Arboretum news. Volume 15 1966

THE UNIVERSITY OF WISCONSIN

ARBORETUM NEWS

Vol. 15, No. 1 Madison, Wisconsin Winter, 1966

WINTER BIRDS AT THE ARBORETUM

Bird life at The University of Wisconsin Arboretum is varied, even in winter. Its diversity of plant cover—deciduous woods, conifer stands, grasslands, brushy carrs, marshes and springs—makes the Arboretum attractive to birds.

The most familiar of our winter birds prefer deciduous woods: Downy Woodpecker, Hairy Woodpecker, White-breasted Nuthatch, Black-capped Chickadee and an occasional Brown Creeper. They often travel together in bands, perhaps cooperating in finding food and detecting predators, perhaps just for company. When a friendly group of Chickadees comes over to inspect you, watch for their larger companions and listen for that shy ventriloquist, the Creeper. These five birds seek insects on bark and twigs throughout the Arboretum.

In this same group but less abundant are the handsome Red-bellied and Red-headed Woodpeckers and the sprite-like Tufted Titmouse. Both Woodpeckers store acorns in bark. A Redhead, seen plucking acorns off a Grady oak and hiding them in various branches last October, has stayed through the winter. Red-bellies have been vociferous in the Wingra-Gallistel Woods and the Grady Oaks. A family of Titmice is frequenting the Spring Trail Pond (Duck Pond) area.

Almost anywhere in the Arboretum you may meet the two most colorful winter birds—Blue Jay and Cardinal. Jays can be raucous, but their other numerous calls are very musical, and when these jolly roving pranksters find no legitimate cause for excitement, listen for some expert imitations of other birds. Quite a different personality marks the Cardinal. Dignified and lovely in song and plumage, Cardinals have dispersed from their native southland during the past century to become one of our most abundant permanent residents.

The thick-beaked, seed-cracking Finches comprise another important group of winter birds. Finches hop and scratch with both feet at once, leaving pairs of tracks in the snow. Four Finches, in addition to the above-mentioned Cardinal, winter regularly in the Arboretum. Goldfinches, the smallest, are often mistaken for warblers in their olive winter garb; but their bouncing flight and Canary-like calls are unmistakable. Slate-colored Juncos appear everywhere, neatly dressed in white and charcoal. The soft "tititit" of their calls and the flash of white tail feathers are as much a part of winter as the cold, snowy expanses they explore on foot. Tree Sparrows travel in numbers in open areas. Their jolly, musical, feeding chorus is very different from their single, plaintive chirps that carry so far in the cold air. Finally, a metallic "chip" is sure to announce a handsome Purple Finch or two as you walk in the Arboretum. The four northern Finches move about the Arboretum freely. Brushy places are favorite loafing sites, but the highest concentrations occur in weed patches where they feed daily on lamb's quarters *(Chenopodium album)*, ragweed *(Ambrosia artemisiifolia)*, horseweed *(Conyza canadensis)*, and frost aster *(Aster pilosus)*. The importance of annual weeds for the survival of winter birds cannot be overestimated.

Not all the winter Finches visit us so regularly, and it is the unusual appearance this year of certain erratic visitors from the Canadian Conifer Belt that prompted the writing of this article. Yellow and black Evening Grosbeaks have appeared in the box elder groves near Ho-Nee-Um Pond and the Teal Pond tamaracks. The gray to rosy-brown Pine Grosbeaks have fed on highbush cranberries in the Arboretum Nursery and near Teal Pond. It is hard to predict where these big Grosbeaks will appear next. They feed so quietly and are so tame, it is possible to walk by without noticing them. White-winged Crossbills, the rosy-pink males rivaling the Cardinal in brightness, are another exciting addition, appearing on occasion in the Teal Pond tamaracks and adjacent jack pines. Since Crossbills, like Grosbeaks, call mostly in flight, a birdwatcher in the pines must depend on tiny cone-cracking sounds to detect them. Finally, it has been a real treat to see flocks of 5-50 tiny Common Redpolls swirling about over the Arboretum. Resembling Goldfinches in size and some of their calls, the arctic Redpolls are rosy-tinted with a black chin, and are fond of feeding on white birches.

