

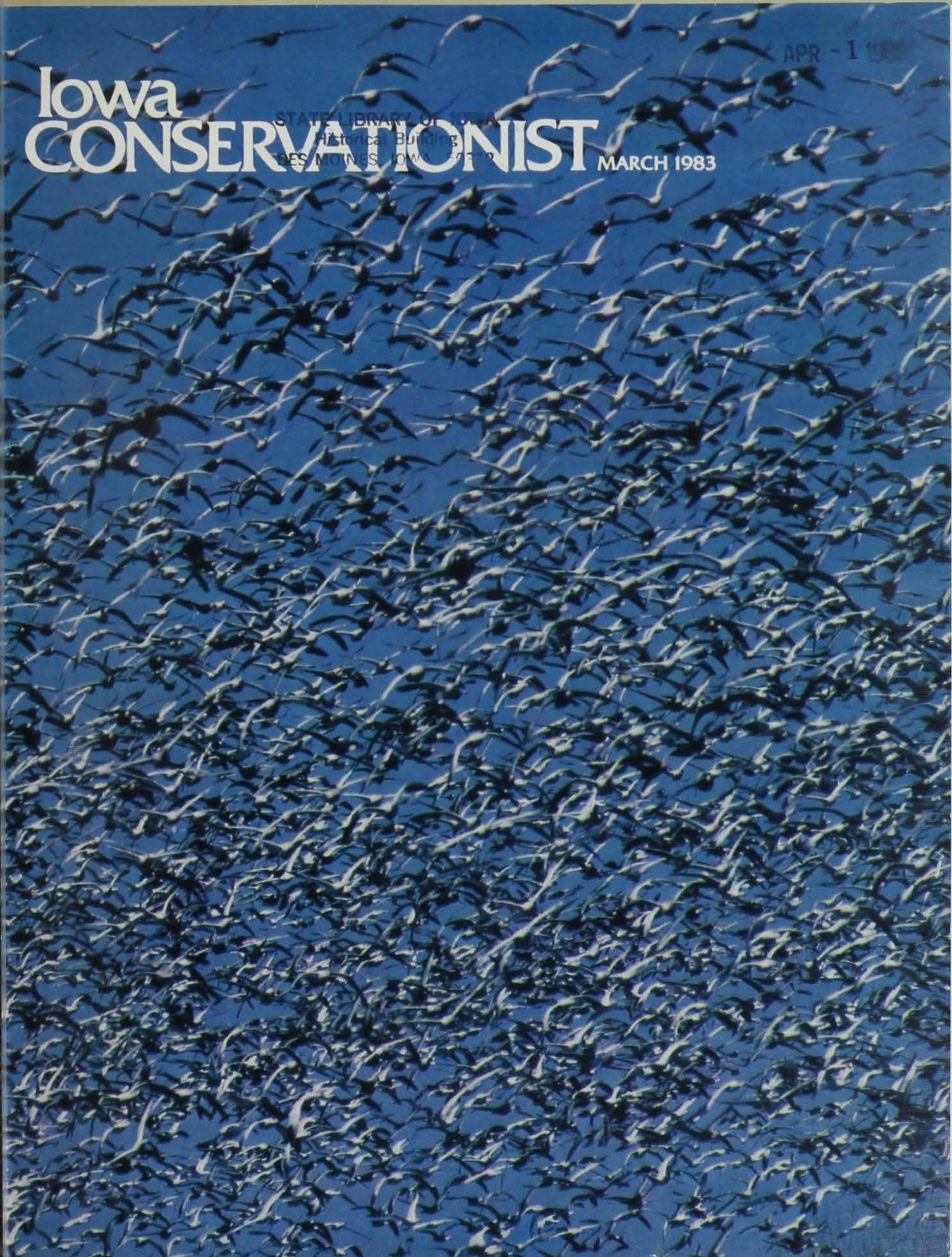
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CONSERVATIONIST

MARCH 1983



1983
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FRONT COVER: Spring migration of Snow geese. Photo by Ken Formanek.

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TOURNAMENT

By Tom Boland

Tom Boland is a fisheries management biologist located at Bellevue. He holds a BS degree from Loras College in Dubuque and an MS degree from the University of Wisconsin in LaCrosse.

Bass tournaments to many conjure up visions of high-powered boats running about with little regard for others and the apparent slaughter of hundreds of bass for the sake of prize money. That image is changing though, as bass clubs throughout the country are making a concerted effort to improve their public image. Most clubs expect compliance

with sportsmanlike conduct and incorporate it into the club's official tournament rules and regulations.

An example of an Iowa club's regulation concerning sportsmanship states: "Competitors in the Bassmasters tournaments are expected to follow high standards of sportsmanship, courtesy, safety and conservation. Any infraction of these fundamental sporting principles may be deemed cause for disqualification. Maximum courtesy must be practiced at all times especially with regard to boating and angling in the vicinity of non-competitors who may be on tournament waters. Any act of a competitor which reflects unfavorably upon the club's effort to promote fisheries conservation, clean waters and courtesy shall be reason for immediate disqualification." Most clubs are very serious about compliance concerning sports-



Tom Boland

WAT FISHING — Changing an Image

manship and would welcome complaints about members who do not comply.

