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Wisconsin
NATURAL RESOURCES
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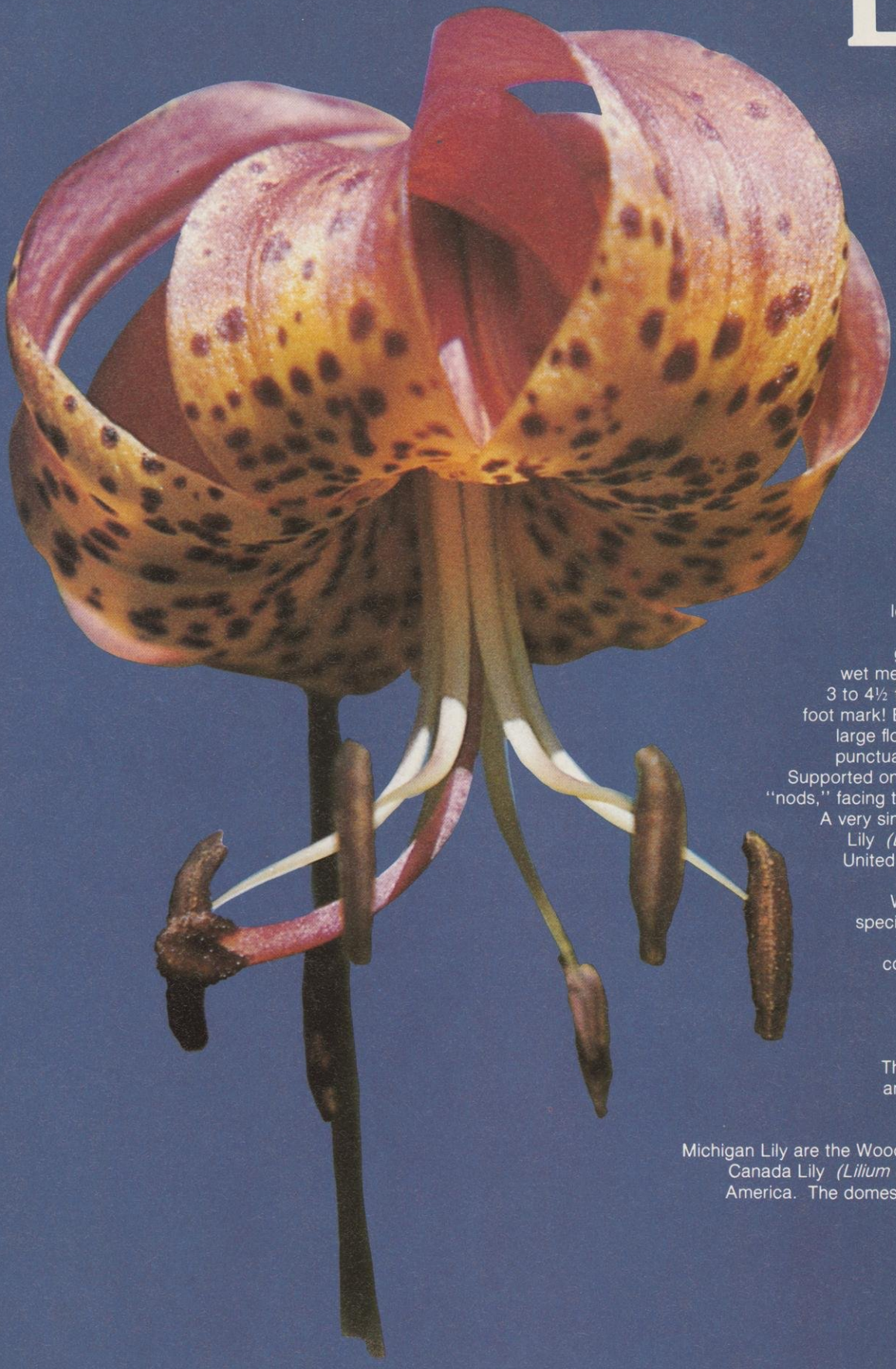
100 years
WISCONSIN
WILD LIFE
REFUGE
NO HUNTING OR TRAPPING
CONSERVATION DEP'T
J. F. KERNAN



Look for this one

GEORGE J. KNUDSEN,
Chief Naturalist, DNR

Midsummer is the time to look for the big, beautiful Michigan Lily *(Lilium michiganense)*. It grows in marshes and undisturbed wet meadows in the midwest. Commonly 3 to 4½ feet tall, some plants reach the six foot mark! Each plant bears a number of very large flowers with recurved, orange petals punctuated with dark spots and blotches. Supported on a long, arching stem, each flower "nods," facing the ground at a pronounced angle. A very similar, close relative, the Turk's-cap Lily *(Lilium superbum)* grows in eastern United States. The two species resemble each other so much that many Wisconsin wildflower lovers call our species Turk's-cap Lily too. Regardless of differences, both species are so colorful and graceful that once seen neither will soon be forgotten.

Depending on local conditions, Michigan Lilies vary from relatively common to rare. Therefore, they should be observed, and perhaps photographed, but not picked or transplanted.

Other close relatives of the Michigan Lily are the Wood Lily *(Lilium philadelphicum)* and Canada Lily *(Lilium canadense)*, both natives of North America. The domestic Tiger Lily *(Lilium tigrinum)* is a native of eastern Asia.

Photo by George J. Knudsen

Contents

Features

Wisconsin Natural Resources
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SPECIAL SECTION NEXT ISSUE:

Birds and mammals on
Wisconsin's endangered species list.

Front Cover:

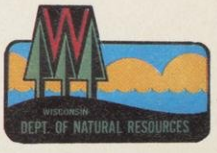
The first uniform! Issued to Wisconsin Conservation Wardens in 1930, it was officially copied from the Royal Canadian Mounted Police. Only difference was the forest green rather than mountie crimson. This painting by New York artist J. F. Kernan was nationally syndicated and appeared in newspaper rotogravure sections all over the U.S., including the Milwaukee Journal. The warden, Charles Lawrence was stationed at Phillips. He later went on to become chief of law enforcement for the U.S. Fish and Wildlife Service. For more on the uniform see page 11.

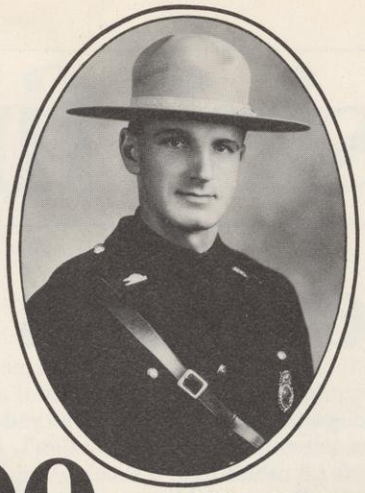
Back Cover:

This brown trout by Robert Frankowiak won the 1980 Wisconsin trout stamp contest. Revenue from sales ($2.50 each) goes for habitat development. Last year it amounted to about $425,000. Second place was awarded to Louis Raymer, Webster and third to Dennis Gorczany, Green Bay.

Guard duty at the Capitol: Chief Warden Don Beghin (foreground) and the late Al Koppenhaver, longtime Dane County Conservation officer.

Photo by Dean Tvedt





100 years a warden

The first generation of wardens were pioneers in resource enforcement.

They were given a seemingly simple charge by today's standards — to go forth and protect the fish and game. Their tools were a badge, a small book of laws, native intelligence, the will to work and the desire to succeed.

The challenge was great, for they did not have the benefit of prior experience nor support of the public. Commercial fish and game violations were common and accepted as a way of life.

Inner drive that comes from self-motivation and ego that does not admit defeat gave them confidence to forge ahead in individual ways and conquer the many pitfalls of those early years. Their sizes, shapes and personalities have varied but the basic qualities that kept the early men going has given strength to the present generation of wardens.

They molded a heritage which has prevailed for 100 years. It didn't take them long to realize that the eyes, ears and support of the public was their chief asset. They developed cooperators and sportsmen's clubs, initiated contacts with the younger generation and established an open dialogue with local and state lawmakers. In this manner the need to conserve natural resources began to develop support.

Over the past century the job has changed a great deal but not the man. The same drives move him. But he has a lot more to do!

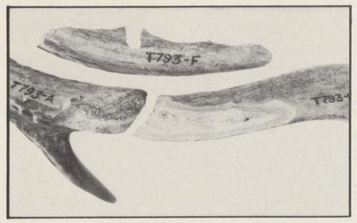
◀ Warden Norm Hicks surprises an angler in this 1957 Brown and Bigelow calendar. Part of an "Old Timer" series by Clair Fry, it was based on the fishing adventures of the artist's father-in-law, Frank Long. Both the artist and the Old Timer lived near Willow River State Park. Hicks served near there at Hudson from 1954 until 1966. He retired from DNR in 1977.
Courtesy of and copyrighted by Brown & Bigelow, St. Paul, Minnesota.

▲ Louis "Pat" Oshesky when he was a young warden at Three Lakes in the 1930's. The lapel ornaments on the uniform are badgers. Oshesky, who lives near Pardeeville was the Southern District Supervisor at Madison when he retired in 1968.

Wisconsin's finest for a century

Val Raeth, Milwaukee

Outdoor supersleuths



A deer was stolen. Wardens found a shattered antler. The crime lab matched the pieces to convict the thief.

DNR wardens use all the scientific sleuthing techniques you see on television and some you don't. A tuft of rabbit hair, a slice of monofilament fishline or a rusty DDT can is all that's needed to prove a violator did the deed.

Ever since 1948, DNR's Bureau of Law Enforcement has called on the State Crime Laboratory to examine evidence. The lab can identify and analyze such items as soil, firearms, hair, fiber, shoe and tire prints, blood, tissue, fur, tool marks, glass fragments, typewriting, handwriting, toxic substances and paint chips. Scientific examination often links a suspect to the crime or the violation.

The deterrent effect of crime lab backup is great. The habitual violator today knows that it is extremely difficult to commit an environmental crime without eventual detection. Facts ferreted out in the lab from evidence gathered by wardens help the courts render judgment.

The lab also helps train wardens in investigative techniques and in collecting, identifying and preserving evidence.

Another important scientific backup comes from the Department of Agriculture Pesticide Residue Laboratory. When chemicals are suspected of detrimental effects on the environment, wardens collect animal carcasses and other evidence found in the area. Highly specialized chemical analysts in the pesticide lab can then usually pinpoint responsibility. □

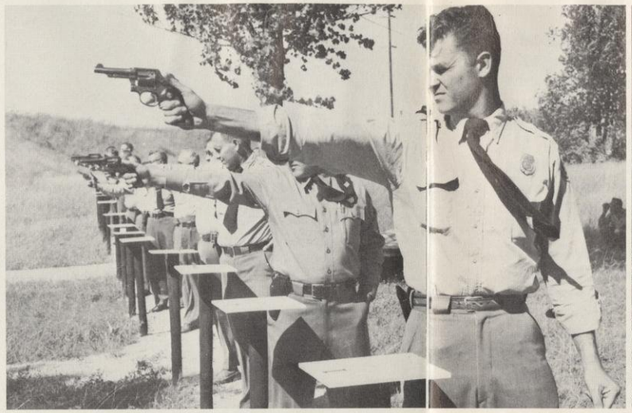
Deputy Chief Harold Hettrick checks ballistics at crime lab.

Why wardens?

The very first warden, Rolla Baker of Bayfield, was hired on April 30, 1879 to prevent overexploitation of the Great Lakes fishery. The worry about it has not stopped to this day. Thereafter in report after report Wisconsin's pioneer Fish Commission lamented about the "laws being continually violated while the offenders are seldom brought to justice."

Commercial violators robbed the lakes. They cashed in on the deer and the ducks. This marauding is hard to stop. For 100 years two themes have pervaded the official reports as well as conservation club minutes: there are not enough wardens to cover the territory; indiscriminate commercial harvest will wipe out the resource. And for 100 years the reaction to this refrain has been schizoid — support when the enormity of the squandering shocked; punctuated by a lot of hostility when enforcement hit home. Occasionally, but not often there has been mere indifference.