Not all of the northern birds who make the Arboretum their winter home are Finches. The companionable, soft-colored Cedar Waxwings, attracted to the fruit of roses, highbush cranberries, apples and hawthorns, sit in hedgerows—by Stevens Pond, the Nursery, Grady Prairie—and also rove about almost anywhere. Last fall, many Red-breasted Nuthatches moved down from the north, and a few have stayed, as they often do, in the Leopold Pines.

Birds of prey are rich in species but seldom observed, being at the top of the food pyramid where numbers are few. The nocturnal Owls are a special challenge, but their detection is often made easy by the screams of Jay and Crow or the finding of pellets under a tree. A Great Horned Owl or a Barred Owl may roost in the pines. A Screech Owl, easily hidden in a hollow oak, may reveal its presence by twilight trills long before spring arrives. Look for northern Owls, too—the tiny, tame Saw-whet in pines or the Teal Pond cedars and the huge Snowy Owl out on the frozen lake.

Hawks that may soar over prairie or marsh include the Red-tail, Rough-leg, and sometimes a Red-shoulder, Sparrow or Marsh Hawk. A Cooper's Hawk has been frequenting the Lost City-Gallistel Woods area. Northern visitors far less frequent than Rough-legs include Goshawk, Bald Eagle and Northern Shrike.

This still does not exhaust the bird list. Some migrants fail to go south so the Arboretum usually harbors a few Robins, Snipe, Mourning Doves, Blackbirds

Many remedies have been offered, but few of these are reasonable and practical and all show a lack of insight into the problem. Less perceptive men than I have proposed that plastic replicas of plants and animals be distributed about the countryside. Though a logical and sensible suggestion, it shows a lack of experience with the idiosyncrasies of nature lovers who place a great deal of importance on whether or not something is "natural." My own proposal is beautifully "natural" and also simple, inexpensive and aesthetically sound.

I propose that examples of all living organisms be preserved—not in refuges, but in formaldehyde. Thus there would be *real* examples of wild creatures to satisfy those who insist on the genuine article. Moreover, I would have motion pictures taken of all natural communities with close-up sequences of the individual plants and animals in them. Recordings could be made of whatever sounds they make. (This would not be as expensive as it might appear, since some animals, such as giraffes, would require only pictures.) At the same time organic chemists should immediately be supported on a project to imitate the odors which lovers of the outdoors acclaim so loudly—pine needles, sweet fern, wild roses.

The motion pictures should be shown in certain special theaters (I propose they be called *Ecocinemas*) in which all the appropriate sights, sounds and smells would be brought together, refined and improved to produce an art form vastly superior to nature itself. Once they have seen *Ecocinema,* I predict that the nature lovers will never again give a genuine dickey-bird a second glance. To add to their delight, the *Ecocinemas* will have controlled climates, so that it will be hot and dry for desert scenes, hot and humid for jungle scenes, and so forth. During films of the arctic and of winter, mica flakes would be blown out of the ventilators for added reality. Some theaters could offer even greater genuineness. The sprinkler system could occasionally douse the spectators to imitate rain and, similarly, sand, dust, sea spray, or whatever is appropriate could be blown into their faces. Undoubtedly some itching powder could be found to approximate the feeling of mosquito bites.

Youthful viewers could be required to watch the spectacle while working treadmills, giving them all the benefits of a hike in the woods. During autumn scenes, small pieces of crumpled paper could be dropped on the treadmill to reproduce the sound and feel of dried leaves. Periodically, as their feet became overheated from the exertion, the treadmill could be stopped and small refrigerated tubs of water provided to simulate icy mountain streams. (This water might be recycled through the air conditioning system for efficiency.)

Since many nature lovers are to some degree misanthropic, small private cubicals away from the main viewing area could provide such people the illusion of being alone. To heighten this feeling an electronic system could easily be installed which, when shouted into, would return an echo. This would be especially effective in scenes of our northern Wisconsin lakes, for instance, where it could be mingled with cries of the loon.

This brief outline merely suggests the refinements that are possible. I am certain that with a reasonable investment *Ecocinema* cannot fail to satisfy nature lovers, for it will guarantee them something as genuine, or even more genuine, than nature itself. Once we have quieted the fears of these people, we will be able to deal with the problems of pollution reasonably, so that our factories will not have to shut down because a song sparrow has laryngitis. We may then proceed to make of pestiferous nature a habitat fit for creation's most noble animal.