During the past 10 years, bass fishing equipment and catch technology has become increasingly sophisticated. The electronic gadgetry, high-powered boats, increased variety and improvement in artificial lures, and the rapid spread of technical bass fishing knowledge have all contributed to the making of the modern day Bass Buster Deluxe. Likewise, tournament fishing for bass has grown very rapidly. An average of 66 tournaments were held in Iowa from 1979 through 1981. During one year (1975) in Missouri 506 bass fishing tournaments were conducted. During the same year in Texas, an estimated 3,000 bass fishing events were held.

In order to determine whether large bass fishing tournaments were having

an effect on bass populations, a study was conducted of 46 tournaments held from 1967 to 1974. Some of the reservoirs involved in this study were: Beaver-Arkansas, Ross Barnett-Missouri, Rayburn-Texas, Toledo Bend-Texas, Table Rock-Missouri, Pickwick-Alabama and Lanier-Georgia. It was found the harvest of bass during these tournaments seldom exceeded 0.10 pounds per acre or approximately 2 percent of the yearly harvest. Also, the average fisherman in a national bass tournament seldom caught more than 0.5 bass longer than 12 inches per hour of fishing. The usual catch rate was 0.1 to 0.3 bass per hour. The national average catch of bass is about 1 pound per fishing day or 0.17 bass per hour. In other words, national tournament bass anglers may be proficient, but the catch rate data suggest they are not notably superior to ordinary anglers. Tournament fishermen do not catch a limit every time they go fishing.

Tournament Mortality

Prior to 1972, very little effort was made to keep tournament-caught bass alive. The fish were kept wet to prevent valuable weight loss but after weigh-in most were returned to the water either dead or dying. In response to concerns of overfishing, B.A.S.S. initiated a "Don't Kill Your Catch" release program. The Florida National B.A.S.S. tournament in March 1972 reported an 85 percent release of live bass. This stimulated interest to initiate release programs at other national, state and club tournaments. An article by fisheries biologist Kevin Richards, in "The Missouri Conservationist" July 1, 1980 points out some very good advice for fish survival at bass tournaments:

A successful release involves much more than simply returning the bass to the water. Weather and water temperature affect the amount of handling and

stress a bass can take. Handling can be more harmful during the hot summer months. From the time a bass is caught until it is released after the weigh-in, there are three phases of handling which affect the survival chances of that fish.

Hook removal. Hold the bass firmly by the lower jaw, not by its body, and gently remove the hook. Never pull a hook from the fish's throat or stomach; it is better to cut the line and let the hook work itself out. If a length limit applies, wet your board and carefully measure the bass with its mouth closed and the lobes of its tail fin pressed together. If the bass is shorter than the required length limit, quickly return it to the water.

Live-well. If tournament rules call for a weigh-in of all legal bass (up to the daily creel limit), carefully put the bass in an aerated live-well. The proper use of a live-well is critical in any successful release program. Once the fish is in the live-well, don't forget about it. It is important to replace the drain plug in the well before moving the boat from place to place. Otherwise the fish will be left dry and bouncing around in the bottom and it is unlikely that a bass treated this way can be successfully released.

The best live-well systems are equipped with overflow standpipes and small 12-volt recirculating pumps which draw fresh water from the lake and spray it into the well. It is best to keep the water in the live-well fresh and as close to the actual lake temperature as possible. On hot summer days it may be necessary to run the recirculating pump continuously. A final note about live-wells and their capacity. A small live-well stuffed with a limit of large bass is as useless as no well at all. In general, you should put no more than $\frac{3}{4}$ pound of bass per gallon of water in a well-aerated live-well. If your well is 18 inches deep by 12 inches wide and

Fishing tournaments have become regular events on many of Iowa's larger lakes, rivers and impoundments. Most organized tournament fishing is conducted by the 25 bass clubs within the state with an estimated membership of around 500.



TOURNAMENT FISHING

18 inches long, it could hold about 11 gallons of water plus eight pounds of bass; that would be four two-pound (15 inch) bass, or one five-pounder and one three-pounder.

A possible solution to overcrowded live-wells is for tournament sponsors to adopt an honor system similar to that used in many small club tournaments. This is to measure and release all bass below a certain size limit immediately, bring only larger bass — say, over 17 inches — to weigh-in. Smaller bass released on the water could be assigned a weight at the weigh-in by using a standard length-weight relationship.

Weigh-in. Assuming the bass has been treated properly in the live-well, the weigh-in is the final and often the most critical phase affecting its survival. Bass that are held out of the water during the weigh-in or during the photographic sessions have slim chance of surviving.

Bass should be kept in the live-well until participants leave their boats. As fishermen leave their boats, bass can be put into round plastic laundry baskets. A series of 50-gallon plastic garbage

cans may be spaced every 10 feet up to the scales so that baskets of fish can be kept in the water until the actual weigh-in. The water in these cans must be kept fresh or aerated.