Whenever you nick people in the pocketbook, controversy swirls. Agencies that protect resources are particular targets. For the wardens it was ever thus. As the place where public focus shone for 100 years, they have been organized, reorganized, split up, centralized, decentralized, abolished and created. But they persist, despite attacks, because they're needed.



At the range

A session with Boy Scouts

Warden code words

Early wardens had a secret word code to disguise telephone and telegraph messages.

Some of the secret words and their meanings:

BIRD - Dynamiting beaver houses
BLAIR - Venison being served
BLAZE - Partridge being sold
BLOOD - Trout being served
BLOOM - Game fish being sold
BLUE - Deer being sold
PAW - Hold
PECK - Keep me advised of your movements
POUND - Reply by telegraph
PRANK - Report
RETURN - Muskellunge
RUBBER - Muskrat
RUFUS - Deer lick
RYE - Skunk
SLUR - Search garage or barn for illegal furs
SMEAR - Search for illegal fish
SWEET - Search for illegal otter skins
TAX - District Attorney
TEASE - Justice of Peace
TENSE - Sheriff
TERM - Policeman
THESE - Affidavit
THIN - Rabbit
THRONE - Plover, snipe, rail, rice hen

Illegal nets, hides and equipment confiscated from violators by Wardens MacKenzie and Olberholtser. Model-T's were the first state cars. MacKenzie later became Chief.

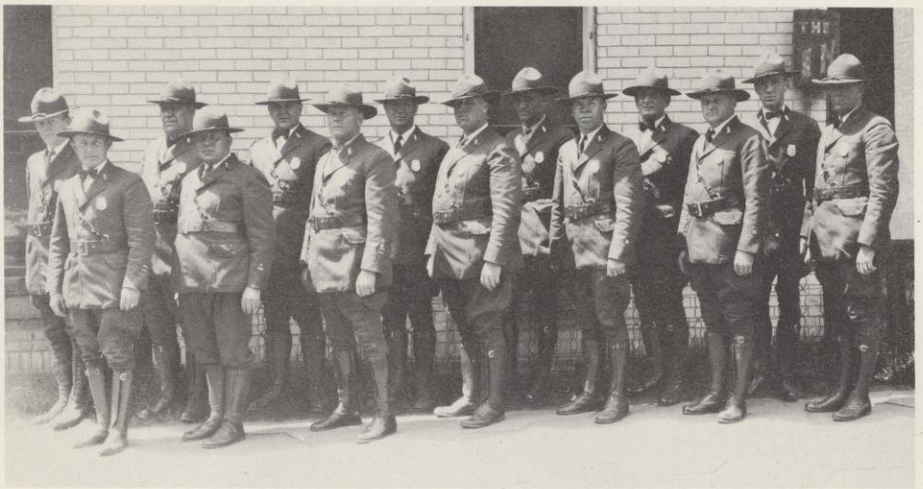
Checking a trapper . . . a fisherman.

Not an easy job to get

The State has only 144 wardens, a select group. It's not easy to become one. The job is popular. Competition is tough, standards high. And there's little turnover. This year, mandatory retirement at age 55 opened 15 jobs. There were 656 applicants, among them 49 women, 19 Blacks, 19 Native Americans, four Hispanics and one Asian American. The weeding out process will include a written exam on regulations, an oral, an agility test (run a 12 minute mile, lift a 100 pound sack, mount a boat motor), an interview, medical check and background investigation. Candidates who survive these, then receive 240 hours of regular police training followed by DNR's special natural resource law enforcement training. The final hurdle is field training and if all goes well, full warden status is reached in two years. Those who make the grade rarely quit.

The old portraits of State Game Wardens at the top of each section were taken in 1908.

Dangerous work



Honor Guard at the funeral of Einar Johnson.

Chronology

The following, taken from a detailed chronology by **Walter E. Scott,** gives an outline of warden history. It is full of ups and downs, but the main themes are constant and probably will continue to be so, as long as people use the outdoors.

1879 — Rolla Baker, Bayfield, appointed first warden, serves Ashland, Bayfield and Douglas Counties. Salary up to $700 per year including fines and fees.

1880 — Fish Commission deplores "slaughter" of bass, walleyes and trout in inland streams.

1881 — A. C. Cooley appointed warden for Green Lake and Fond du Lac Counties, dies in 1883 and is replaced by Harvey Durand. Fish commission calls protective laws and enforcement inadequate.

1882 — County sheriff's deputies, constables and marshals cited as responsible for enforcement of game laws.

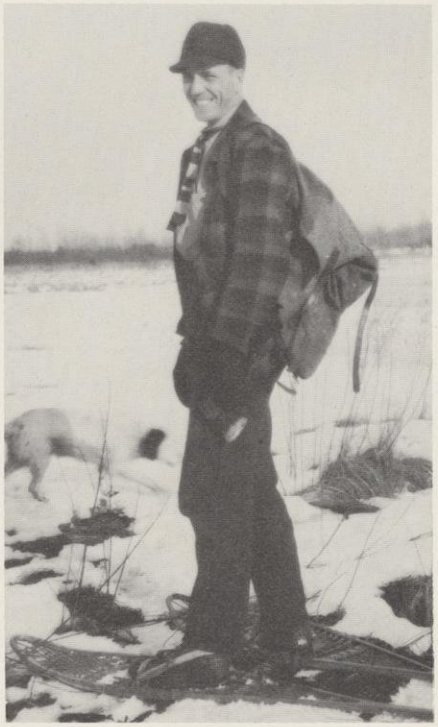
1883 — Sneak boats used illegally for duck hunting on Lake Koshkonong.

1885 — Governor J. M. Rusk urges that "the unlawful and unreasonable catching of fish" be checked. Three fish wardens authorized for Lakes Michigan, Superior and Green Bay. Salary and expenses for all three, $2,500, dependent on miles of coast patrolled.

Continued page 10

Dead and injured

A warden's job is satisfying. But it's also dangerous. More armed violators are routinely faced by conservation wardens than by any other kind of law enforcement officer.



Warden Einar Johnson, shot and killed while investigating a beaver trapping violation in Rusk County in 1929.

There are other hazards, too, especially auto accidents. The roll call of dead or injured in line of duty is a long one. These are the dead:

1923. J. B. Carter — Died from injuries received in an auto accident in Barron county.

1924. Michael Kleist — Killed in an automobile crash while chasing violators. Headquarters at Fond du Lac.

1928. A. P. Vanderkelen — Drowned when boat capsized in Little Sturgeon Bay while checking duck hunters.

1929. Einar Johnson — Shot and killed by violator while attempting to make arrest for illegal beaver trapping in Rusk county. His assailant was wounded in the shootout, but recovered and was later tried and convicted.

1930. W. H. Riebe — Killed by train while on a fur transaction assignment. Headquarters at Eagle River.

1933. Edgar L. Alderman — Killed in a car wreck. Headquarters at Portage.

1934. Albert Lee — Killed in an automobile accident. Headquarters at Luck.

1936. Robert Keeney — Stricken with appendicitis while on a beaver complaint in Forest county. Was unable to reach a doctor in time. He died from gangrene poisoning.

1942. Albert Reif — Shot and instantly killed while checking a deer hunter. His murderer was caught and sentenced to twenty-five years in prison.

1950's. Mark Russell, Neilsville — Drowned in a boating accident while checking fishermen for licenses.

1960's. Robert Markle, Park Falls — Killed when his automobile crashed during pursuit of fish spearers.

1971. Neil LaFave, Little Suamico — Game technician with warden credentials shot and killed by a violator in the Sensiba Wildlife Area.

In 1938 in Jackson county a warden's pregnant wife, Mrs. Joe Jonas was shot from ambush and killed while she rode in the family car with her husband. He was uninjured.

The list of those who were injured but survived is longer and not complete. Most would have been

goners, but they were tough and they had luck:

1920's. H. W. MacKenzie, Crandon — Hit in the head with an axe as he accosted men fishing trout out of season. MacKenzie survived to become director of the Wisconsin Conservation Department.

1920's. E. M. "Pop" Weaver, Woodruff — Beaten and left atop a beaver dam for dead.

1931. W. A. Cole — Shot in both arms and left leg while trying to make arrest for killing deer illegally.

1933. Stuart Hayner, Eagle River — Hit on the head and beaten, left near the Wisconsin River with a fractured skull and severe injuries after accosting beaver trappers trapping out-of-season.

1940's. "Doc" Chase, Oshkosh — Tied up to be thrown into the Fox River by illegal fisherman at Omro but saved.

1940's. Don Ewers, Green Bay — Nearly thrown into Lake Michigan after boarding a commercial fishing vessel from Two Rivers that carried illegal fish.

1948. Kenneth Beghin, Park Falls — Hospitalized with serious injuries after being beaten by deer shiners. He is now chief pilot for the DNR.

1949. Warren Holger, Mercer — Hit with a flashlight in an attempt to stop deer shiners as he clung to a car going 50-60 miles per hour.

1960's. Keith Reichenbach, Chilton-Beaten by deer shiners.

1960's. Jim Whalen, Eau Claire — Severely injured when his car was hit by a truck while he was investigating a deer shining case.

1968. James Chizek, Park Falls — Severely injured when struck by a truck while investigating a deer shining incident.

1975. Bill Mitchell, West Bend — Beaten by five snowmobilers when attempting to arrest one of the group for failing to have current license registration.

1977. Chuck Petri, Green Bay — Unhurt when a commercial fisherman tried to stab him then threw a knife while Petri served a search warrant at a Jacksonport bar.

1978. Dick Abney, Crandon — Suffered a broken leg when hit by a car while attempting to halt a vehicle used in deer shining.

1978. Mike Dresen, Beaver Dam — Run over by a car along with a deputy sheriff while attempting to stop the vehicle during a deer shining incident.

1978. Winter Hess, Marinette — Suffered a broken cheekbone when struck from behind after stopping a pickup truck carrying a load of illegal lake trout. □

James Chizek former warden at Park Falls suffered permanent hip injuries when his car was rammed by a pickup during an illegal deer shining incident. The accident ended his career as a warden and he now works as a DNR administrator. The driver of the pickup was killed and Chizek's special deputy, James Golomb was injured.

Light aircraft are often used in law enforcement work.

It was mostly afoot, but sometimes horseback. Astride the forward horse, named Midge, is Warden E.M. Weaver, Woodruff. The other rider was from the U.S. Forest Service in Washington, D.C. Midge reportedly always won the annual July 4th pony race down the main street of Woodruff. At one point in his career, Weaver was beaten and left in the woods for dead. He survived. Picture was taken in 1912.

How Bill Grey's lights went out

From the Wisconsin Conservationist, January, 1920.

This is the story of a conservation warden who saw his duty and went for it. Bill Grey is one of the Conservation Commission's wardens and is located at Ashland. A number of weeks ago Bill found nets set in violation of law, in Chequamegon Bay near the mouth of Fish Creek. He hired a launch and accompanied by his wife who is an efficient deputy warden went out to take up and confiscate the nets. He had but begun his work when a Green Bay fisherman appeared on the scene with his big fishing smack, and demanded to know "what in hell" Bill was doing. Bill informed him that he was seizing the nets because they were there in violation of law. The fisherman then announced that though the nets were not his, he was in charge of them and they must not be disturbed. Grey's reply to this was to declare the man under arrest, and start to get onto his boat.

"Don't come aboard" yelled the fisherman. "You will not take me alive."

This was a stimulative threat to Bill and he immediately boarded the boat and tackled the owner. After a sharp scuffle the fisherman got away and ran to the upper deck, where seizing an eight-foot pole he struck Bill on the side of the head as he was coming up from the lower deck.

"Believe me," says Bill telling about the encounter, "my lights went out suddenly."

At this juncture Mrs. Grey who is as courageous and faithful in the performance of duty as her husband, saw the fisherman kick her husband while he was down. Grasping a rifle she drew a bead on the fisherman and told him that she would perforate him if he attempted again to kick her husband while he was down.

Bill recovered quickly and tackled the fisherman again. This time the fisherman attempted to brain Bill with a net float. The man was finally captured and as Bill writes "was landed on my boat, alive."

