.

For more information, contact: Office of Publications, Information & Outreach, Institute for Environmental Studies, 550 N. Park St., 15 Science Hall, Madison, WI 53706, (608) 263-3064.

Fact Sheet 7
Institute for Environmental Studies
University of Wisconsin-Madison
January 1990

Glasnost Reveals USSR's Environmental Woes

ON WISCONSIN Fall/Winter 1989

By Tom Sinclair

Marat Khabibullov cannot say what prompted him to become an ecologist. He seemed to be born with an interest in the natural world.

As a young boy growing up in the Soviet city of Kazan, about 500 miles east of Moscow, he often explored the shores and broad waters of the Volga River near his home. He loved to read about zoology. Khabibullov drew inspiration from many sources, including Aldo Leopold's *A Sand County Almanac*.

After graduating from high school, Khabibullov entered Kazan State University's Department of Nature Protection, the oldest in the Soviet Union. Five years later, with a bachelor's degree, he left to work in a wildlife research laboratory in the Soviet republic of Turkmenia. He later returned to Kazan State to pursue a Ph.D. in reptile ecology.

At age 29, his doctorate virtually in hand, he is a researcher in Kazan's Laboratory of Ecological Modeling and Education. He also coordinates his department's cooperative international programs. And still, he enjoys nothing more than to be outdoors, in the wild.

When he read Leopold's book in high school, the young Soviet did not imagine he would one day walk the paths of the author's rural Wisconsin refuge or visit the wooden shack where Leopold wrote so eloquently about humanity's relationship with the land. Wisconsin might as well have been on a different planet.

But remarkable changes in his homeland and a renaissance in Soviet-American relations brought Khabibullov to Wisconsin last summer. As a guest of the Institute for Environmental Studies (IES) and the Division of Summer Sessions and Inter-College Programs at UW–Madison, he became the first Soviet to teach a course to American college students about the environment and environmentalism in the USSR.

His course, arranged by IES's director, Arthur Sacks, is perhaps the most ambitious achievement to date by IES and several Soviet universities that have endeavored for the past two years to share expertise and information. Under a formal agreement between the U.S. and Soviet governments to cooperate in environmental protection, more than a dozen environmental scientists and educators from the USSR have visited UW–Madison, and several UW–Madison experts have traveled to the Soviet Union.

During his stay in Madison, Khabibullov was outspoken about the need for more and better environmental protection in his country. He said the Soviet environment is in dismal shape because of uncontrolled air and water pollution, careless resource management, and inefficient technology.

The most blatant example, according to Khabibullov, is the Aral Sea region of Soviet central Asia. Once home to tigers, leopards, deer, and birds, much of the densely forested land was cleared to grow cotton, and many animals disappeared for lack of habitat. Intense irrigation eventually increased the salinity of the soil so much that farmers were forced to abandon the land. Now it is barren and virtually useless.

Until two or three years ago, the Soviet government did not acknowledge the nation's environmental problems, said Khabibullov, and the Soviet public had no way of knowing how serious they had become. But political fallout from the highly visible nuclear accident at Chernobyl and Mikhail Gorbachev's policies of glasnost and perestroika have begun to yield dramatic changes.

"We are getting more and more information about the real state of the environment. Before glasnost it was impossible. We didn't know anything about the environmental situation in our country," said Khabibullov.

"Also, glasnost and perestroika woke up public and social activity and social movements. It's a great thing because before Gorbachev we couldn't really express our opinions, express our will. Now we have more possibilities, and more and more people are involved in this political process to influence the bureaucracy to do something to solve Soviet environmental problems. It's a new trend in our country; before this, everything was governed from above."

Eager to attack their country's environmental problems but uncertain where to begin, Soviet scientists are looking to more experienced countries for ideas. Thus Khabibullov had a dual mission at UW–Madison. "I came here not only to teach, but also to learn," he explained.

"I hope I gave the students not just an impression of the system we have for nature protection in the Soviet Union, but a chance to compare the American and Soviet systems. We have to take into strong consideration the differences between the two economic and political systems. By collaborating, perhaps we can extract good things from the Soviet system and good things from the American system and come up with a kind of ideal system."