The use of plastic water bags to carry bass to the scales is not a good practice. Although this principal works well for transporting aquarium fish home from the pet shop, it does not work well at a bass tournament. To use these unaerated bags effectively they should contain about one gallon of fresh water for each $\frac{1}{4}$ pound of bass — that is, eight gallons of water (weighing about 65 pounds) for each 15-inch bass in the bag. This, of course, is quite impractical.

Tournament sponsors should assign people to coordinate fish release. After the weigh-in, bass should be classified as releasable or non-releasable. Non-releasables are dead, weak or injured fish. It is better to keep any questionable bass as food rather than waste them by returning to the water. A successful release program is a credit to any fishing club. A sloppy weigh-in can mar an organization forever.

Three to five days after the release, tournament sponsors should check the release area to remove any dead fish.

The tournament should not be considered over until this has been done.

Do Release Programs Make a Difference?

During a one-year period in 1974 and 1975, there were a total of 506 bass fishing tournaments on Missouri waters, and 65 percent of the fish weighed-in at these tournaments were released alive. In a carefully organized tournament in April 1978, 93 percent of the bass weighed-in were released alive. A delayed mortality study indicated that an additional four percent of these died within two days after release. A recent Iowa bass tagging study on the Mississippi River, indicated that approximately 10-15 percent of tournament released bass were caught again within three weeks. Also, a single fisherman was responsible for re-catching five of the tagged fish.

The point is, that with care, a high percentage of tournament-caught bass can be released successfully. **RELEASE PROGRAMS CAN AND DO WORK.** The basic techniques outlined here can apply to all fishermen who want to release part of their catch. And every fish successfully released is one that may well be caught another day.



Ron Johnson

The weigh-in is the final and sometimes the most critical phase affecting survival. But with proper care a high percentage of tournament-caught bass can be released successfully.



Ron Johnson



Ken Formanek

The Wild Turkey

By Terry Little

Terry Little is a wildlife research biologist located at Boone. He holds a B.S. degree from Luther College in Decorah, an M.S. degree from Iowa State and a Ph.D. from the University of Minnesota. He has been with the commission since 1975.

History

Wild turkeys numbered in the millions nationwide when the first settlers landed at Plymouth Rock. The birds provided a readily available source of food for the table and the market. Like much of our native wildlife, turkeys were unable to withstand the onslaught of white settlement. Year 'round indiscriminate killing of all ages and sexes and clearing of their forested habitats to create agricultural lands led to the extirpation of turkey flocks from all of their primitive range north of the Ohio River and from most areas in the South and East. By 1920, approximately 250,000 eastern wild turkeys remained, occupy-

ing just 12% of their former range. Only 8 states still had a turkey hunting season, most in the mountainous terrain of the southeastern United States. Turkeys were virtually gone from Iowa by 1900; the last verified sighting was made in Lucas County in 1910.

In the early 20th century, trends which led to the demise of turkey flocks began to be reversed. Most states formed conservation agencies and gave protection to vanishing wildlife. At the same time, unproductive farmlands were abandoned as industrial jobs in growing cities became more attractive. Purchase of state and national forests, reduction in cattle grazing on public forest lands and control of wildfire were factors which led to the development of new turkey habitats in regions where no turkeys existed to populate them.

Most states began turkey restoration programs in the 1920's, first using docile gamefarm turkeys to produce large numbers of young birds which were released in the wild. These efforts were universally unsuccessful because gamefarm birds had lost their wary instincts which allowed truly wild turkeys to survive in their natural environ-

ment. In spite of expenditures of millions of dollars over several decades, no free-ranging turkey populations were produced. Gamefarm turkeys also carry domestic poultry diseases which can be transmitted to a variety of wild birds. *For these reasons, release of gamefarm turkeys without a permit from the Iowa Conservation Commission is illegal in Iowa today.*

With the development of the cannon net trap in the 1950's, the history of the wild turkey underwent a dramatic reversal. For the first time, large numbers of wild turkeys became available for transplanting to unoccupied habitats and turkey populations began the long road back from near oblivion. In three decades wild turkey numbers have been increased to 1.8 million birds in 47 states, turkeys have been reestablished in 15 states, introduced to 11 states where they did not occur historically and harvests have totalled 223,000 birds annually.

In Iowa, an aggressive restoration program utilizing wild trapped turkeys from Missouri and Shimek State Forest (Lee County) and Stephens State Forest (Lucas County), resulted in transplant-

The Wild Turkey

ing 1,144 turkeys to 78 sites between 1966 and 1980. Turkeys from southern Iowa were originally introduced from Missouri in the mid 1960's. Turkeys are now well established on a quarter million acres of forest land in southern Iowa and are rapidly expanding into another $\frac{3}{4}$ million acres around recent releases in northeast Iowa, western Iowa's loess hills and most of the forested river valleys in central and east-central Iowa. This restoration program was paid for entirely by the Iowa sportsman through revenues from the sale of hunting and fishing licenses and an excise tax on the sale of arms and ammunition.