The sequel of this story is that the fisherman lost his nets which the warden sold for $140 and his boat and the judge at Green Bay where he came up for trial fined him $300 and costs.

Dangerous work

C. W. Johnston, Winneconne

When hits miss "you can't dwell on it"

Newspapers and magazines recently reported that an undercover agent was offered $5,000 in "hit" money to get rid of Sturgeon Bay Wardens Charles Olson and John Wilbur. There were also reports that $25,000 was offered for the life of DNR Secretary Anthony Earl.

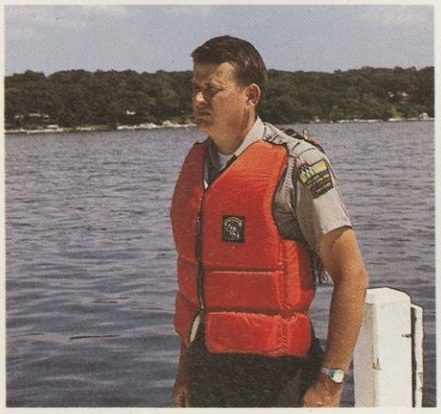
Olson and Wilbur had shut off illegal sales of PCB-laden fish to the black market. There was big money involved. It is said that the people who tried to arrange the murders-for-hire flashed a $200,000 secret bank account to the undercover agent. At their peak, illegal shipments may have been as high as 10,000 pounds of fish per day at a price tag of $1 or more a pound.

David Weitz, a staff writer for the Appleton Post Crescent whose father, Chauncey Weitz, is a retired warden, interviewed Olson after the story broke. The following are excerpts from his article:

When Olson found someone had attempted to hire a professional "hit man" it had an effect.

"I was scared. I'm not going to deny that."

And it frightened his wife.



Charles Olson.

Anonymous callers had cursed at him and threatened his life. Early in the morning the phone would ring and the only sound on the other end of the line would be a questioner asking his wife if she knew where he was or whether he was alive.

He and his wife, Janice, talked over the phone calls and the threats. They tried to calculate whether he would be killed.

They decided to stay.

Today Olson talks about it as if it were a simple decision. It was made when gray-uniformed game wardens were keeping a 24-hour guard on him and his family.

"My wife was against leaving," he says now. "We made up our minds to stay."

It wasn't a decision made because they didn't feel the threat to his life was serious. "My opinion at the time was that I felt it was a serious threat to myself and the other people involved."

Olson knows the names of the men who tried to hire him killed. He knew them long before he was a warden. He calls them "people I knew and grew up with."

He says the murder threats have had an impact.

"After the incident we worked only in pairs and we took — and still do — take protective measures."

Olson says he intends to keep up his fight to enforce the game laws.

"I guess one reason is I've started something and I haven't yet finished it. And also I haven't found anything as challenging."

Olson is here, and refuses to leave. The death threat is real but he's decided he can live with it. "You can't dwell on it," he says. □

1887 — Wisconsin the first state to outlaw killing birds for millinery purposes. Among first three to prohibit spring waterfowl hunt. Four game wardens are salaried at $600 annually plus up to $250 expenses. Deputies receive constable fees.

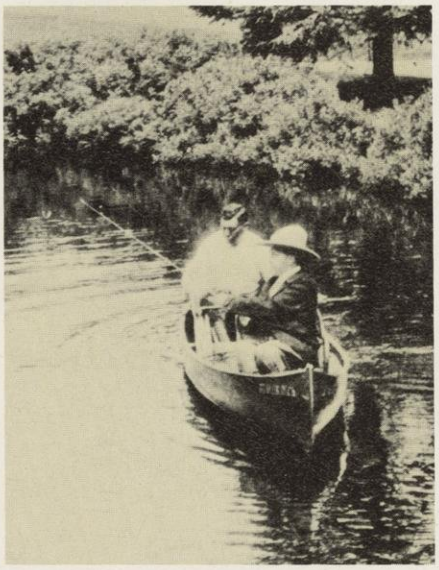
1889 — Cost for seven Fish and Game Wardens: $5,898.02.

1891 — Governor George Peck suggests abolishing "Game Wardens, Fish Wardens and the many boards created for the furtherance of special interests."

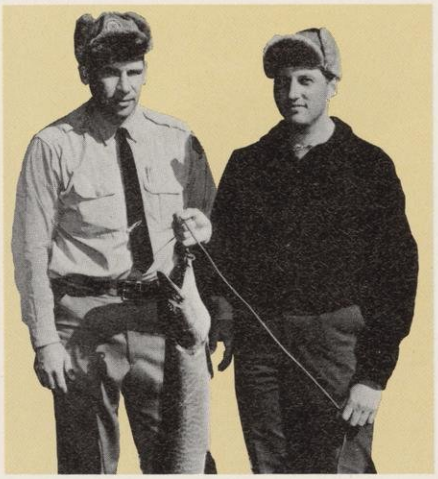
1890 — Warden Wentworth explains he must cover 20 southeastern counties and, though he has a deputy in each, cannot possibly reach them all on $250 travel allowance. Commissioners describe control of Great Lakes fishing by wardens as "quite unsatisfactory" and call for complete revision of laws.

1893 — Legislature reopens spring waterfowl hunting. Game law fines total $145.75.

Continued page 12



Just before the Great Depression, President Calvin Coolidge went fishing on the Brule River in Wisconsin. Wardens were on hand to assist.



Crown Prince Harald of Norway went muskie fishing in Wisconsin in 1967 and caught this 17 pounder. Warden Russ DeBrock helped.

The uniform

J. W. Stone, former State Fish And Game Warden

The late Arthur "Doc" Chase, Winnebago County warden for 33 years. Doc Chase pioneered enforcement against walleye and sturgeon poachers on the Wolf River.

From the old manual:

Each warden must wear his uniform whenever it is practicable for him to do so, and when wearing it he must wear the complete uniform, and not a part of it: — belt, hat, puttees, coat, and breeches. The badge of authority must also be worn on the outside of the coat on the left hand side, just above the breast pocket. While it is not practicable to wear the uniform at all times, it should be worn as much as possible, particularly when the warden appears in court or in other public places.

Fifty years ago the Conservation Commission authorized the first uniforms for wardens. They decided to use the Royal Canadian Mounted Police outfit as the prototype and Chief Warden H. W. MacKenzie was dispatched to Ottawa to negotiate permission and obtain tailoring specifications.

The Mounties' chief tailor, Staff Sgt. David Hay was assigned to MacKenzie for two days. Outdoor fabrics and design details were inspected and a selection made.

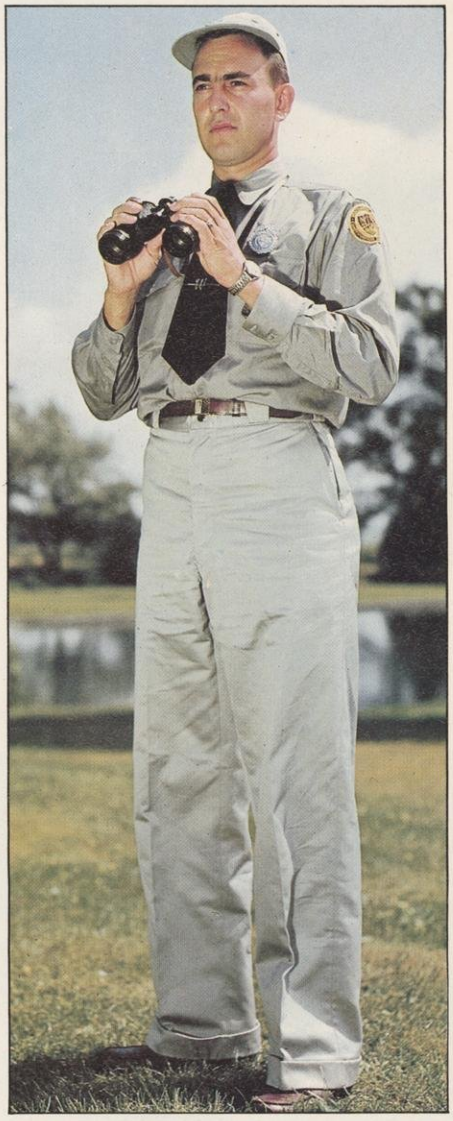
When MacKenzie reported back, the commission was enthusiastic but learned, to its dismay, that the law did not authorize issuing uniforms to wardens without cost. They proceeded nevertheless, and here's how it was done:

Commissioner Haskell Noyes arranged for the Personal Loan Department of the First Wisconsin National Bank of Milwaukee to accept a promissory note from each warden for $90.04, the cost of the uniform. There was an itemized price list:

Coat and breeches	$40.98
Overcoat	27.31
Hat	9.75
Shirt	8.45
Tie	.85
Buttons and Badges	2.45
Star	.25
	$90.04

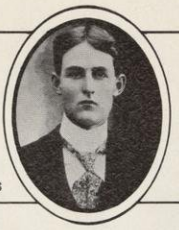
The commission then raised the pay of each warden by $10 per month so that he could pay off the loan.

Browning, King and Company of Milwaukee made the uniforms. There were 68 wardens and a tailor from the firm took individual measurements for each man. Special days were set aside for fittings at Ladysmith, Antigo and Madison. Mounties had unique rights to their hat design and the John B. Stetson Company required special written authorization before it would consent to duplicate the hats for Wisconsin. Wardens started wearing these forest green uniforms in 1930. The original is on display at the MacKenzie Environmental Education Center at Poynette. □

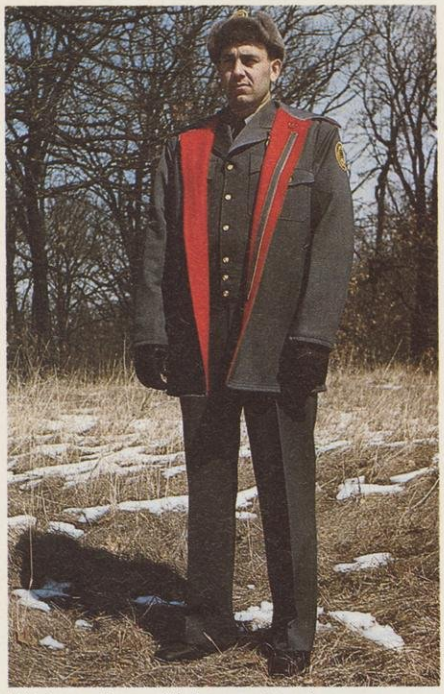


The gray uniform wardens wear now, was authorized by the Conservation Commission in 1950. By coincidence, the man who is chief warden today posed for this picture when these uniforms were delivered. He is Don Beghin. Cost was $150. Wardens were expected to pay $50 of that amount and the state paid the rest. Thereafter, a $50 annual uniform allowance was granted.

The public



W. A. Cole, Grand Rapids



Winter uniform with topcoat and Eisenhower jacket.

The game warden's lament*

***From the Hunting Annual 1939-40.**

GILBERT RUSSELL BRACKETT

If the game warden asks to see your license, he's insulting.
If he takes your word for having one, he's corrupt.
If he arrests a violator, he's showing how tough he can be.
If he gives the culprit another chance, he's showing favoritism.
If he labors night and day to enforce the law, he's a tyrant.
If he relaxes at all, he's a shirker and a crook.
If he talks fish and game conservation, he's a maudlin.
If he keeps quiet, he's not interested in his work.
If he accepts suggestions or advice, he's incompetent.
If he works out problems for himself, he's a know all.
If he acts like a gentlemen, he's too easy.
If he acts firm, he's unfair and a rascal.

Ashes to ashes,
Dust to dust,
If the sportsmen won't do it,
The game warden must.

1894 — Chief Warden Fernandez states that "the sentiment in many localities regarding fish and game laws is so manifestly against them that it makes conviction difficult even on the strongest evidence." Many deputies are discouraged as they depend on convictions for pay.

1897 — First deer hunting license: $1 resident, $30 non-resident. This inaugurates dependable financing for entire conservation program. Chief Warden Ellarson appoints five special duty wardens and two deputies for each county.