—Roger C. Anderson
Research Assistant—Botany

ARBORETUM PUBLICATIONS

A Thousand Ages–Nancy D. Sachse

The history of The University of Wisconsin Arboretum, *A Thousand Ages*, has proven to be very popular. Better than 1,200 copies have been sold in slightly over two months time. Christmas gift sales ran high and copies continue to sell–to libraries, schools, botanical gardens and other arboreta from coast to coast as well as to interested individuals. Mrs. Sachse has done a very masterful job. This compact, attractive paperback sells for $2.95.

Wildflower Families and How to Know Them–James H. Zimmerman and Booth Courtenay

A second edition of the very popular *Wildflower Families* is now available at $1.00 each. (Orders of 25 or more are priced at 75 cents each.) A must for those needing help in the identification of unknown plants, this booklet presents Dr. Zimmerman's field-tested system, based on family groupings.

Both of these publications are available from the Arboretum Office, 329 Birge Hall, Madison, Wisconsin 53706. The above have been produced with funds made available by the *Friends of the Arboretum.*

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ARBORETUM NEWS

Vol. 15, No. 2-3 Madison, Wisconsin Spring-Summer, 1966

PERSONNEL NOTES–RETIREMENTS

The past year has seen the retirement of two veteran members of the Arboretum Committee. Both men have had an intense desire to see their dreams for the Arboretum become realities.

Professor G. William Longenecker, of The University of Wisconsin Department of Landscape Architecture, has given us better than 30 years of advice and experience in planning the major areas of the Arboretum–the trees, shrubs, paths, firelanes, ponds, stone work. No tree or shrub was set into the ground unless its location had been staked out by Longenecker. As Executive Director of the Arboretum, Professor Longenecker served as our public relations man. Always willing to give talks and show his collection of beautiful colored slides, he rapidly became well known to various service organizations, garden clubs and social groups of Dane County. He has represented our Wisconsin Arboretum at meetings of the American Institute of Park Executives and the American Association of Botanical Gardens and Arboretums.

Dr. Henry C. Greene, of The University of Wisconsin Botany Department, has given us more than 20 years of botanical knowledge and of services as secretary of the Arboretum Committee. He was editor of the Arboretum News from the time it first appeared in its present format–July of 1952–until January of 1962, and has continued to contribute articles since that time. Dr. Greene's great skill as a botanist is evidenced by the beautiful Grady Tract prairie. Working over a span of 15 years, he transformed forty acres of old farm land into the colorful array of prairie vegetation one sees today.

The following two articles are an expression of appreciation to Professor Longenecker and to Dr. Greene for their years of dedicated service.

G. WILLIAM LONGENECKER, MASTER PLANNER

G. William Longenecker
Master Planner of
The University of Wisconsin
Arboretum

The Arboretum Committee has been distinguished by men who were ahead of their times, and no one has been more so than G. William Longenecker, better known as Bill by his friends, retiring this year as Executive Director, a position he has held since the founding of The University of Wisconsin Arboretum.

Bill Longenecker's earliest memories are imbued with the Wisconsin landscape as it was in earlier days, for he was born in Neillsville at the turn of the century, the son of a Congregationalist minister and a mother with an unusual awareness of natural surroundings. Having spent his boyhood in the Dakotas and in Utah, Bill at 14 traveled with his family back to Wisconsin, by mountain wagon and horseback. Along the way he made a collection of plants—some of which he still has—with the encouragement of his mother, an amateur botanist, who introduced him to the system of plant keys as a means of identification. Early fascination with plants plus the ability to sketch what he saw around him ultimately led Longenecker to the study of landscape architecture, in which he took a B.S. degree in 1924 and an M.S. in 1929 at The University of Wisconsin. Three years later, with the emergence of the University Arboretum, he became the logical choice to work with such dedicated conservationists as Aldo Leopold and E. M. Gilbert. Of all prospects considered for this exciting new experiment, Longenecker had the unique "feel" for the natural landscape, the painter's eye combined with the imagination required of a designer who must foresee growth at least 40 years into the future.