Habitat

Wild turkeys are birds of the forest. The eastern subspecies found in Iowa and most of the United States east of the Missouri River thrives in mature oak-hickory forests native to this region. Turkeys primarily eat nuts, seeds and berries (collectively called mast) produced in greatest abundance in middle-aged to mature stands of oak forests. Because mast crops are notoriously variable, turkeys have evolved into large, strong-walking birds capable of covering a range of 1-2 square miles in a day, searching for suitable food items by scratching in leaf litter. These "scratchings" — piles of leaves adjacent to a small plot of bare earth — are characteristic in good turkey habitat and indicate that turkeys have been feeding in the immediate area.

In winter, turkeys rely primarily on mast for food, although in Iowa and other agricultural states they are capable of substituting waste grain in harvested corn and soybean fields, where it is available adjacent to timber. When snow covers their native foods, or mast crops fail, corn fields supply an important supplemental food capable of carrying turkeys through winter stress periods in excellent condition.

In spring and summer, a turkey's diet switches to a wide variety of seeds, insects and green leafy material. Protein

derived from insects is especially important to rapidly growing poults during their first weeks after hatching and to adults replacing feathers after their annual summer molt. Hayfields and moderately grazed pastures are excellent producers of insects and are heavily utilized by turkey broods where they are interspersed with suitable forest stands. Hayfields and rank, grassy areas also provide suitable nesting sites.

Turkeys roost at night in trees year around, except for hens sitting on a nest. Any tree larger than 4 inches in diameter at breast height may serve as a roost tree, but larger, mature trees are most often utilized. Eastern turkeys shift their roost sites almost daily, seldom roosting in the same tree two nights in succession. Certain areas of their home range may provide especially favorable roosting sites and may be utilized more heavily than other locations, e.g. a ridge of large trees near a feeding area or a stand of large evergreen trees during very cold weather.

In Iowa, the abundance of food and nesting areas in nonforested habitats (corn fields, pastures, hayfields) has allowed turkeys to survive in areas where forests are limited. In traditional turkey range, minimum timber requirements of 10,000 continuous acres of mature forest are commonly thought to be necessary for wild turkeys. Recent research indicates that areas with a 50:50 ratio of forest with properly managed nonforested habitats is ideal turkey range, and that a turkey population may survive where as little as 1,000 acres of timber are available.

Hunting

The eastern wild turkey offers one of the most challenging hunting experiences available today and appeals only to the most dedicated outdoorsmen. Wild turkeys have extremely keen senses of sight and hearing and are normally able to avoid human contact so successfully that hunters often do not detect their presence. The instincts for survival are most highly developed among adult gobblers, making them among the most sought after trophies in North America today.

Turkeys are hunted during two seasons — spring and fall — which are differentiated by styles of hunting and