1898 — Interstate Warden's Convention held in Chicago to discuss uniform laws. More than $6,000 paid in fines, 100 miles of gill nets destroyed, 39 people jailed.

1899 — Special duty wardens increase to 30. One-third of all fines go to a "fund for the protection of fish and game." A $1 general hunting fee is established, deer included.

1900 — The Wisconsin Game Protective Association is organized to assist wardens.

1901 — "Game birds" are legally separated from other birds. Governor LaFollette appoints 12 new deputy wardens and phases out old ones.

1902 — National Association of Fish and Game Wardens is organized.

Continued page 14

Wardens have always felt that they need positive contact with people beyond the role of the arresting officer. For half a century public education has been important to them. They regularly meet with conservation clubs and youth groups and in the past for many years had conducted scheduled programs in the public schools. Today extensive effort goes into snowmobile, hunter, and boating safety. Thousands of individuals have received the training. Graduates are awarded colorful shoulder patches. All instructors are volunteers and required to take intensive course work to qualify.

Courthouse tactics

E. W. Tuttle, Oconomowoc

A silent witness – his master's undoing

W. E. BARBER

This story appeared in an early day predecessor of this magazine, The Wisconsin Conservationist, in March 1922. The author was a conservation commissioner who served when the old agency was directed by a three man paid commission. The warden involved, H. W. MacKenzie, later became chief warden and eventually director of the Conservation Department.

It is not unusual for complaints of hunting deer with dogs in Langlade county to be lodged with Warden MacKenzie. Acting upon his suspicion that a certain crowd of persistent violators were using dogs, MacKenzie hiked into the woods disguised as a hunter where he came across a party of five. There was every indication that a dog was on the drive as distant barking was distinctly heard. It was not very long before the dog made his appearance. The men were arrested and the case came up in court.

MacKenzie testified as follows: "I came upon these men in the woods, none of them knowing I was a warden. I asked 'What luck?' They replied prospects were good and that if I would stand over there (pointing in the direction of a runway) I would probably get a shot. A dog was heard barking in the distance. I inquired if they were hunting with a dog. They answered 'Yes.' Then I asked if they were not afraid of being arrested for hunting with a dog as I understood it was a violation of the law. They replied 'Oh, no, there is no danger. They couldn't find us in a million years.' I took my position on the runway, as directed, and waited anxiously as the distant barking kept coming nearer and nearer, until finally the dog came along with seeming disappointment that he had failed to bring the expected deer. With the usual good nature that characterizes a faithful hunting dog, he faced me with an expression of apology when I took him in possession and arrested the offenders."

The dog in the case. Confiscated by the court, it became MacKenzie's pet.

The five defendants undertook to swear MacKenzie out of court notwithstanding the frequent warnings of Judge Goodrich that they must remember they were under oath and that to swear falsely was dangerous. The offenders all testified they were not hunting with a dog but that while they were hunting this strange dog came upon them and they did not know to whom it belonged.

The first defendant denied ever having seen the dog or ever having hunted with him. He denied everything that had any bearing on the case.

The next defendant also denied ever having seen the dog or ever having hunted with him and also denied ever having had any conversation with MacKenzie. Judge Goodrich cautioned him and asked him if he knew he could be prosecuted for perjury if he swore falsely. The witness said he was telling the truth, and still denied ever having seen the dog.

The third defendant also made a complete denial of everything. But while he was on the stand testifying, Judge Goodrich ordered the hound (a large, red, heavy-boned hound that was just outside the door) let into the court room. The opposing attorney objected strongly but was overruled. The hound was let in. It walked around the judge to the witness stand where the defendant was denying he had ever seen it before. The dog jumped on the defendant with his forepaws. The defendant shoved him down. He jumped up again and when he was shoved down this time he laid down at the defendant's feet. When the defendant left the stand and went back to his seat in the court room the dog got up and followed and laid down at his feet again. The defendant turned his back but the faithful dog knew his master and stuck to him with the faithfulness that characterizes a dog's fidelity.

Two friends of the defendants volunteered to testify that they were there and that there was no dog with the party and that they knew they were not hunting with the dog; also, that they had never seen the dog before.

But all were found guilty by the court and fined $50.00 each. Judge Goodrich in passing sentence said:

"There are two sets of testimony that are conflicting, one that of the officer and that of the defendants, but there is one witness present I am sure told the truth though he cannot speak and that is the witness lying on the floor at the feet of his master. I have owned and have known a great many dogs and thought they were always a man's faithful servant. I haven't much sympathy for a man who would take his servant of this kind into the woods to violate the law and then disown him when he is apprehended in the act."

The judge then ordered an investigation to determine who owned the dog and instructed that should evidence show one of the defendants owned it, action for perjury should be started.

The perjury charge was proven. The man who owned the dog went to jail for two years. Fines levied against others ranged all the way from $200 to $1,000. □

Transportation

Big Ben

HOMER E. MOE
Lake Michigan Enforcement Coordinator

"Look, there's something out there!" A quick glance in our radar screen revealed a tiny blip. It was too small to be an ocean vessel, and too bright for a commercial net marking buoy. The screen told us the vessel was probably a cruiser, and was eight miles out on Lake Michigan at a heading of 85 degrees.

A steadily falling barometer had resulted in mist and fog that cut visibility to a half mile. We readied checking and boarding procedures as the pilot swung the bow eastward and gunned the diesel to 2400 RPM. We were on our way to a rendezvous with the unknown blip.

1903 — Governor LaFollette praises wardens for an excellent job and for adding fine money to the school fund. There are now 85 deputy wardens and an annual budget of $85,000.

1904 — Willis Barber, former Chairman of the Commission writes, "Political activities of wardens are somewhat exaggerated, yet there clearly is fire under the smoke. The publicity has discredited the entire fish and game department, and membership in the warden force is deemed synonymous with being a hired political henchman."

1905 — General civil-service law is enacted to include wardens.

1906 — James Nevin emphasizes the need for better commercial fishing enforcement in the Great Lakes.

1907 — Spring waterfowl hunting hotly debated, but finally abolished.

1908 — Theodore Roosevelt's "Conference of Governors" fires public imagination about the new "conservation."

1912 — Warden training school established. Education of school children in conservation becomes a winter duty.

Continued page 16

Big Ben.

"Two degrees starboard, Cap'n," our radar operator advised, "The boat is moving south."

"Must be a troller. Let's check it out."

"There it is!" Emerging from the mist like a lost ghost ship, a large white cruiser seemed to take form even as we watched.

Binoculars were glued to faces as we approached. "Only one man aboard, and he's really looking us over."

"I see four lines. Let's keep up speed."

"Watch him, he just grabbed a rod and is reeling in like crazy!"

"Get him on film with that zoom lens."

The pilot eased alongside and our loudspeaker boomed into the mist, "Good morning! We are state wardens, please leave your lines in the water and continue on a straight course. How many aboard?"

"Just you? You have too many lines and baits. We will put a warden aboard your boat, just maintain present heading and speed as we come alongside."

This incident on Lake Michigan is one of many for the 42-foot DNR patrol boat "Ben Waskow." A steel-hulled craft, powered by a single 450 horsepower diesel engine, its equipment includes marine radar, an electronic recording fathometer, direction finder, three radios, compass, tow lines, hydraulic net lifter, search and rescue equipment and a six-man life raft with survival suits.

There are four bunks, a galley and head and two 500 gallon fuel tanks, which enable "Big Ben" to cruise 250 miles from home port. Maximum speed is about 18 knots, cruising speed 14.

Big Ben is named after the late Benjamin J. Waskow, former Wisconsin Conservation Warden and Commercial Fishing Supervisor at Bayfield. Another similar vessel, is the "Vince Skilling," also named after a deceased warden. It patrols north Lake Michigan out of Sturgeon Bay.

Both vessels have search and rescue capability. They also play the role of "Mother Ship" for smaller DNR boats on joint weekend patrol.

The bailiwick of Big Ben extends from Manitowoc County to the Illinois line. On an average summer day more than 1,400 fishing boats use this two million acres of water plus numerous other recreational craft. Keeping track is a big job even for Big Ben. Illegal commercial nets are searched out, sport trollers monitored, and boats checked periodically for registration and safety compliance. Commercial fishermen and their tugs are inspected for license and gear requirements. Duck hunters are checked and waterfowl counted. Pollution complaints are investigated and water samples collected. The chores are endless and necessary.

Big Ben is the visible symbol of DNR. It represents the agency's commitment to protect natural resources from exploitation by poachers and thieves.

The boat monitors channel 16 on the marine radio and channel 9 on the citizen's band. If you see something wrong out there, give a call. The Ben Waskow will be proud to hear from you. □

R. Hitchon, Marinette

Travel: From the 1929 manual:

No. 4. When camping out or eating meals taken from home, wardens are allowed fifty cents per meal and fifty cents for each night's lodging when they furnish their own camp equipment. When the state furnishes the camp equipment for the wardens, they are not allowed to charge any lodging but are allowed fifty cents per meal.

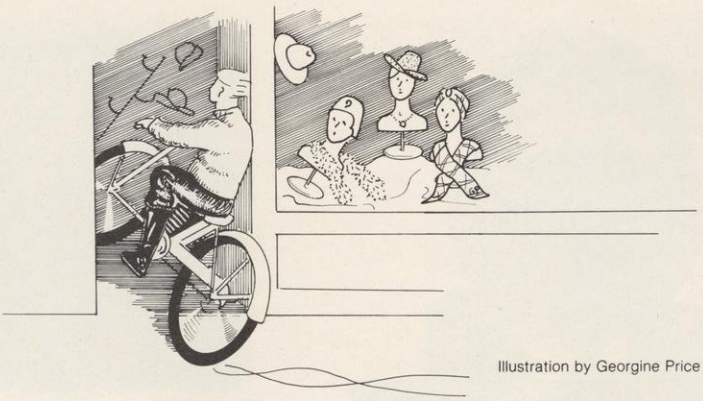


Illustration by Georgine Price

Mississippi River airboat. The warden on the right is the late Oliver Valley. It's said that just the sound of the engine plying the back sloughs was enough to keep violations down.

Reminiscences of Early Warden Days by L.D. Jones, from the Wisconsin Conservation Bulletin, June, 1948.

Warden Johnny Helsing had a motor speeder he used on the logging railroads in Sawyer county. A speeder is a handcar with a motor on it. One day, accompanied by supervisor Allan Hanson and Warden Leon Plante, he made a trip up north of Loretta.

On the way back to town, Hanson was in a hurry and kept urging Helsing to speed up a little. Johnny had the speeder headed downgrade with the throttle wide open. Suddenly they rounded a bend and directly ahead on the track was a log jammer which had been moved onto the main line while the wardens were in the woods.

Johnny yelled, "Take to the brush! I can't stop her."

Hanson took off on one side and landed in a pile of ties, while Plante hit a cinder pile on the other side of the right-of-way. Helsing stayed with the speeder until just before it hit the jammer and then was lucky enough to hit a wet spot in the ditch. The speeder folded up against the jammer.

They administered emergency first aid to each other, then had to push the speeder four miles to the next landing.

Albert Lee, warden in Polk county for many years, had a saddle horse he used for patrol. But there was a drawback. Certain violators got to know the horse by sight. When they found it tied to a tree in some secluded spot while Lee was away doing some checking, they would remove the bridle. The horse would then head straight for home, and hours later Albert would come walking out of the woods carrying the bridle.

Warden Harold Apel's car. In 1935 the snow was deep — snowshoes and skis a necessity.

Once in the early teens, the Department bought some motorcycles and issued them to a number of the wardens. Neither the machines nor the roads were anything like they are now.

When the motorcycles were delivered at Madison, wardens were called in, given two days training in operating the machines, lined up in front of the capitol to have their pictures taken and then started for home. One warden got two blocks from the Capitol, failed to make a sharp corner, crashed through the door of a millinery store and jammed himself and the motorcycle so tightly in the door of the shop the fire department had to be called to pry him out. □

In the early days the only sure method of transportation was the railroad. Most hunters and most fish, game, and fur shipments went by rail. Wardens located in a town where several roads converged did a lot of business by checking trains. Wardens Peter Diedrich at Milwaukee, Ed Apel at Eau Claire, and Jim McNaughton at Superior made hundreds of arrests and confiscations this way.