IES Celebrates 20th Anniversary

The Institute for Environmental Studies celebrates its 20th anniversary next semester with a special course on Earth Day 1990, public lectures by noted environmental experts, an environmental symposium, films, and other activities.

IES's celebration will coincide with the nationwide observance, on April 22, 1990, of the 20th anniversary of Earth Day, a landmark event in the American environmental movement. For information about events, contact the Institute for Environmental Studies, 550 N. Park St., 15 Science Hall, Madison 53706.

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies Institute

Release: Immediately 6/23/88

CONTACT: Bruce Allison (608) 257-4126

DROUGHT'S TIMING BAD NEWS FOR TREES

By Steve Pomplun
UW-Madison Institute for Environmental Studies

MADISON--This spring's extended drought has hit farm crops hard, but it may soon begin to claim other victims, including trees.

Bruce Allison, a doctoral student in the University of Wisconsin--Madison's Institute for Environmental Studies and operator of a Madison tree-care company, says trees normally add new tissue during the spring and store up food for the rest of the year. Without water now, he says, trees will be less vigorous later.

"Lack of moisture is much more significant now than it would be in August because of the loss of spring growth," Allison says, "and this reduces the ability of trees to cope with other stress factors, such as insects and disease organisms, that might come along."

Allison says he's already seeing unusually large numbers of tree pests such as leaf-miners, aphids, and borers.

"In fact, it's the worst year for infestations that I've seen in 15 years of observing trees," he says. The early spring, combined with the lack of heavy rains to knock insects out of trees, has allowed pests to feed and lay eggs on leaves without interruption. As a result, Allison says, insect populations are booming and their damage to trees is widespread.

Trees are also beginning to show the direct effects of nearly six weeks without rain. Leaves are curling up to reduce the surface area exposed to the sun and dry air and thereby preserve moisture. Some trees are even dropping leaves in an effort to divert water to their branches and trunks.

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Allison says most people water their young trees but mistakenly assume that mature trees can take care of themselves because of their deep-running roots. Those "sinker" roots may bring up enough moisture from deep in the ground to keep the tree alive, he says, but they'll do little more than that.

"Most trees have the significant roots -- those that transfer most of the water, nutrients, and oxygen -- in the first six to 12 inches of soil," he explains. "If you dig into that layer of soil right now, you'll find that there's absolutely no moisture in it. So even if a tree is able to keep itself alive through this drought, it's not going to be very vigorous."

Larger trees also lose water faster because of the greater surface area of their canopies. Allison says a big elm tree may lose as much as 50 gallons of water per day from its leaves.

Normal spring rainfall averages an inch per week, and Allison advises tree owners to make up for that beneath trees of all sizes. While sprinkling lacks all the benefits of a good, hard rain, he says, it will allow trees to fend off pests this summer and store up food for next winter.

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--Steve Pomplun (608) 263-3063

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 4/6/88

CONTACT: Michael Kraft (608) 262-3581

RISK CONFERENCE SCHEDULED APRIL 13-14

MADISON--Distinguished researchers from around the country will join University of Wisconsin-Madison faculty to address issues of environmental risk assessment at a conference Wednesday and Thursday (April 13 and 14) at the Wisconsin Center, 702 Langdon St.

The La Follette Institute of Public Affairs and Institute for Environmental Studies at UW-Madison are sponsoring the event, which will consider such topics as modeling uncertainty in long-term global risks, evaluating policies toward endangered species, barriers to risk communication, and financing liabilities under the federal Superfund program.

Guest speakers will include economist Lester Lave of Carnegie-Mellon University, Susan Hadden of the University of Texas, former UW-Madison Professor Charles Cicchetti (now at Harvard University), Daniel Fiorino of the U.S. Environmental Protection Agency, Howard Kunreuther of the University of Pennsylvania, and Paul Portney, former White House staff economist now with Resources for the Future.

Michael Kraft and A. Myrick Freeman, visiting professors this semester with the La Follette Institute, are chairing the meeting.

Kraft says risk assessment conferences frequently address singular topics such as chemicals in the environment or communication, but the UW-Madison meeting will cut across many areas to evaluate economic and political aspects

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of decisionmaking.