Ken Formanek

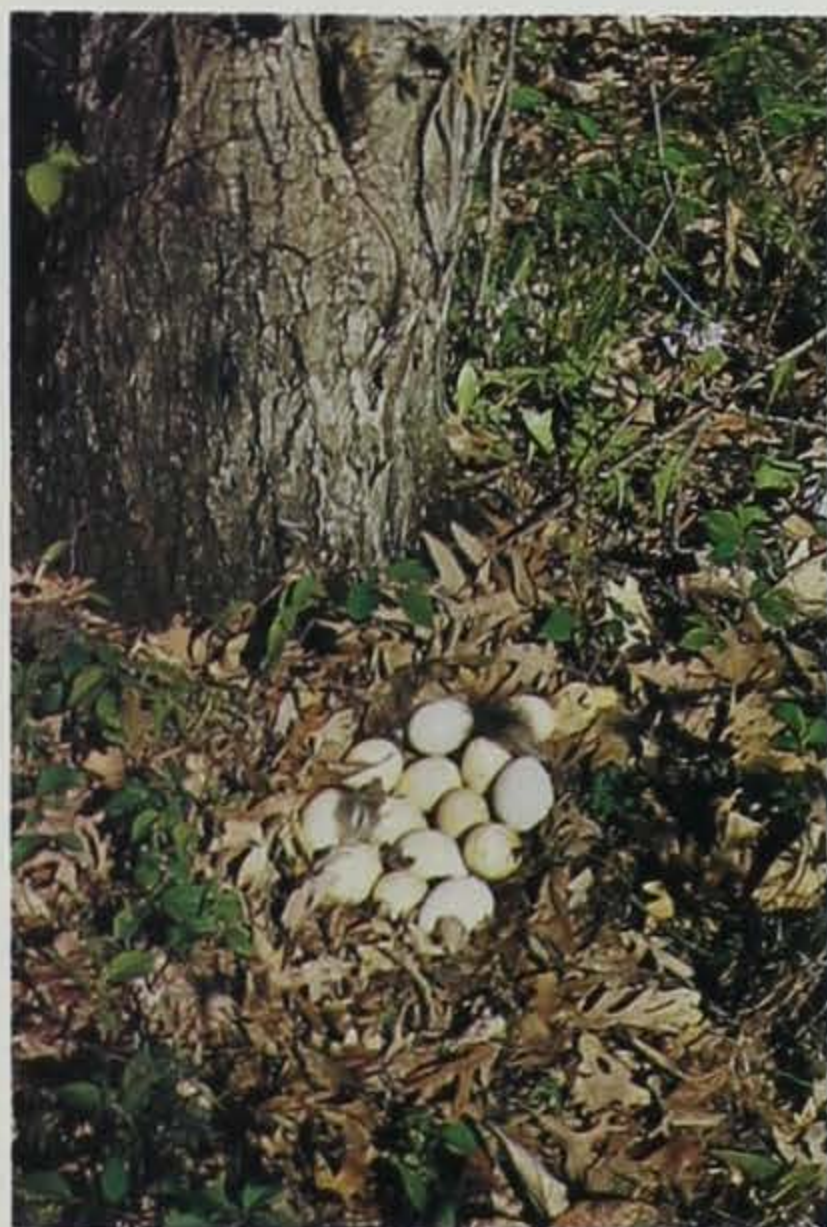


Ken Formanek

Above: *Roosting turkeys*; far right, *turkey nest*; and right, *a hen turkey*.

the primary quarry. Spring gobbler hunting is most widespread because shooting males has no impact on the future growth or dispersal of turkey populations, even at new release sites. Turkeys are promiscuous, with only the largest, most dominant males obtaining harems of a dozen or more hens. Nonbreeding males are thus available to hunters at no cost to the population. Even heavily hunted areas seldom sustain hunting losses of as many as 50% of the adult males. The principal spring hunting method is to locate toms gobbling from the roost at daylight and attempt to call them to the hunter by imitating the yelps, clucks, cackles and whines of a hen ready to mate. Hunters wear camouflage clothing and sit completely motionless for as long as several hours to escape detection by keen-eyed gobblers. Success rates for spring hunters in most states average about 10%, but are in the 20-30% range in most of Iowa because of the excellent turkey densities found here. Because 10% of the hens also have beards (the hair-like appendage hanging from a tom's breast), any bearded turkey is legal game in the spring. The results of Iowa's first spring hunting seasons are summarized in Table 1.

Fall turkey hunts usually allow any turkey in the bag, and are thus allowed only in states with well established turkey populations. More young poults are produced than survive the rigors of winter and escape from predators to reach the breeding season, thus allowing limited fall hunting before much of this natural mortality takes place. The



most common fall hunting technique is to locate a flock of turkeys, scatter them as widely as possible, and call back broodmates by imitating the assembly yelps and clucks of the adult hen or kee-kee of lost poults. Gobblers are not particularly interested in finding hens in the fall, making them extremely difficult to call and shoot. Inexperienced young turkeys return readily to the hen and commonly make up 60% or more of fall harvests. Fall hunters also use complete camouflage.

Populations

Because of their dependence on variable mast production for food in areas where large forest tracts provide typical turkey habitat, good populations normally average about 10 turkeys per square mile of forest over much of eastern turkey range. In agricultural states like Iowa, the presence of abundant food contributes to densities at least twice this great, and which may reach 60-100 turkeys per square mile in the best habitats.

Turkeys breed only in the spring. Hens join harems attached to a dominant gobbler, but may breed with any available male. Nests are poorly formed bowls completely on the ground and contain 6-18 eggs (average 11 per clutch). Hens of all ages attempt to nest, but yearling hens are seldom successful and 80% of the poults will be produced by 2 year old or older hens. Nests have been found in most habitats types from dense forest, brush, grown up pastures, fence lines, to alfalfa fields. Hens incubate 28 days before the eggs hatch. Renesting after losing a clutch to cold, wet weather or predators is not common; about 40% of the adult hens will eventually hatch a clutch. Hens do all of the brood rearing, and life is precarious for newly hatched poults; nearly half will die in the first 4 weeks. Of the poults surviving to fall, 35% of the young hens will be lost to predators, primarily coyotes. Few young or adult turkeys are lost during the winter in

most of Iowa, but starvation may occur where deep snows for a prolonged period keep flocks from moving to food sources. Spring is a major mortality period for both sexes, many hens are lost to predators after winter flocks break up and breeding activities begin, and toms are lost primarily to hunters. Total annual losses will average 49% for young hens, 35% for adult hens, 34% for young males and 25-40% for adult gobblers.

Range

Iowa's remnant forest habitats total just 1.5 million acres (20% of presettlement acreage) and are separated into 4 reasonably well defined regions — unglaciated northeast Iowa's deep river valleys and steep, high ridges; southern Iowa's rolling hills; western Iowa's narrow belt of sharp, loess hills running along the southern two-thirds of the western border of the state; and several isolated river drainages in north and east-central Iowa (Little Sioux, Raccoon, Des Moines, Skunk, Iowa, Cedar, Wapsipinicon, and Maquoketa Rivers). Turkeys were introduced first into the southern region and are established on a quarter million acres in virtually all timber stands there. Populations are rapidly building around more recent successful releases in northeast and western Iowa and some of the eastcentral river drainages, inhabiting some 3/4 million acres. The future success of releases in these regions, plus planned stockings in isolated woodlots in northcentral Iowa, will determine the eventual range of the wild turkey in Iowa. If recent success continues, perhaps 80% of Iowa's remaining forest land will eventually sustain turkey populations.