A varied group of personalities shared in the development of our now-famous 1,200 acres of outdoor laboratory, but they formed a well-integrated committee. From the first it was agreed that a complete analysis including surveys of soil, drainage pattern, and topography should be made as a guide in formulating a Master Plan of the Arboretum. The careful planning and attention to detail that went into this program is beyond the conception of the average visitor today. Conceiving a Master Plan is one job but interpreting the ideas of the Plan and developing the actual landscape is quite another. Starting with an overall pattern, different plant associations must be fitted together with consideration of the ecological background, otherwise the result is a meaningless hodge-podge of areas. For Longenecker this meant also a visual quality—pines grouped naturally to become a woods rather than planted as a collection or in checkrows. Fitting these associations together peacefully was of prime importance, a dream that took infinite time and patience to realize. For many years, in the early stages, Longenecker checked two or three times a day on the progress in planting, stone

work, and trail layout. This close attention to minute detail is apparent today in the pleasing effect of plant groupings, open vistas, and the subtle blendings of color and texture. Bill has always been against too much labeling, making what he calls "a graveyard look." In some areas during special seasons, labels must be used as an aid to students and visitors, but the greater part of the Arboretum remains unmarked, a place of individual discovery, an aesthetically planned outdoor laboratory.

The mere location of the trails was a major consideration about which Bill had definite convictions. "Trails should take you in a pleasant sort of way to where you want to go, seeing the most there is to see on the way," are his words. There must be a transition from one area to another. The Wheeler Council Ring is an example of such planning. Here one goes from city street to marsh and water by means of an expanse of mowed lawn and shrubbery planting. The Council Ring was designed in 1938 by Jens Jensen, the *avant garde* landscapist, as a memorial to his grandson who died on the eve of his graduation from the University. As Executive Director of the Arboretum, upon which land the memorial was located, Bill Longenecker worked out the background planting. What started out as open space filled with the noise of nearby traffic became, under his care, a tranquil sanctuary enclosed by trees and shrubs, the waters of an old spring trickling down to the lagoon beyond. Despite the surrounding city today, it is still a perfect place to see migrating warblers in May. Such successful blending of stone work and planting was the expression of man's compromise with nature that Longenecker was to create throughout the Arboretum.

The lilacs and horticultural shrub areas were arranged with careful attention to color shading and texture of plant material, something the casual visitor may not be aware of except as a pleasant sensation, the same sort of refreshment one gets from viewing a fine painting.

It has not been all hard work and solemn toil, of course, for everyone involved in that early struggle has a story or two. One of Bill's favorites is about the time when there was no money for labor and the draft had emptied the campus of young men. Undaunted by this loss, hundreds of coeds turned out on Arbor Day to plant pines in the Grady Tract. As a reward for their effort, Bill was asked to pick a Queen and did so, willingly, basing his choice on the beauty with the most dirt under her fingernails.

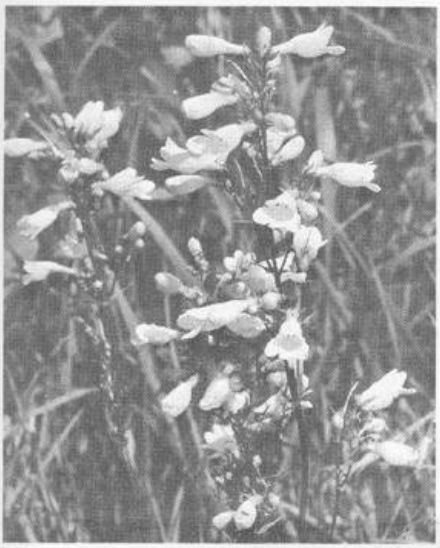
Thirty-three years ago in a newspaper interview, Longenecker spoke of The University of Wisconsin Arboretum as a "life work," and for him it has been just that. Since 1933 he has seen 60 acres of worn-out cornfield turned into the first reestablishment of native prairie in the country. He has supervised the dredging and landscaping of bleak wasteland to create the lagoons that fringe the north and west shores of Lake Wingra. He has watched hundreds of young pine seedlings grow into a majestic pine forest that rivals those of the north. The glorious lilac and crabapple displays in the Horticultural Area are his special accomplishments, attracting thousands of sightseers from all over the Midwest every spring. Anyone who knows Bill Longenecker can be sure this enthusiasm for the "America in miniature," as he called the Arboretum long ago, has not faded in the least.