UW-Madison professors who will present papers are Richard Bishop (agricultural economics/environmental studies) and Dan Anderson (business).

Discussants will include Professors Rodney Stevenson (business/environmental studies), Sharon Dunwoody (journalism and mass communications/environmental studies), Thomas Heberlein (rural sociology/sociology/environmental studies), Roger Formisano (business), Jean-Paul Chevas (agricultural economics), Kraft, and Don Theiler, air management director at the Wisconsin Department of Natural Resources.

The conference is free, but advance registration is appreciated. For a copy of the program or to preregister, contact Debra Hegerfeld at the La Follette Institute, (608) 262-3581.

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-- Nick Houtman (608) 262-4510

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Environmental Studies

Release: Immediately 1/8/88

CONTACT: Arthur B. Sacks (608) 262-5957

UW-MADISON PLEDGED $1.2 MILLION FOR NEW ENVIRONMENTAL PROGRAM

MADISON--The University of Wisconsin-Madison has received a pledge of $1.2 million to create a new academic and research program in honor of retired UW-Madison climatologist Reid A. Bryson.

The donor wishes to remain anonymous.

The pledge -- $300,000 of which has already been received -- provides more than half of the total amount sought by the university's Institute for Environmental Studies (IES) and College of Letters and Science for an endowed Interdisciplinary Climate, People, and Environment Program at UW-Madison. IES Director Arthur Sacks said he is optimistic that the balance needed to fund the program fully can be raised from other sources.

Sacks said the program's goals are to establish a distinguished professorship in Bryson's name, graduate and post-graduate fellowships, symposia, and publications -- all focused on the interrelationship of climate, human population, and the environment. The program would be administered by IES in cooperation with the College of Letters and Science.

Bryson, now an emeritus professor, is known internationally for his pioneering studies in world climatology, particularly on climatic changes resulting from human activities. He founded the university's department of meteorology in 1948 and served as its first chairman. Later, from 1970 to 1985, he served as first director of the Institute for Environmental Studies.

He retired in 1986, 40 years after joining the UW-Madison faculty, but continues his research and writing as a senior scientist in IES's Center for Climatic Research.

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-- Tom Sinclair (608) 263-5599

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies Institute Law

Release: Immediately 10/16/87

NOTE TO EDITORS/NEWS DIRECTORS: The Soviet scientists will be available for a limited number of interviews on Monday, Oct. 26, from 11:30 a.m. to noon. If you wish to schedule an interview, contact Tom Sinclair (608) 263-5599 no later than noon, Oct. 23.

SOVIET SCIENTISTS TO VISIT UW-MADISON

MADISON--Six Soviet scientists will visit University of Wisconsin-Madison Oct. 25-28 to get a firsthand look at environmental studies, science, and education American-style.

The scientists constitute a USSR Environmental Education Working Group created under a 10-year-old agreement between the United States and the Soviet Union to cooperate in environmental protection.

They will tour the university and meet with faculty members, administrators, students, and staff, according to Arthur Sacks, director of the UW-Madison Institute for Environmental Studies. Sacks, a member of the corresponding United States' working group, invited the Soviets during a recent conference in Moscow.

"We will explore the potential for cooperative endeavors in environmental education with the Soviet group," said Sacks, who foresees possible student and faculty exchanges, field work, co-production of educational materials and jointly taught courses.

One of the visitors, Valery S. Petrosyan, a Moscow State University chemistry professor, will give a free lecture on Soviet environmental education Monday, Oct. 26 at 3 p.m. in Room 180 Science Hall.

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Add 1--Soviet visitors

The Soviets are scheduled to visit such environmental attractions as the International Crane Foundation and Aldo Leopold Memorial Reserve in Baraboo as well as UW-Madison's climate and environmental remote sensing research centers.

Heading the delegation will be Professor N. Egorov, the USSR's vice minister of higher and secondary education. Other members, besides Egorov and Petrosyan, will be Professor Y. Kotov of the Department of Nature Protection and Ecology at the University of Kazan; Professor Y.A. Lejkin, Department of Industrial Ecology, D.I. Mendelejev Institute of Chemical Technology; and Associate Professor Lyudmila Treijakova, an organic chemist at the Mendelejev Institute and main scientific secretary of the Soviet Ministry of Higher Education.