For more information about wild turkey stocking sites or hunting seasons and zones in your area, contact your local wildlife biologist, conservation officer or the Iowa Conservation Commission, Wallace State Office Bldg., Des Moines, 50319.

Table 1. Synopsis of Iowa's wild turkey hunting seasons, 1974-82.

Year	Days per season	Dates	No. licenses	Estimated harvest	Statewide success rate
1974	7,7	4-19 May	450	113 ± 18	29
1975	7,7,9	25 Apr.-18 May	825	142 ± 4	19
1976	5,7,11	25 Apr.-16 May	975	190 ± 11	23
1977	7,7,11	21 Apr.-15 May	1,005	215 ± 8	24
1978	7,7,11	20 Apr.-14 May	1,815	366 ± 49	23
1979	7,7,11	19 Apr.-20 May	3,156	688 ± 32	24
1980	7,7,11	17 Apr.-18 May	4,110	988 ± 33	27
1981	7,8,12	14 Apr.-10 May	5,055	1,439 ± 36	32
1982	7,8,12	13 Apr.-9 May	7,065	1,685 ± 124	27

Outlook



By Gerald Schnepf, Executive Director Natural Heritage Foundation

A new environmental education program for Iowa schools entitled "Outlook" was recently announced by Former Governor Robert Ray and Governor Terry Branstad.

The program is designed to enrich K-12 education in several disciplines by encouraging students to appreciate their heritage of resources and to develop a personal ethic of conservation. The interrelationships of population, pollution, resources, conservation, transportation, technology and planning are stressed.

During the announcement Governor Ray praised the effort, saying "I have long felt that Iowa should create a greater awareness of the need to protect the chief sources of our strength — our fertile land and clean water. The name given to the curriculum, 'Outlook', aptly describes its purpose to look to Iowa's future and educate our young leaders about natural resources."

Governor Branstad also pledged his support to the project. "There is at least one area of common ground among the many controversies which have and will face issues of conserving Iowa's natural resources: A knowledgeable public is the prerequisite to solutions for natural resource problems."

With funds provided by the Iowa Natural Heritage Foundation, from the McElroy Trust in Waterloo, members of the science education faculty of the University of Northern Iowa conducted a one-year research effort to locate and evaluate all pertinent environmental education activities available nationally. This effort provided the basis for the development of "Outlook." Additional funding by the Foundation, again from the McElroy Trust, the University of Northern Iowa, and the State Department of Public Instruction, provided for the establishment of a steering committee and the selection of a talented writing team of 20 Iowa educators. The writers spent six weeks last summer producing the draft of educational activities. These educational materials were distributed in field test packages for classroom testing by 300 Iowa teachers. The responses are now being assessed and evaluated, with that information providing the basis for final editing prior to printing.

About 85 percent of the 140 activities designed for youngsters at all grade levels are original. Activities include hands-on exploration, as well as research work in the classroom or at home. The themes that are woven into

all of the materials include lifestyle, cultural evolution, stewardship, aesthetics, interdependency and energy flow. The program is a first of its kind in the nation and as such it is expected to draw considerable interest and attention. Teachers who have tested the program are excited about it both because of its use as a supplement to their present curriculum and because of the enthusiasm exhibited by their students. One elementary teacher states, "...These were very valuable to the students and were enjoyed by all. I was very impressed by these activities! Thank you for the opportunity to use them." A secondary teacher writes, "[These would be great] in science and in social studies. I wish I had more time for trying the whole package. I feel the learning cycle is essential to the development of thinking skills and am pleased with this direction."

Dan Krumm, chairman of the Natural Heritage Foundation and president of The Maytag Company, said the program was developed for Iowa but he hopes the materials and training plans can be available throughout the Midwest.

"Soil, water, forest, wildlife and other natural resources are facing similar problems of public understanding throughout the farmbelt," Krumm said. "'Outlook,' after a number of years in use, may be the single most important

factor in determining the future of all our natural resources."

State Superintendent of the Department of Public Instruction, Dr. Robert Benton, outlined his agency's commitment to the project, "As an educator, I am concerned that we may be doing a better job than most in conserving our rich resources of land and water, yet we watch another valuable resource, our young people, move away to the sun-belt and other regions. We must be committed to providing the best educational opportunities we can, including the instilling of an ethic of conservation which will benefit our youth wherever they may reside."

"It is also important for each of us to recognize that if our state is to keep its young people, we must provide for a quality of life which depends upon adequate maintenance of our resources of land, air and water. Watching our young people move away is disturbing. Watching the erosion of our soil is equally disturbing because it reminds us that we are losing the heartbeat of our state's agricultural economy, eventually, leading to an even greater loss of human resources."

"The Code of Iowa requires that environmental awareness and conservation of natural resources be taught as a

part of science in grades 1-12 in Iowa schools. However, paradox has long existed since no concentrated effort has been made to produce suitable materials for Iowa educators to achieve this requirement. After Governor Ray's announcement of the title for the newly developed Iowa environmental education program, and with the evaluation of the material nearly completed, we are now well under way to eliminate this deficiency."