Chief wardens

1913 — Wardens ranked A, B, or C according to experience and qualifications and allowed to take promotional exams. Boats become required tools. Monthly quizzes keep wardens up to date with rapidly changing laws.

1915 — Reorganization! All permanent employees get warden authority. State buys motorcycles. A special station established at Oshkosh.

1917 — Motorcycles don't pan out so the state pays eight cents per mile for use of private cars. Ranks reduced by World War I.

1925 — Warden H. W. MacKenzie becomes Chief.

1928 — MacKenzie brings stimulating change under new six-man commission. Uniforms are issued and a 95% conviction rate achieved.

1930 — Haskell Noyes initiates annual efficiency award.

1934 — MacKenzie becomes Director of the Conservation Department.

1935 — Duties expand. Wardens participate in research, organize conservation clubs and supervise work projects.

1940 — Patrol boat purchased for Lake Michigan.

1941 — World War II drains manpower.

1945 — When war ends, force is increased to 100. First two-way radios used.

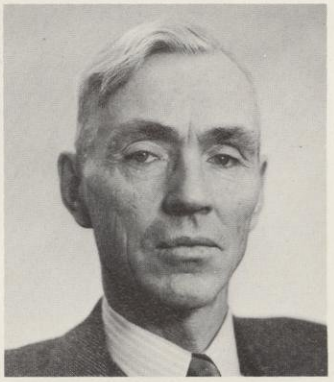
1946 — Arrests increase 50% indicating an alarming number of violations. A special section is created for acute problems.

Continued page 18

H. W. MacKENZIE:
Chief Warden 1925-1934
Director
Wisconsin Conservation
Department 1934-1942

"The department is not interested in conservation wardens making a spectacular record of arrests for violations of fish and game laws. Rather, it is particularly desirous that officers use every effort to prevent violations through education of the public. Everyone appreciates, however, that there are some who will not refrain from illegal practices excepting wherein they are apprehended and properly punished." *

*From the Wisconsin Conservation Bulletin, December-January, 1937-38.



BARNEY DEVINE:
Chief Warden, 1934-1940

"In practically all instances where the department is criticized in connection with the promotion of its program, it is usually because some person or group desires special privileges, financially or otherwise."*

*From a biennial report of the Conservation Commission

A rare early photo that includes three fabled Wisconsin wardens. Left to right they are Chief H. W. MacKenzie who went on to become director of the old Conservation Department, Barney Devine the Chief from 1934 to 1940, and Ernie Swift who also served as department director and then went on to national prominence in the Wildlife Federation. The others are Wardens James McNaughton and Max Happle. The picture was taken on the porch of the Giblin Hotel in Hayward.

J. Swenholt, former State Warden, Madison

A. J. ROBINSON: Chief Warden 1941-1947

"As far as the majority of offenders is concerned, education will do much toward decreasing their number. The smaller this group, the more intensively can efforts of the wardens be directed to that other group which, for selfish or mercenary reasons, continues to violate. It is almost too much to hope that education will ever reach those persons who commercialize illegally in game, fish and fur."*

*From the 1941-42 biennial report of the Conservation Commission

GEORGE S. HADLAND: Chief Warden 1947-1962

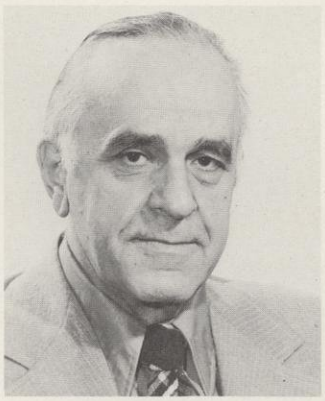
"After 27 years on the warden force my enthusiasm for the causes I believed in was just as great as when I was a 'rookie.' We had a good balance of young, middle aged and older men. We hired the best we could recruit. We had good morale, — and it was pure joy for me to work with these exceptional men."

WALTER H. ZELINSKE: Chief Warden 1962-1974

"My 12 years saw many administrative changes due mainly to legislative action in realignment of state departments, expanded enforcement responsibilities and authorized union activities. With the able assistance of the Law Enforcement Bureau's staff and key field people, the new and changed assignments were carried out in good order."

DONALD L. BEGHIN: Chief Warden 1974 - Present

"During the past five years the number of resource users has increased sharply. At the same time the warden's work week has been reduced. There has been a shortage of travel money and collective bargaining has brought in a 40-hour week. However, the program remains excellent and a good deal of the credit for this must be given to the general public. When you have a relatively small warden force, public cooperation becomes the backbone for achievement."



ATTORNEY ANDREW C. DAMON: Administrator Division of Enforcement 1976-Present

"More than any other group of state employes, wardens are respected for their historic and continuing moral commitment to natural resources and to the people of Wisconsin. They appreciate that the public expects them to be knowledgeable, fair and courteous. And they deliver."

Harley MacKenzie and former Governor Patrick Lucey. This picture was taken in 1971 when Lucey dedicated the MacKenzie Environmental Education Center at Poynette. MacKenzie had founded the facility. Now 91 the retired chief warden is a native of Poynette and still lives there.

Ernie Swift

ERNEST F. SWIFT: Director Wisconsin Conservation Department 1947-1954

The success of conservation in the coming one hundred years will depend upon what we do in our local communities . . . . through self-discipline aimed at overcoming wastefulness . . . . self-discipline born of an intelligent understanding of the limitations of our natural resources.*

*From the Wisconsin Conservation Bulletin, June, 1948

Ernest Fremont (Ernie) Swift was a legendary Wisconsin warden who rose from bush cop to the highest levels of policy making. After an adventurous field career, he became director of the old Conservation Department and then went on to national prominence. A recent article in National Wildlife Magazine by Larry Van Goethem of White Lake traced some of Swift's career:

When a young Wisconsin game warden named Ernie Swift followed three fishermen to a secluded stream where fishing was not allowed, he knew he might be killed. The year was 1928, and the lawbreakers were members of a notorious Chicago gang that was vacationing in the North Woods. Sure enough, one of the mobsters pulled a gun as soon as Swift stepped out from the trees. Undaunted, Swift confiscated all of the hoodlums' fishing gear and ordered the three to appear in court the next morning. Two days later, he pushed his luck even further when he arrested the gang leader, Joe Soltis, for poaching. This time, however, it was Swift who leveled his gun. . . .

Beginning as one of Wisconsin's first official wardens, he eventually acceded to the leadership of the National Wildlife Federation. Thus, Swift's career reflected a momentous shift in wildlife conservation itself, from the time when law enforcement was everything to the full flowering of scientific management. . . .

Swift also moved biologists into his department for the first time, a move that brought him into a happy partnership with the great University of Wisconsin ecologist, Aldo Leopold. Friends and neighbors at Madison, the two had a profound impact on each other. In 1954, Swift became assistant director of the U.S. Fish and Wildlife Service, but quit after only 18 months. He was appalled at the bureaucratic trade-offs he saw all around him. . . .

Notwithstanding his bluster and bluntness, Ernie Swift was, at times, a man of considerable discretion. Because of his aggressiveness as a game warden back in the early days, he became the target of a Chicago assassination squad. One day, a big black Packard glided to a stop in front of Swift's modest home in Hayward. But the would-be executioners found it empty. Swift had been tipped off in advance and was hiding a safe distance away. Hiding was not Ernie Swift's style — but he knew a good tip when he heard one. □

J. W. Foster, Wausau

The late Haskell Noyes, Sr. created an annual award to honor "faithful able service" by a deserving warden. Noyes was on the first State Conservation Commission in 1930, serving as chairman from 1931 to 1933. The Noyes family has carried on the tradition for 48 years. Among the winners were two future chiefs, Barney Devine and A.J. Robinson. Ernie Swift was the first winner in 1930.

1949 — Educational program for juvenile offenders started. State Crime Lab is opened and scientific criminology dawns for wardens.

1950 — The Haskell Noyes patrol boat cruises Lake Superior. Present day uniforms adopted.

1954 — Drowning and hunting accident reports submitted to legislature.

1959 — Wardens enforce new Boat Safety and Registration law. Pesticide and water pollution investigations start. First two airplanes purchased.

1962 — State cars issued. Five planes now in use. Formal hunter safety training begins.

1967 — The Wisconsin Conservation Department becomes the Department of Natural Resources.

1969 — Training at Fort McCoy makes wardens a standby force in case of civil disturbance. Snowmobile regulations a new responsibility.

1975 — Enforcement grows to parallel outdoor recreation and commercial expansion with 24,918 cases in court during the biennium. Major investigation begins into the illegal transport of PCB-contaminated fish.

1977 — Endangered Species Act passes. Wardens enforce it. □

Special thanks for contributing photos and data on the warden anniversary go to former Conservation Department Director Harley MacKenzie, Poynette; Walter Scott, Madison, retired assistant to the Secretary of DNR; Stanley Apel, Buffalo City, retired warden; Staber Reese, Madison, retired DNR photographer; Harold D. Hettrick, Deputy Director, Bureau of Law Enforcement; Dale P. Morey, Boating Safety Coordinator; and John S. Plenke, Hunter Safety Coordinator.

The man with the badge

ERNEST SWIFT

Pinning a badge on a man does something to him; his mental outlook has to adjust to the responsibility and authority vested in him. The authority to restrict the liberty of fellow citizens should not be taken lightly nor should it be abused. The adjustment will determine a man's ability, self-restraint, judgment and courage. A badge can expose sadistic qualities formerly unknown or concealed.

A successful law man must be endowed with certain basic characteristics. Among the most important are judgment and decision; a split-second decisiveness to follow through, and in emergencies, to be able to shoot the works without thought of personal safety. Whereas one rookie can be ruined by a situation of sudden violence, in another it may spark latent qualities of firmness and leadership.

A successful game warden by nature is an individualist. He enjoys being his own boss, working out his own problems and the competition of matching wits with offenders of the law. He is not just a woods cop, although he must be a crafty manhunter, with the sleuthing ability of a city detective as well as a master craftsman in the woods. He must know the laws he enforces from A to Izzard and be something of a trial lawyer.

In this present day of automobiles and radio, he is beginning to lose affinity with nature; with the woods, fields and waters. He hikes less, rides more and does not put forth the physical effort of his predecessors; seldom carries a pack or sleeps in the brush.

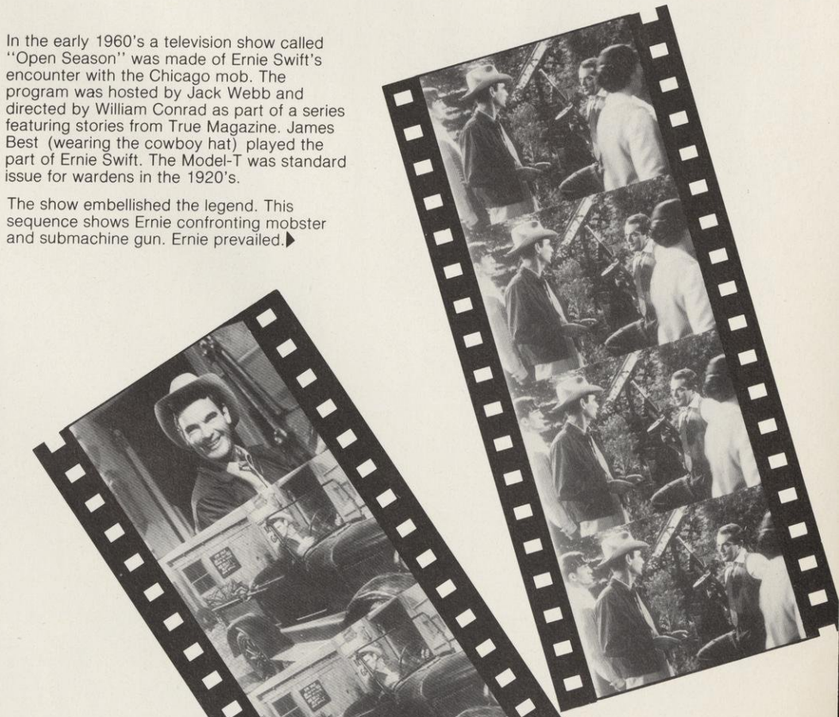
Too few wardens ever reach their full potential in their own field or the broader field of conservation. They fail through lack of hard work and diligence to master all the many ramifications of the work so necessary for success. This is equally true with other specialists. When a warden allows the job to become routine, he is either slipping or lacks imagination. There is no place for routine in game law enforcement. In addition to knowing all the tricks of the trade in enforcement, the warden should be well grounded in the biological field of fish and game, and have a working knowledge of forestry and land management. All these specialties develop him into the over-all field man that he should be. By virtue of these additional attributes he will be less a cop and more of a conservationist; less sadistic and better balanced in humility and humor.