Traveling with the delegation will be Professor Dmitri N. Kavtaradze, head of laboratory ecology and nature protection at Moscow State University. Kavtaradze is a visiting professor this year at Dartmouth College in Hanover, N.H.

The American and Soviet Environmental Education Working Groups operate in concert with a larger, US-USSR Committee in the Field of Environmental Protection chaired by the heads of the U.S. Environmental Protection Agency and Hydromet, EPA's counterpart in the Soviet Union.

The Soviet visitors also will visit Dartmouth College, Ohio State University, and Washington, D.C. during their two-week stay in the United States.

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-- Tom Sinclair (608) 263-5599

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Environmental Studies Institute

Release: Immediately 9/17/87

CONTACT: Peyton Smith (608) 262-6393, Tom Sinclair (608) 262-5599

EARTHWATCH: 15 YEARS OF PLUGGING THE ENVIRONMENT

MADISON--Sandwiched between the news and the latest in Top 40, the familiar crescendo of the synthesizer punctuates the airwaves: Earthwatch, the bite-sized environmental and science radio program, is about to air -- for the 3,900th time.

Fifteen years ago this week, Earthwatch Radio played for the first time on 12 Wisconsin radio stations. Today, the program, produced by the University of Wisconsin Sea Grant Program and the UW-Madison Institute for Environmental Studies, is played on 110 stations in eight states. Its potential audience numbers in the millions.

The program has garnered a wall full of national and state awards and people from as far away as Central America, Thailand and India have tapped Earthwatch producers for advice on producing similar programs.

Born at the height of the environmental movement, the five-day-a-week, two-minute long program has covered topics ranging from the benefits of bats to the cancer-fighting potential of a chemical derived from sea squirts. Other stories have focused on the world's vanishing tropical rain forests, climate change, endangered species and toxins in Great Lakes fish.

"Just about any science or environmental story is fair game," said Earthwatch co-producer Peyton Smith. The only ground rule for the program's writers -- many of whom are UW-Madison students -- is that the story be balanced and accurate.

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"That's one of the reasons Earthwatch has been so successful," said Smith. "We don't use it as a soapbox. We've dealt with some emotional issues like the safety aspects of nuclear power, the Alaska pipeline and toxic wastes, but each story is put in perspective. It's never one-sided."

Student involvement in the writing, production and marketing of Earthwatch has also been a cornerstone of the program, according to co-producer Tom Sinclair of the Institute for Environmental Studies. "Scores of people have contributed to Earthwatch over the years. They all deserve credit for the success of the program."

While much of Earthwatch's success can be attributed to the students who have made the program work, the students themselves benefit by the experience, Smith said.

"The stories our students write get used. The program gives students something to show for their work," he said. "It's not just an academic exercise."

Many former Earthwatch writers have gone on to successful careers in radio, television, newspapers and magazines. Others have become doctors, lawyers, businesspeople and environmental consultants.

Over the years, the Earthwatch format has changed little. The emphasis, said Sinclair, is to use those two minutes to convey useful information in an entertaining manner. "We haven't had to change it much because we haven't had to in order to succeed."

Smith, who, as a UW-Madison undergraduate, helped originate the program in 1972, admits to being pleasantly surprised by the program's longevity.

Earthwatch has weathered what some perceive as a waning interest in environmental issues, he said. It also has survived the deregulation of radio and less stringent FCC rules requiring commercial stations to devote time to public affairs programming.

When Earthwatch was launched, about 85 percent of the stations airing the program were commercial stations, Smith said. Since deregulation, use by commercial stations has dropped to a little more than 60 percent, but Smith and Sinclair feel that is still an unusually high usage rate in what is considered to be an extremely volatile market.

"We must be providing something that radio stations like and something that radio audiences listen to," he added. "If we didn't, Earthwatch would be nothing but a memory."