In cooperation with the Iowa Conservation Commission, eight, one-week in-service training sessions are being scheduled for this summer at the Springbrook Conservation Education Center near Guthrie Center. The scheduled capacity is 40 teachers for each of the one-week sessions. The goal is to provide in-service training to 320 teachers/educators during the eight week period. Teachers can receive two university credits from the University of Northern Iowa transferable to Iowa State University and/or the University of Iowa if desired. Discussions are currently underway for a similar arrangement with Drake University.

Sponsors are being sought for these 320 individuals in order to encourage their attendance and lessen the financial burden on local schools and/or the

teacher. The estimated cost for a teacher to attend a one-week session is approximately \$206 including materials, tuition, room and board. Stipends of \$150/teacher are being sought from conservation/environmental organizations, county conservation boards, Soil Conservation Districts, state agencies, school boards, parent/teacher organizations, service clubs, farm groups, business and industry, private individuals, and youth groups such as 4-H, scouts, and FFA. It will be the responsibility of the teacher and/or school to cover the remaining cost of approximately \$56 plus travel expenses.

Donations for the \$150 per teacher/educator stipends should be sent to the **Iowa Natural Heritage Foundation, 830 Insurance Exchange Building, 505 Fifth Avenue, Des Moines, IA 50309**, with checks payable to the Foundation. Stipends may either be designated for sponsorship of a specifically identified teacher or given generally to the project. In the latter case a review committee will allocate the stipends to teachers and/or educators who have applied for the in-service training program. Interested individuals or groups are asked to use the following form or a facsimile thereof to submit with stipends for the program.

Enclosed is/are _____ grants of \$150* each for a total of \$ _____

The grants are provided by _____

(Organization/Individual & Address)

The Contract is _____

(Name, Address, Phone Number)

Please check one of the following:

_____ The grants are to be allocated to eligible teachers by the review committee.

_____ The grants are to sponsor the following teachers (provide name, course and grades taught, school name & address, and home address & phone number).

Recognition will be provided to the grantors.

*Donations of less than \$150 are also encouraged. These contributions will be credited toward the project.