—Nancy D. Sachse

EVOLUTION OF A PRAIRIE—THE GRADY TRACT

The Grady Tract Prairie of The University of Wisconsin Arboretum first took shape as an idea in the mind of Dr. Henry C. Greene as long ago as 1940. At that time, Dr. Greene spent his summers near Eagle, Wisconsin, not far from the then-extensive Waukesha County prairies, well-known remnants of the prairie vegetation which covered most of southern Wisconsin before settlement by the white man. Greene, an expert in the highly specialized field of parasitic fungi, was an associate and friend of the late John T. Curtis, former Chairman of the Arboretum Committee. Together, they roamed the countryside making botanical collections and observations. Impressed by the beauty of these low, wet prairies and the variety of plant species they supported, Greene developed a compelling interest in this type of vegetation.

Henry began to think that it might be possible to develop a similar prairie in the Arboretum. The level southeastern part of the recently acquired Grady Tract adjacent to the Chicago and Northwestern Railroad seemed to offer the best available area for this purpose. The railroad right-of-way contained many native prairie plants, indicating the nature of the original vegetation. In addition, there were pockets of prairie species in the tract itself, although most of it had been planted to corn as recently as 1937. The higher parts of the Grady Tract which had been grazed lightly for many years also had many prairie species at that time. Records of the original land survey, although somewhat fragmentary, indicated an oak opening situation with prairie understory, so the site was deemed favorable. Accordingly, permission was obtained from the Arboretum Committee to proceed with development of the area. This was begun on a small scale in 1943 and carried on for about the next 15 years.



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Prairie species that thrive in the Grady Prairie. 1. Echinacea pallida, Pale Purple Coneflower. 2. Penstemon digitalis, Beard-tongue. 3. Silphium laciniatum, Compass Plant.

The Grady Prairie has various soil types ranging from clay in the south to black, often wet, sedge peat and sandy loam in the central portion, to pockets of almost pure sand along the northern edges, allowing for a wide range of growth conditions. The soil was mostly very low in fertility, an advantage as it turned out, since prairie plants do quite well on such soils while agricultural weeds are inhibited.

Various methods of prairie plant establishment were tried:

1. Transplanting mature plants
2. Planting individual seeds of some of the large deep-rooted species, such as the Silphiums
3. Growing seedlings in the greenhouse and transplanting them to the field
4. Spot planting mixtures of seeds at numerous points
5. Collecting large amounts of mixed seeds and planting them in sizeable areas which had been prepared by lightly discing with tractor equipment, and then dragging after broadcasting the seed

The last-named procedure (5) definitely proved to be the most effective, with the spot planting of mixtures (4) next so, followed by transplanting of mature plants (1) and planting of individual seeds (2). The growing and transplanting of seedlings (3) is, by and large, a waste of time and effort.

The Grady Prairie is approximately forty acres in extent, no small area to fill with prairie plants, as was soon apparent. Despite intensive work, it was 10 years before the place began to resemble a prairie, but after that, progress was very rapid due to extensive seeding-in of the prairie species by plants then established in all parts of the area. Not all of the approximately 150 species Dr. Greene worked with have thrived, but there is today a good complement of the basic low-prairie species. The species have become distributed so well the Grady is now an excellent facsimile of an original Wisconsin low prairie. Certainly, it is an impressive sight to view the expanse of spectacular prairie plants as one stands on the rise of ground at the north edge of the Grady Prairie. It seems an amazing accomplishment that this colorful forty-acre array of vegetation could be the work of one man.

Several papers published jointly by Greene and Curtis deal in part with the Grady Prairie. Reprints are available from the Arboretum Office.

1. Germination studies of Wisconsin prairie plants. *American Midland Naturalist 43:* 186-194. 1950.
2. The re-establishment of prairie in The University of Wisconsin Arboretum. *Wild Flower 29:* 77-88. 1953.
3. Population changes in some native orchids of southern Wisconsin, especially in The University of Wisconsin Arboretum. *Orchid Journal 2:* 152-155. 1953.