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-- Terry Devitt (608) 262-8282

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies Institute

Release: Immediately

7/13/87

CONTACT: Kathe Glassner (608) 262-2950, Bob Linck (608) 263-6793

EDUCATING PUBLIC ABOUT LAKES IS STUDENTS' AIM

By TOM SINCLAIR
UW Institute for Environmental Studies

MADISON--Consider the irony:

The Madison-area lakes are among the most intensively-studied lakes in the world. Yet much of what's been learned about them -- including why they are plagued with weeds and algae and what could be done about it -- is unknown to people who live near them, boat on them, and fish and swim in them.

Enterprising students in the Institute for Environmental Studies at the University of Wisconsin-Madison hope to remedy that.

Since January, they have gleaned facts from a multitude of studies conducted by the university and other organizations and interviews with a variety of local experts to devise new public information and education materials about the lakes.

A $7,000 grant from the Wisconsin Department of Natural Resources (DNR) will enable the students to produce a citizens' guide, a middle-school curriculum, and a narrated slide show about the lakes and their problems by summer's end. They are also drawing up a proposal for a lake education center.

"We want people to realize that everything they do in this watershed may have direct or indirect consequences on the lakes. If they recognize that, perhaps they will decide to do some things differently," explained Bob Linck,

-more-

who, with 14 fellow graduate students in water resources management, embarked on the project last winter.

"We're also trying to stimulate people who want to do more than that to take a political role, or whatever role is best for them, to make a wider contribution."

A series of stories in a local newspaper last September rekindled interest in the water-quality woes of the big lakes of the Yahara River watershed: Mendota, Monona, Waubesa, Kegonsa and Wingra. A special committee headed by state Rep. David Clarenbach has subsequently considered the lakes' problems and what to do about them.

Aquatic weeds and algae blooms plague growing portions of all four lakes. They drive away swimmers, tangle boat motors and fishing lines, and foul the air with the stench of rotting plants.

Although some area residents are aware that an abundance of the nutrient phosphorous in the lakes is largely to blame, too few understand where the phosphorus comes from and how its levels in the lakes might be reduced, according to the UW-Madison students.

"Land use practices in the watershed are clearly one of the most important sources of phosphorus and other nutrients in the lakes," said Linck. "There's an ongoing argument over who contributes more: urban or rural areas. But that's irrelevant. Both are major sources of nutrients that cause weeds and algae to grow."

Everything from residues of fertilizers and animal manure to grass clippings and fallen leaves, swept into the lakes by stormwater runoff, adds phosphorus to the lakes. That will be one of the messages of the new educational materials. But another will be that halting the flow of phosphorus into the lakes would not clear them up overnight; the surplus already there would take decades to dissipate.

Student Kathe Glassner, a former teacher who's helping write the curriculum and slide show, says she and her classmates are trying not to create unrealistic expectations.

"The public needs to understand the dynamics of the lakes," she said. "We don't want to deceive people into thinking that if they change their land-use practices then the problems will disappear immediately. Rehabilitation will take a long time. Still, people should realize that if they don't change their behavior, the lakes could get worse than they are now."

Though the students will complete their work next month and go their separate ways, they hope to pinpoint local organizations and schools that can put the educational materials and their other ideas to good use.

"We want to produce something that will last longer than our group," said Linck. "It would be good if we could find someone who can carry the ball afterward."

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-- Tom Sinclair (608) 263-5599

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Environmental Studies Institute

Release: Immediately

7/8/87

CONTACT: Antje Lisken (608) 262-2760

PRAIRIES -- ISLANDS OF REFUGE FOR SPIDERS

By Inga Brynildson
University News Service

MADISON--When environmentalists talk about preserving the web of life, they're usually being metaphorical -- a way of saying we need to keep the natural world intact.

When Antje Lisken talks about preserving webs, she literally means webs and their builders -- spiders.

The existing natural diversity of spiders in the cornbelt is the result of surviving prairie remnants, said Lisken, a University of Wisconsin-Madison ecologist.

"Spiders are a vital part of a healthy prairie community and important in balancing insect populations," Lisken said noting that some people may not share her concern for the eight-legged arachnids.

Lisken, an exchange graduate student from the Friedrich-Wilhelm University in Bonn, Germany, said, "Prairies are islands of refuge for spiders -- especially web-building spiders."