Above all, he must have an intense fever for his work, be fanatically conscientious, indifferent to hours, physical discomforts, poor pay and public abuse. Many are called, some are chosen, but too few really succeed. There is no better job in the entire field of conservation upon which to build decision and judgment for all specialties than some basic training in law enforcement.*

*From *By Which We Live*, by Ernest Swift, published by the National Wildlife Federation.

In the early 1960's a television show called "Open Season" was made of Ernie Swift's encounter with the Chicago mob. The program was hosted by Jack Webb and directed by William Conrad as part of a series featuring stories from True Magazine. James Best (wearing the cowboy hat) played the part of Ernie Swift. The Model-T was standard issue for wardens in the 1920's.

The show embellished the legend. This sequence shows Ernie confronting mobster and submachine gun. Ernie prevailed.▶



Gypsy moth: name your poison

This bug is a gluttonous defoliator that used to live out east, but like the boll weevil, is "movin' on and lookin' for a home." Might light in Wisconsin. Entomologists say if times are right, sex, sickness and parasites could do it in — quick as poison.

DAVID J. HALL, DNR Entomologist

The gypsy moth is a pest nobody wants in Wisconsin. It defoliates 500,000 to a million acres of forest in New England every summer, has moved rapidly down the east coast and is chomping its way slowly westward through New York and Pennsylvania. It comes on like fate and now the inevitable has occurred — a couple toeholds in Wisconsin.

There is a tiny infestation in Appleton that has been monitored by the US Department of Agriculture (USDA) since 1975. Five males were trapped there that year, 11 the next, 26 in '77 and 21 in 1978. But in the town of Oconomowoc near Milwaukee, the outbreak is bigger and a little more serious. Five males turned up in 1977 and an intensive trapping program last year caught 643. Seventy-seven gypsy moth egg masses were also found.

The infestation covers about 400 acres between Oconomowoc and Okauchee lakes. It includes the shoreline of both lakes, part of the Oconomowoc River, various wetlands, many year-round residences and many summer cottages. Some places are heavily forested, some open field. Altogether, the location is an absolute nightmare for anyone planning to spray for control.

Gypsy moth caterpillars eat the foliage of many different trees. They prefer oak, basswood and birch, but will eat almost any tree, including pine. In outbreak numbers, they repeatedly denude large areas of forest and suburb. Heavy defoliation for two or more consecutive years can kill less vigorous trees and weaken healthy ones enough so that attacks by secondary organisms are often fatal. In New Jersey the toll was a million trees, mostly oak, in just three years between 1968 and 1971.

When very abundant the gypsy moth is a real pain. Its larvae will dirty your house, car and yard with droppings, and with their shed skins. Their dead bodies contribute to the mess and can fall down your youngster's neck or soil your cookout hamburger.

When this happens the public outcry is always loud and government reacts. The state of Pennsylvania had to spray 135,000 acres in 1978 and New Jersey sprayed 34,500 to prevent heavy defoliation in high-use wooded areas.

In Oconomowoc the gypsy moth population is not high enough to cause noticeable defoliation this season. But it could be heavy in five to 10 years if nothing is done. Best to wipe them out now! Infestations are still small and to wait means inevitable problems of great magnitude. A stitch in time is the way to go!

The gypsy moth is a federally quarantined pest. States permanently infested face restrictions on out-of-state movement of a variety of commodities that might contain the live insect. In Wisconsin the Plant Industry Division of

Evergreens often die from a single defoliation.

Females laying eggs.

Egg masses on trailer.

Don't bring a gypsy moth home

If you are visiting or camping in a heavily infested part of Northeast U.S. this summer, be careful. The female gypsy moth often lays eggs on vehicles, particularly campers and they usually head for the underside of the vehicle or some other hidden location. The egg mass is tear-drop shaped, about one to two inches long and is covered with light yellowish brown hairs from the abdomen of the female. If you visit an infested area, check your vehicle.

the Department of Agriculture, Trade and Consumer Protection has the responsibility for handling quarantined pests. To deal with the threat here, pest control personnel from DNR, the University of Wisconsin and the state and federal departments of agriculture have had an ad hoc committee operating ever since 1974.

In other states where new infestations have been detected, USDA has recommended and states have approved insecticide spray of anywhere from 500 to 1,000 acres. This approach was recommended for Appleton in 1977 and 1978 but the ad hoc committee felt the very low trap catch did not warrant such severe treatment. In fact, members believed that if nothing were done, the population might disappear without being treated at all. Even though treatment might eventually be necessary at Appleton, it is not urgent now.

At Oconomowoc, however, it was different. The infestation there is serious and for the ad hoc committee, critical decision time came soon. The concensus (it was not unanimous) was that an attempt should be made to eliminate gypsy moths at Oconomowoc without insecticides and with a minimum of environmental disruption. Several alternatives were considered and this was the final plan:

1. Release parasites.
2. Spray the area with a special virus that attacks only gypsy moths.
3. Use a female sex attractant to confuse males and suppress mating.

PARASITES

DNR released the first gypsy moth parasites in Wisconsin in 1973. Three species which also attack many other caterpillars were distributed. The hope was that they would become established before the gypsy moth invaded. Then, last August and September at Oconomowoc more than 300,000 tiny wasps that parasitize gypsy moth eggs were released. And three parasites that destroy the caterpillars themselves will go out this summer. Because the final objective is elimination, parasites that feed only on gypsy moths will die out if the project is successful. If it's not and the gypsy moth becomes permanently established, parasites will be out there to prevent or reduce future outbreaks.

Continued. . .

Gypsy moth.

Caterpillar.

VIRUS

The gypsy moth virus is a registered substance which infects only the gypsy moth. It is not as reliable as a chemical pesticide and requires exact environmental conditions to be most effective. But it has no known adverse effect on any other organisms.

SEX ATTRACTANT

The adult male gypsy moth is attracted to the female by a chemical sex attractant (sex pheromone) produced in an abdominal gland of the female. This chemical has been synthesized and is called disparlure (after the scientific name for the gypsy moth, *Lymantria dispar*. "Lymantria" means "destroyer.")

For six years disparlure has been used in traps to detect the presence of gypsy moths. USDA researchers have also tested various spray formulations of it for mating suppression or male confusion. The idea is that if the entire environment smells like the female, the male will not be able to find her. This works fine as long as males and females are not so crowded that they stumble over each other. Theoretically, disparlure could totally eliminate local isolated populations if they are not too high. Parasite releases coupled with the virus treatment are intended to lower populations enough so that disparlure will be effective.

The entire program offers the least possible environmental disruption. The parasites to be used very seldom attack anything other than the gypsy moth. The virus affects only the gypsy moth! And disparlure is not toxic to anything!

Environmental safety is foremost and has been gained at the expense of reliability. Both parasites and virus require favorable conditions to be most effective. So far, disparlure as a mating suppressant has been successful only in controlled experiments. It has not yet proven effective on natural populations. Therefore the program may fail to eliminate the infestation. If so it may be repeated — or, if the gypsy moth increases too rapidly, the ad hoc committee may reconsider chemical insecticides.

But everybody hopes not. We're all betting that a stitch in time with sex, sickness and parasites can kill the bug dead. □

Gypsy moths became established in this country in 1869, after specimens imported from Europe escaped from a laboratory in Massachusetts. It became a pest because there were no natural enemies here.

The insect has four stages — egg, larva (caterpillar), pupa (cocoon), and moth. It has one generation a year, overwintering in egg masses attached to trees, stones, walls, logs and other outdoor objects. Each gypsy moth egg mass contains up to 1,000 eggs and is covered with buff or yellowish hairs from the abdomen of the female. The velvety egg masses average about 1 1/2 inches long and about 3/4 inch wide.

Eggs begin hatching in late April or early May. The brownish, hairy caterpillars are easy to identify when about halfgrown by pairs of red and blue dots on their backs. Mature caterpillars are from 1 1/2 inches to 2 1/2 inches long.

Caterpillars enter the pupal or "cocoon" stage late in June or early in July, emerging from their dark brown pupal cases in 10 to 14 days as moths. Males have dark brown forewings and a 1 1/2 inch wingspread. Female moths are white with a wingspread of about two inches.

The pests do not feed in the moth stage, but only mate and lay eggs. Depending on weather and location, eggs are laid between July and September.

Cocoon.

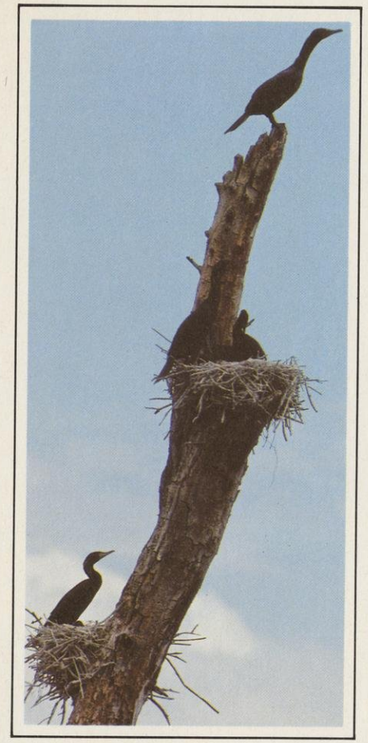
Photos courtesy of the United States Dept. of Agriculture.

DNR builds dead trees

Today bird calls and mist and eerie silhouettes in the sunrise often reveal a cormorant or heron rookery where only debris existed before. The idea came from DNR Biologist Tom Meier and today it's a public — private cooperative project.

Adult cormorant and three young in nest.

In July, 1978, active cormorant nests occupied 35 of the 45 nest structures in the Cat Island rookery in Green Bay.



DAVE CREHORE, DNR Public Information Officer, Green Bay

Double-crested cormorants are fish-eating birds related to the pelican. And in Wisconsin, they've been in trouble.

Cormorants aren't numerous anywhere in the central United States, and were never common in Wisconsin except occasionally during migration. Through the late 1950's, around 2,000 cormorants nested in the state, and their population appeared to be relatively stable. But then numbers started going down, and today the cormorant is listed as an endangered species in Wisconsin. Only 600-700 cormorants nested in the state in 1977, at six small "rookeries."

Why the decline? Waste residue of pesticides in the fish they eat are probably involved to some extent, but one certain factor is the loss of the secluded, flooded timber stands the birds prefer for nesting. Flooded stands of trees are vulnerable to wind, waves and ice and often topple after flooding. And like most other kinds of wildlife habitat, they aren't being made any more. Flood control work has reduced or eliminated flooded backwaters along rivers, and the control of beavers to protect roads and valuable trees from beaver ponds has cut back on another source of flooded timber. Although the trees are usually left standing when state wildlife areas are flooded for habitat development, most suitable low spots are already under water.

So the cormorant has been up against it. Dwindling habitat meant dwindling cormorants, and until recently the state was faced with the possibility of losing most of these unique, oddly attractive birds.

But a likely way out of the dilemma has been found. In 1973, when Tom Meier, now a DNR wildlife manager at Spring Green, was a graduate student at the UW-Stevens Point, he wondered if artificial trees and artificial nest structures could replace the natural timber as it fell. His research proposal was accepted, and Meier was soon engaged in a study of the cormorant situation, in co-operation with the UW-Stevens Point. DNR funding came, in part, from firearms and ammunition tax revenues through the federal Pittman-Robertson program.