Photographs by—
G. William Longenecker—Edward E. Shumann & Assoc. for the *Wisconsin State Journal;* Grady Prairie Plants—*Capital Times* staff photos by David Sandell.

HONORS FOR ARBORETUM'S HISTORIAN

Two honors of distinction have come in recent months to Mrs. William L. Sachse (Nancy D.) and her history of The University of Wisconsin Arboretum, *A Thousand Ages*. Four years of research and writing went into the preparation of the book, which was released in November, 1965, at the annual meeting of the *Friends of the Arboretum.*

On Sunday, April 17, 1966, Theta Sigma Phi, honorary journalism sorority, presented the Writer's Cup to Mrs. Sachse. The award was made at the organization's annual Ladies of the Press Breakfast and is presented each year to a writer selected for her outstanding contribution in the field of communication.

On June 10, 1966, Mrs. Sachse was one of two Wisconsin authors to receive an Award of Merit by the State Historical Society of Wisconsin at their annual meeting held in Wisconsin Rapids. Since the presentation describes the Arboretum and Mrs. Sachse's writing so well, it is printed here in its entirety by permission of the Society.

State Historical Society of Wisconsin
Award of Merit, 1966

A Thousand Ages by Nancy D. Sachse

Description: In recent decades the geographic growth of our cities has destroyed acres upon acres of what has been the natural habitat of indigenous plants and animals for a thousand ages. These are part of our lost heritage.

In Madison, Wisconsin, the promise of perpetual preservation of a sampling of this natural heritage lies within the boundaries of The University of Wisconsin Arboretum—an historic reserve abounding with hundreds of specimens of trees and plants, birds and small animals, fish and insects.

Surrounded by factory sites, residential subdivisions and express highways, the Arboretum sits like a natural jewel in its urban setting, an enduring monument to the foresight of men from within and without the University who planned, proposed and pushed it to completion.

Once an Indian homeland with a history and prehistory going back a thousand ages, the Arboretum today serves without fear of bulldozer or ax as a mecca for nature lovers who wander and wonder and as a laboratory of nature for scientists who probe nature's mysteries. Nancy D. Sachse, faculty wife and busy mother, tells the intriguing story of the Arboretum in her book, *A Thousand Ages*. Based on thorough research, it sparkles with vitality, yet it never voids the tenets of sound scholarship. *A Thousand Ages* is more than a history of an altruistic experiment; it is the story of cooperation among public-spirited scientists, administrators and private citizens who dreamed and dared for posterity.

HORTICULTURAL PLANTS IN THE ARBORETUM

3. Sycamore

Sycamore, American Planetree and buttonwood are all common names for *Platanus occidentalis* L., a common river-bottom tree of eastern and central North America. In Wisconsin, its natural distribution follows the Sugar River in Green County and the Wisconsin River valley up to Prairie du Sac. A handsome Arboretum specimen may be seen in the area between Arbor Drive and Ho-Nee-Um Pond.

Mottled, patchy white and gray-green bark, large maple-like leaves and curious ball-shaped fruits are all unique characteristics of the sycamore. Large stipules present on the leaf petioles when leaves appear in spring usually drop off when the foliage matures.

Its tolerance of the heat and contaminated air of our cities is well known, but for success as a shade tree in Wisconsin, the sycamore should be planted on sites with adequate soil moisture. Sycamores are easily transplanted and are fast growers. Perhaps the largest deciduous tree in America, it is too massive for most home landscapes but is a magnificent tree for parks and broad avenues.

Young leaves of sycamores have numerous fine hairs on their leaf surfaces, and as the leaves mature the hairs are shed, causing nasal irritation to some people. Another troublesome habit is the shedding of bark and the dropping of leaves throughout the growing season.

Winter is a drab time for most trees. With the sycamore, the loss of leaves in autumn reveals again the striking light-colored exfoliating bark and the ball or "button" compound fruits that bob on slender pendants from the branch tips.

—E. R. Hasselkus
Depts. of Horticulture & Landscape Architecture

IN MEMORIAM

Contributions in memory of Asel R. Colbert, Terry R. Hewitt, Alfred W. Peterson and Raymond J. Roark have been received recently by the University of Wisconsin Foundation for the *Friends of the Arboretum.*

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