Prairie once dominated the midwestern landscape but now exists in scattered remnants between fields of crops, pastures, roads and cities. Wisconsin now has only 2,000 of an original two million prairie acres. Iowa has only 3,500 dispersed acres remaining from its original 30-million-acre prairie.

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Lisken said these remnant natural grasslands are inhabited by more spiders and more spider species than surrounding "artificial grasslands" like hay fields and pastures.

Lisken surveyed spider populations on three dry prairies in the Madison area -- Muralt Bluff, Hawk Hill and Oliver prairies -- and in surrounding farmlands.

Using a tall round metal frame, Lisken counted all the spiders on the ground and on the grasses inside the frame. After dozens of samples, she concluded that pastures and hayfields are inhabited by only half as many spiders as prairies and have only 60 percent of the variety of spiders.

On two of the prairies she sampled, Lisken found about 10 spiders per square yard compared with only five spiders in hayfields and four spiders per square yard of pasture.

Pastures also netted the fewest spiders in sweep net samples collected by swishing a butterfly-type net through the grass.

"Pasture is not suitable for web-builders -- the grass is too short. In hayfields the grass is too dense for some webs, and it may not be strong enough to hold them, said Lisken.

"The kinds of plants may not be as important to spiders as they are to insects because spiders are predators -- they eat whatever they can catch. Some insects eat only a certain kind of nectar or leaf. So the kind of plant is probably not so important as the structure of the plant for web-building spiders."

Lisken said that her research supports the currently popular ecological theory known as "island biogeography." According to the theory, remnant natural habitats are like oceanic islands in that they are ecologically isolated from surrounding lands.

According to Lisken, that isolation makes the inhabitants of the "prairie islands" very vulnerable to habitat disturbance.

"Without the prairie, some of the species would disappear. Several families of spiders, like jumping spiders, crab spiders and running spiders, are missing completely from the hayfield and the pasture. Many spiders evolved with the prairie and can survive prairie fires, but not agriculture or development," she said.

Lisken presented her research June 16 at the annual meeting of the American Arachnological Society held at Harvard University.

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-- Inga Brynildson (608) 262-9772

Received 10/6/00

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UW-MADISON RESIDENCE HALLS WILL SERVE A LOCALLY GROWN, ORGANIC DINNER OCT. 10

Do you think that all dorm food is forgettable? If so, the University of Wisconsin-Madison Residence Halls Dining Service wants to change your mind. On Tuesday, Oct. 10, you can enjoy a delicious, healthy dorm dinner prepared from fresh, organically grown ingredients raised on Wisconsin farms.

"UW-Madison spends almost $10 million a year on food," said meal organizer and UW-Madison student Janet Parker. "By participating in this meal, you can encourage UW-Madison to use this buying power to support Wisconsin's family farmers and environmentally friendly agriculture."

Dinner will be served from 5 p.m. to 7 p.m. at Frank's Place Dining Center on the UW-Madison campus. Frank's Place is located behind Allen Centennial Gardens, between Observatory Drive and Lake Mendota, west of Babcock Drive. Parking is available in the residence hall lots (#32 and #34) after 4:30 p.m.

Both students and the public are invited. Most of the menu will come from family farms in southern and central Wisconsin. For $5.98, diners may select an entree, two side dishes, a dessert, and a beverage from a variety of choices.

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ORGANIC DINNER -- add one

According to Sue Olson, director of Frank's Place, the menu will include a vegetable stew, vegetable stir-fry, veggie burgers, acorn squash, beets, a root vegetable mix, a wild rice dish, a baked potato bar, and apple cider. Hickory nut brownies, caramel apples, and a pear crisp are just a few of the desserts planned for this meal.

Meal sponsors include the UW-Madison Residence Halls Dining Service; the Center for Integrated Agricultural Systems, FH King Students of Sustainable Agriculture, and the Departments of Rural Sociology, Plant Pathology, and Soil Science at the College of Agricultural and Life Sciences; and the UW-Madison Institute for Environmental Studies.

Come to this meal and encourage UW-Madison to support family farmers and healthy eating! For more information, contact Janet Parker at (608) 265-7914 or **janetparker@students.wisc.edu**

##

dormdinner 10/00
writer: Cris Carusi