The project was carried out in a cormorant and great blue heron rookery on the state-owned George W. Mead wildlife area near Stevens Point, where cormorant habitat had been declining. In January, 1974, ten 30-foot poles were cut from live timber and hauled over the ice to the rookery. Holes were cut through the ice and the poles were driven into the bottom of the flowage. Then artificial nest platforms were bolted to the poles.

The experiment was a success the first year. That breeding season, 25% of the cormorant nests in the rookery were built on the artificial platforms. To replace the loss of natural nesting trees, additional "trees" made of treated power poles were set up in the rookery during the winters of 1974-75 and 1975-76. In the spring of 1977, 68% of the cormorant nests in the rookery were built on the artificial platforms. More cormorants than ever nested in the rookery that year, and as an additional benefit, great blue herons used the platforms as well. To keep up with the "demand," more structures were put up at the Mead area in early 1978.

Since the first use of structures by cormorants in 1974, similar habitat creation has been done at state wildlife areas in Burnett and Buffalo Counties, and at the Grand River wildlife area in Marquette County.

The most recent cormorant habitat project was initiated in March 1978, when 15 treated power poles bearing 45 nest platforms were set up on Cat Island in Green Bay, where cormorants had nested until bad weather toppled the trees. The construction of this rookery was a good example of co-operation between government and industry. The Brown County Highway Commission plowed a two-mile road across the snow-covered ice to the site, and the Wisconsin Public Service Corporation donated the use of line trucks to set poles in the bottom of the Bay. Public Service employees and DNR personnel put in a Saturday without pay on the project, and later, the Jack Foster Construction Company of Abrams, donated tons of rock and hauled it to the site to stabilize the poles and protect them from ice action. When the cormorants returned to Green Bay that spring, they took immediately to the thicket of power poles that had sprung up on their old nest island. By mid-summer, 35 of the 45 platforms held active cormorant nests with two to four young each, marking another success for the habitat creation idea.

So far, the cormorant project has been an instant winner. But attempts to help other species might not pay dividends as quickly, and in any case there are many other endangered and threatened species to worry about. With that in mind, the DNR's work with the cormorants must be considered a significant but early event in what will have to be a long program of non-game species management.

The project proves that we can intelligently intervene to solve wildlife problems. It also helps to affirm the modern belief that living species, no matter how rare or unusual, should be preserved as a matter of course, as well as for the enjoyment of tomorrow's citizens. □

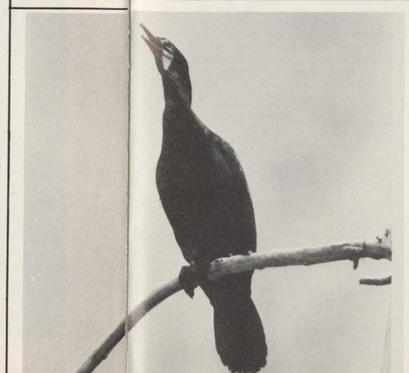
Photos by Wisconsin Public Service Corp., Tom Meier and Dave Crehore

The cormorants' preference for secluded, flooded timber is so great that they build precariously situated nests on dead trees that are literally falling apart. Man-made structures can be repaired and produce more young.

Bottom center:
Double-crested cormorants breed in southern Canada and the northern U.S. Adults are all black with orange faces and bills, are about 27 inches long and have 50-inch wingspreads. Their diet consists entirely of fish, two-thirds of which are "rough" fish such as bullheads.

Top center:
Great blue herons nest in the same places.

Wisconsin Public Service Corporation line truck sets one of 15 poles at Cat Island rookery. The poles were anchored in the bay bottom about a foot beneath the ice.



The readers write

Transplanted to California in 1975, I now eagerly await each issue of the Wisconsin Natural Resources magazine. Its timely and interesting articles and photographs keep my great love and interest for Wisconsin alive.

A two week vacation there last fall offered me successful goose, partridge and pheasant hunting with a few days of walleye pike and musky fishing. Upon returning, my neighbor, a Catholic priest, asked me how my vacation was. My answer was, "Father, I must have been in heaven because the earth has never been so good to me."

So please continue the high quality of your fine magazine because it is my lifeline to outdoor pleasures.
WILLIAM MCGILLIGAN; San Clemente, California

I've never seen anyone find water with a willow wand, but I watched a man dowse one day with a quarter and a string. He dangled a quarter on the end of a string held by this thumb and forefinger. The coin was horizontal and swung in a circle. The number of swings corresponds to the depth of the water table. If the dowser is relaxed, the quarter starts, swings and stops freely.

This has worked for me over a glass of water. Even skeptics have verified it, but others could try all day with no results. The quarter definitely moves, but whether water influences it is guesswork. A silver quarter swings clockwise and a nonsilver one goes counterclockwise. What causes this motion?
R. H. WOLFF; Franklin

Is "the hunter" getting a fair shake? I think not. In your March-April issue someone expressed an obvious charge of criminal trespass and made it very clear that their children learned a lesson about, of course, "the hunter" and not the criminal. It was "the hunter" who had to kill to be satisfied. It was "the hunter" who shot the deer out of season and dragged it off past "No Trespassing" signs, not the felon.

The hunter will get a fair shake if people learn to recognize his importance and if they join hands with him to battle those who insist on misuse of guns, seasons, land rights and animals.
STEVE GONSKE; Hunter Safety Instructor, Stevens Point

I just finished reading the article in the March-April issue called "Baby Blues Die Hard." The idea that fish are only good if they attract fishermen or bring in money typifies the way things are handled by the DNR.

The DNR does much for wildlife, but on the other side I have witnessed some terrible abuses of defenseless wildlife simply because it didn't fit into the DNR's cash box.
MS. KAROL L. KNOBLE, Mishicot

May I suggest you publish a retraction of "Breathalyze Your Air" pointing out false statements and innuendoes it contains. It paints a completely incorrect picture of the pollution situation in Wisconsin and could be extremely damaging to the state's economy.

We all want clean air, clean water and nonhazardous waste disposal. We have come a long way, as your data would prove. If, however, we divert too much of our productive effort into ineffective types of control or vain attempts to meet unattainable goals, we will cause unemployment — a very vicious type of pollution.
ALVIN P. FENTON; Oostburg

Congratulations to Wisconsin Natural Resources and Wolf Klassen for "talking sense" about air conservation in "Breathalyze Your Air". Klassen's writing made a difficult and controversial subject understandable, thought-provoking and inspirational. And those illustrations! They took me back to Life Magazine in its glory years.
GORDON KRENN; Wisconsin Lung Association

I have been reading every word in Wisconsin Natural Resources since it came out. I enjoy many hours reading and rereading it. Your December editorial "The Gift" was a rare gem.

Enclosed is a piece of fishing line I took off a drake mallard's bottom bill. The loop held his tongue down very tightly. The drake was mature and good sized, but very skinny. He had an empty crop and little in the gizzard. I shot him near the Root River — the chinook slaughterhouse. I find a lot of tangled line there and many birds nest along its banks.

Careless fishermen can cause a lot of grief to birds and mammals with their cast-offs — put the junk where it belongs!
PAUL GALES; Racine

Three cheers for Justin Isherwood's excellent essay on "The Hedgerow" in the November-December issue. He says a number of things that need saying, in a style which approaches the almost-poetry of Aldo Leopold — especially apt for your pages. Hedgerows *do* serve many valuable functions that are probably worth many dollars, but landowners and engineers have failed to add these into their accounts. An economic approach which fails to consider the ecological interactions on which productivity depends, or one which looks only at immediate returns in only one category, is not a viable economy in the long run.
PROFESSOR PHILIP B. WHITFORD; UW-Milwaukee

Illustration by Jim McEvoy

I found the photograph on the back cover of the January-February edition to be both poorly chosen and disappointing. I do not believe Wisconsin's 7,000 mile trail system was intended to foster reckless behavior, as depicted by the snowmobile with its front end high off the ground. You should promote behavior in tune with ecological consciousness and safety.
TOM BLACKWOOD: Stoughton

In your January-February Issue you recommended a book entitled "The Deer of North America." The publisher has moved and I've called every bookstore around. No bookstores have ever heard of it or have it listed. Can you send me some information?
REED A. HORWATH; Waukesha

The book was scheduled for publication March 1, 1979, and is available from Crown Publishers, Inc., One Park Avenue, New York, N.Y., 10016.

The cover of your March-April issue featured a wonderfully ugly, awkward baby eagle. Who took the picture?
BILL QUADE, Madison

Ronald G. Eckstein, DNR's Forest Habitat Coordinator at Rhinelander. Another name that needs mention in connection with the eagle story is Charles (Chuck) Sindelare of Waukesha who for many years banded Wisconsin eagles and conducted the aerial surveys.

As an animal lover and drawer, I can say you put out a good magazine! I know my sister and brother-in-law will enjoy it as well!
VICKIE OATMAN; Eau Claire

Readers are invited to express opinions on published articles. Letters will be edited for clarity and conciseness and published at the discretion of the magazine. Please include name and address. Excerpts may be used in some instances. "Letters to the editor" should be addressed to Wisconsin Natural Resources magazine, Box 7921, Madison, Wisconsin 53707.

Muskellunge: wallhanger forever

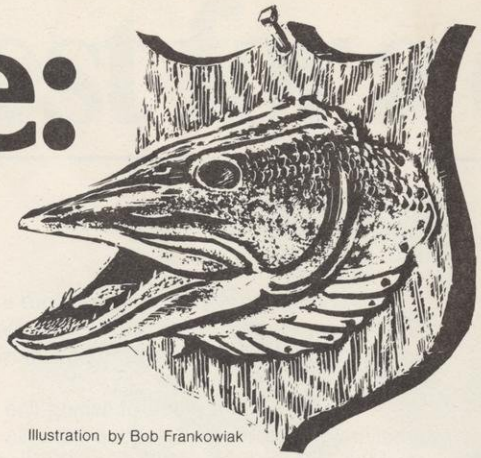
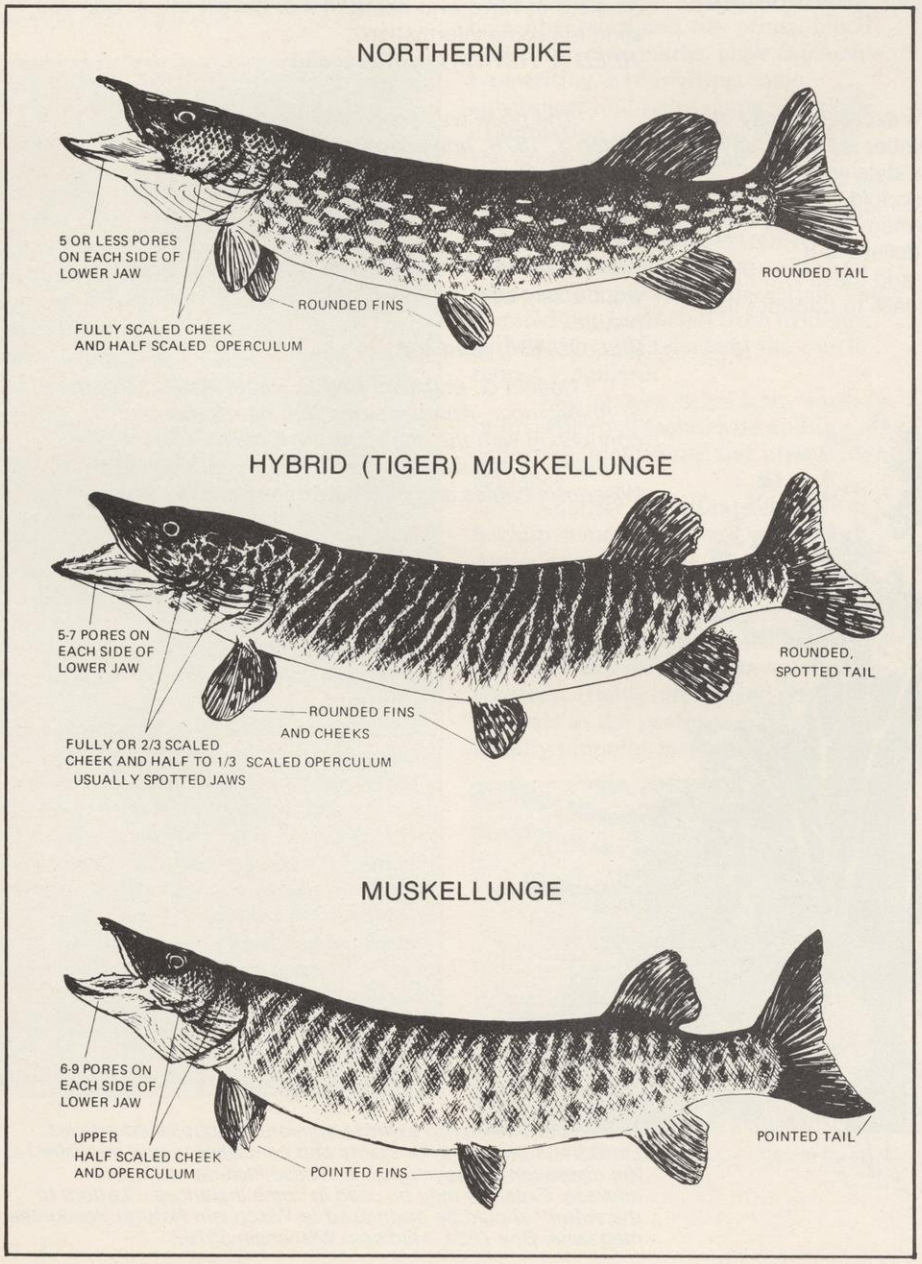


Illustration by Bob Frankowiak

Both the northern pike and hybrid muskie have light markings on a dark background, but the northern has spots while the hybrid has stripes.

Illustrations by Georgine Price



Wisconsin is the greatest trophy muskie territory in the world. One reason is they're hard to catch. DNR wants it to stay that way.

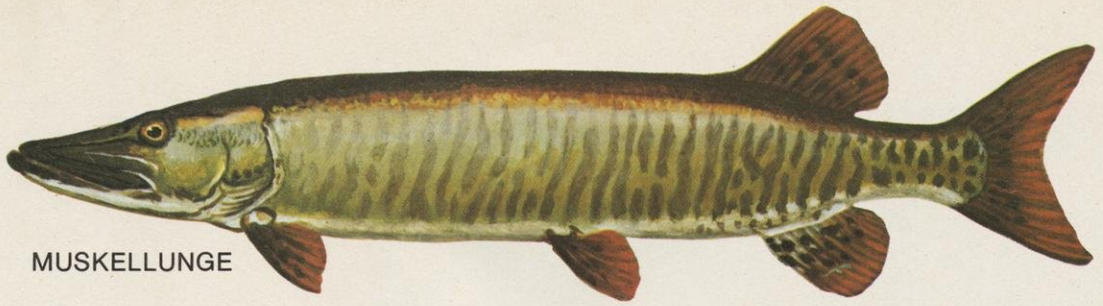
JOHN H. KLINGBIEL, DNR Fish Production Specialist, Madison

"Look!" Pat whispered. He nodded toward the tip of my rod. There, in the shadow moved the dark form of a mammoth fish. Then — it was gone. "Why no hit?" I felt it in the pit of my stomach. "Try again, gently."

Three casts later it appeared once more — but then — nothing. I finally started the outboard. We would come back. "What a trophy for the family room! (I could see it there.) Well, someday maybe."

Some muskie anglers, while a lovable bunch, develop strong personal preferences (for lakes) which may have little to do with the average musky population per acre of water. Stories of Scarface, Torpedoe Joe or Old Boatswallower abound. Enjoy, but don't believe them.*

Every year thousands of muskie anglers have different versions of this experience. To the uninformed it probably would have seemed a disappointment. But not to the true muskie hunter — for him a "follow" whets the anticipation of landing a real wall hanger. A muskie is not a meat fish. There aren't enough of them for that and there shouldn't be. It takes more than 100 hours for the average angler to catch a legal muskie. Three small ones are caught for every 30-inch legal. Some people have fished them for years without ever putting one in a boat. It is



MUSKELLUNGE

NORTHERN PIKE

Illustration by Virgil Beck

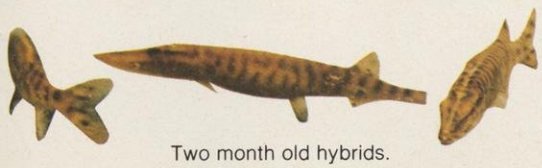
an experience too precious to become commonplace.

Although accurate figures aren't available, it's estimated that there are 210,000 muskie anglers in Wisconsin. The sport is more popular every year. During the average season about 65,000 legals are caught — one for every 5½ acres of muskie water. This may not seem like a lot, but muskies never get very abundant anywhere. Few lakes have more than one adult per acre. Evidence says it's always been this way. Muskies are meant to be scarce — and meant to be trophies.

Seventy percent of successful muskie fishing is familiarity with your muskie lake's structure. I can't overemphasize the importance of knowing and fishing underwater reefs and bars, particularly those that also provide weed cover. The remaining 30% of the success rate, assuming an angler has some sense of what the fishing art is all about, encompasses such matters as what time of day to go for maximum opportunity and what baits to use.*

Because of the high demand and low natural populations, most of Wisconsin's 787 muskie waters are stocked periodically. Each year about 130,000 fingerlings are reared in hatchery ponds for stocking. Wisconsin has the largest muskie rearing program in the country and anglers catch more muskies here than anywhere else in the world. Most lakes are stocked with eight-to-10-inch fingerlings in early fall, but a few get smaller fish.

Raising muskies is expensive; each one costs about $1.70. The price is high because they eat only minnows — four or five pounds for every pound of muskie reared. If you've filled up your bait bucket lately you know how much minnows cost. But we're trying to raise them for less. Last summer for the first time, a few fingerlings were experimentally reared, like trout, on dry pelleted feed. There were only 400 of them and they weren't very big, but if the method can be successfully developed, rearing costs will be substantially lower. It's a start.



Two month old hybrids.

Ichthyologists tell us that the muskie is a more ancient version of its cousin, the northern pike. The muskie is all muscle in linear geometric shape, a predator incarnate. When hooked, a flash of its metallic sheen confirms that here is a fish that evolved when times were leaner, when glaciers abounded, when species had to be tough and fast to assure survival. As though conscious of its proud past the muskie is a dignified creature. When it follows a lure to the source and the bug-eyed angler shakes in his boat, does the muskie sprint away in embarrassed panic? Not at all! The muskellunge, its composure unbroken, casually veers or simply sinks under the hull. Up your sunburned, windblown hide, mere man! I like muskies. May they swim forever.*

Since 1976, muskie — northern pike hybrids have been raised very successfully on pellets, but they are different fish than true muskies, not nearly as fussy about what they eat. Hybrids have been stocked in some southern counties and a few occur naturally in lakes in the north. They have some advantages over pure muskellunge but serious disadvantages too. Besides the low cost of hatchery production, because of their willingness to eat pellets, they grow extremely fast. In southern Wisconsin some get to be the legal 30 inches the second summer after stocking — twice as fast as pure muskies in most northern waters.

I venture the proposition that if the muskie angler devotes, say the hours from dawn to 8 a.m. and from 6 p.m. to darkness in conscientious casting, he will not be far behind in his catch rate from that of full-day devotees.*

Hybrids have two disadvantages: they cannot reproduce successfully and they're too easy to catch. Even though the reason they're stocked is so that anglers can catch them, they have to be able to survive and grow big enough to become trophies if the program is to be worthwhile. In some small popular lakes, taking a hybrid is notoriously easy. It's estimated that on opening day last year, six hybrids were taken into every boat on one lake where they'd been stocked — and unfortunately, all were sublegal. Only one legal fish was known to have been caught from that lake all year.

And try to be out on your favorite reef or bar when the thunderheads gather, when rumbling begins in the distance and the water is like oily glass. It is such times that can produce, if not a strike, then at least a memorable follow from a muskellunge of a size you thought not possible for your lake. When the wind is blowing to sting, is shifting from westerly to northeast, when the rain drives into your pores and wispy clouds billow across the pine tops — anglers, then it is good muskie weather.*

Continued next page. . .

* From an essay entitled The Occasional Muskie Angler, by Stan Vanagunas, Elm Grove, WI.

Hatchery at Woodruff. Photo by Art Oehmke

Although little is known about survival of fish hooked and returned to the water, apparently many die. Anglers should handle them very carefully. It's best to remove the hook while the fish is still in the water. If this can't be done, the line should be cut. The hook will soon rust away and the fish will be fine. When using large muskie lures, a wire cutter should be carried to cut fish free.

The bait that I strongly recommend to the occasional muskie angler is a bucktail spinner. When the muskie locks its jaws on it, the bucktail's form becomes a relatively insubstantial shaft of steel and compressed hair. There is more slippage and consequently better hook setting capability. Bucktails do not necessarily mean more strikes, but more solidly hooked muskies when one does hit.*

Hybrids may be okay in some of the large lakes of southern Wisconsin where they can get away from anglers but they just don't grow up to be trophies when too many people are fishing. The benefit of stocking hybrids where northern pike grow just as big is extremely questionable. By comparison northerns reproduce naturally and usually require little special management.

While catching a legal hybrid is a thrill, when a fish is too easy and a lot of sublegals come aboard, the whole experience is cheapened. DNR plans to forget stocking hybrids in the little, heavily fished lakes and put in the real thing instead. It's hoped they'll grow up and furnish the kind of drama they ought to.

In my view, an occasional muskie angler will increase his catch opportunity if he perseveres in these five principles:

1. Learn intimately the structure of a manageable body of muskie water and loyally stick with it;

2. Concentrate on underwater reefs and bars with weed cover in the main part of the lake;

3. Fish early morning and evening hours;

4. Fish before thundershowers and during frontal movements;

5. Cast a bucktail.*

Wisconsin has the best muskie fishing on earth. More world records have been landed here than anywhere else. A lot of big ones are still around and trophy fishing for them remains a great experience. A broken line, a vicious slash, a desperate leap or even a passing shadow are remembered and valued. Such things happen to relatively few. If you're one of the lucky ones who has had an encounter, you may escape addiction. But the thrill is guaranteed. May it be so forever. □

* From an essay entitled The Occasional Musky Angler, by Stan Vanagunas, Elm Grove, WI.

Some of Wisconsin's best muskie lakes

ONEIDA COUNTY:
Clear
Minocqua
Pelican
Planting Ground
Rhinelander Flowage
Squirrel
Tomahawk

SAWYER COUNTY:
Chippewa Flowage
Lostland
Moose
Teal

POLK COUNTY:
Bone

VILAS COUNTY:
Big Arbor Vitae
Big Sand
Big St. Germain
Crawling Stone
Fence
Flambeau
Ike Walton
North Twin
Pokegama
Presque Isle
Star
Trout
White Sand

IRON COUNTY:
Gile Flowage

Wisconsin record muskies:

Year	Weight	Place Caught
1939	59 lb. 8 oz.	Grindstone Lake
1940	61 lb. 13 oz.	Lac Court Oreilles
1947	64 lb. 8 oz.	Favil Lake
1949	69 lb. 11 oz.	Chippewa Flowage
1949	67 lb. 8 oz.	Lac Court Oreilles
1951	50 lb. (hybrid)	Lac Vieux Desert

Other big ones:

1941	50 lb.	Grindstone Lake
1942	55 lb.	Chippewa Flowage
1942	50 lb.	Lac du Flambeau
1945	52 lb.	Trout Lake
1948	51 lb. 12 oz.	Lake Winnebago
1952	49 lb. 12 oz.	Chippewa Flowage
1953	53 lb. 12 oz.	North Twin Lake
1956	50 lb.	Minocqua Lake
1975	51 lb.	Lac du Flambeau

Photos by Dean Tvedt

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