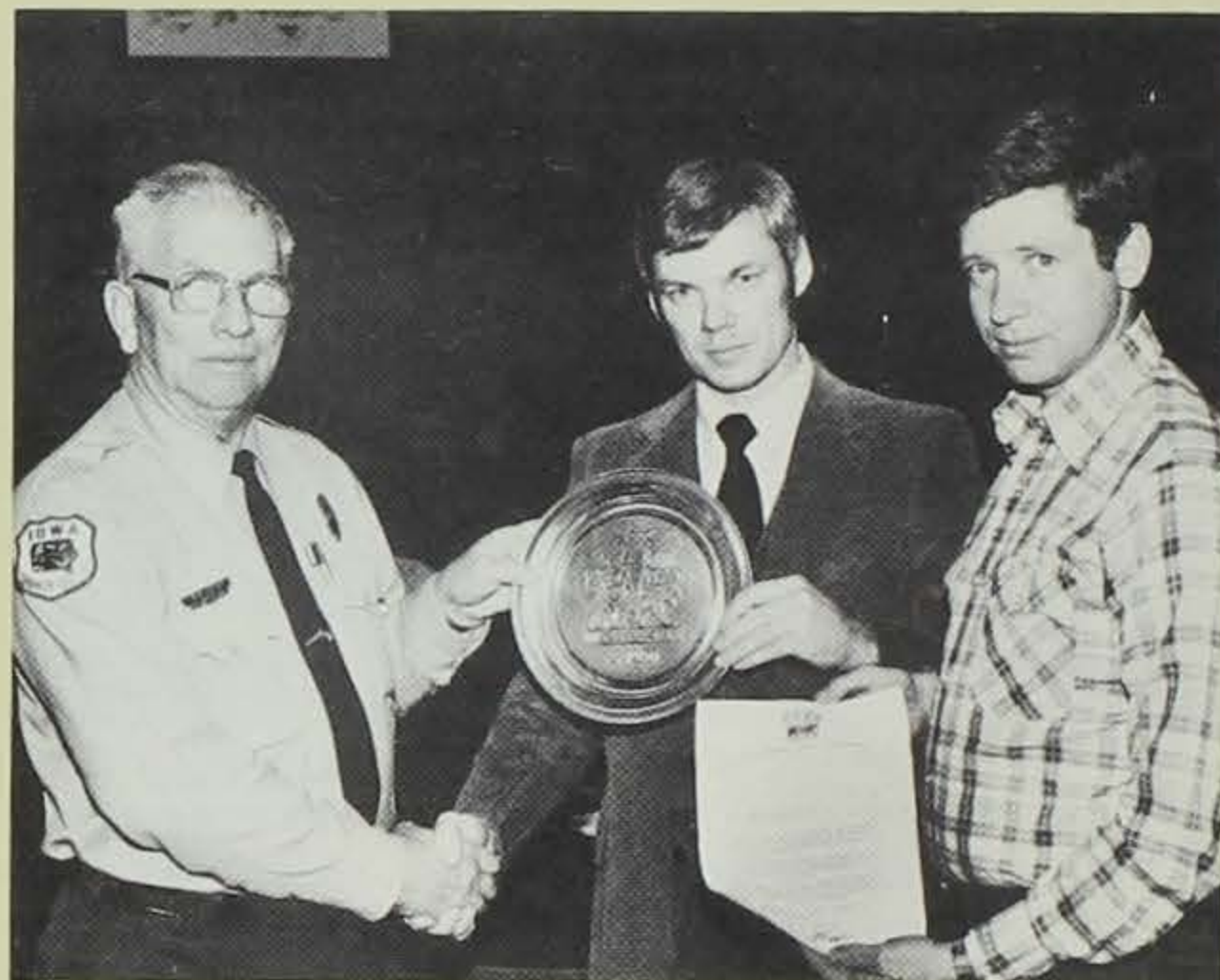
SHIKAR-SAFARI CLUB INTERNATIONAL AWARD

Conservation Officer James Shipley of Oskaloosa was recently presented the Shikar-Safari Club International Conservation Officer of the Year Award. The presentation was made at the Iowa Conservation Commission's Enforcement Section statewide meeting held at Springbrook State Park in February.

The Shikar-Safari Club International makes the awards available annually in each of the 50 states, Canada and Mexico. The organization's purpose in making the award is to show appreciation and offer encouragement to officers who have given outstanding service in the fields of conservation and game management.

Rick McGeough, Law Enforcement Superintendent says, "The department selected Shipley as the recipient of the award based on his dedication to duty, willingness to volunteer for extra duty assignments, unselfish devotion to fellow officers and his well-rounded active conservation program". Shipley began his career with the Conservation Commission in 1956 and now takes his place among only 12 other Iowa officers to be so honored.

Shipley was presented with a parchment certificate and a pewter plaque emblazoned with the club's distinctive tiger and elephant logo.



Pictured left to right: *James Shipley; Rick McGeough, Law Enforcement Superintendent, and Mike Sells, District Supervisor for southeast Iowa.*

Employee Honored



Harold Carter (right), retired after 35 years as a conservation officer, receives recognition from the Commission's Enforcement Section at their annual statewide meeting at Springbrook State Park. Presenting Carter with traditional plaque and watch are Steve Pierce (center), president of the Iowa Fish and Game Conservation Officers Association and Warren Wilson (left) conservation officer for Boone and Story counties.



Less than 10% of the state income tax returns have been processed by the Department of Revenue, but the outlook is great for the Chickadee Checkoff. So far, about 7½% of the forms show a contribution to the nongame wildlife program, with contributions averaging about \$5 per form. If the early trend holds, it could mean about one-quarter of a million dollars would go into new nongame conservation programs, beginning this summer. This billboard at Carrol is one of five in northwest Iowa provided rent-free to promote the program by Hawkeye Outdoor Advertising, Inc. Other rent-free signs in the Cedar Rapids area are being provided by Dowie Outdoor, Inc.



LANDOWNERS TAKE ADVANTAGE OF SLOUGH BILL

In 1982 the Iowa Legislature passed the "Slough Bill" (H.F. 2351) to provide property tax exemptions for private landowners who want to keep their "wild areas wild." Such areas as wetlands, all sizes of streams and their banks, recreational lakes, forests, native prairies and other grasslands, and other forms of wildlife habitats are covered by the exemptions. The new law is being implemented for this 1983 fiscal year and progress reports show welcomed participation in the program by landowners and counties.

The wetlands category is the only portion of the bill which is limited (each county is permitted to have 3,000 acres) and its implementation must be approved by the county's board of supervisors. The board of supervisors may elect to grant or not to grant property tax exemptions for wetlands, recreational lakes, forest covers, rivers and streams, river and stream banks and open

prairies. However, according to the Commission's county conservation board officials, 31 counties are implementing the wetlands portion, 16 have decided not to adopt it this year, and the remaining 52 are undecided.

"Disapproval by the board of supervisors on the wetland portion should not prevent landowners from submitting applications," says Steve Dermand, Commission's county conservation specialist. "Interest shown by landowners may prompt acceptance by the county."

The other three categories — forest reserve, wildlife habitat and native prairie — are unlimited. Forest reservations were formerly eligible for a tax reduction, but are now completely exempt.

There are many obvious benefits to this new law. With streambanks, grasslands and windbreaks left undisturbed, soil erosion in these areas may be abated. Water quality in our streams and lakes could improve. Permanent land cover has obvious benefits for ground-nesting birds

and other wildlife. Forest reservations offer a continuing supply of wood products for industry and remain available for many other benefits as well. Recreational values will increase for hunting, bird-watching, hiking and enjoying nature. With two years or more worth of crops already in storage around the Midwest, these few acres of tax-free land, providing benefits to man and wildlife, certainly will not be missed by grain producers.

Landowners interested in participating in the program should become aware of the date to apply for the particular exemption they may receive. The deadline for a native prairie exemption has passed, but there is still time to apply for other exemptions. The local Soil Conservation District Office, county conservation board office and area wildlife management biologist have the appropriate forms, and can explain the requirements and advantages of a program that will truly give taxpayers and wildlife a break.

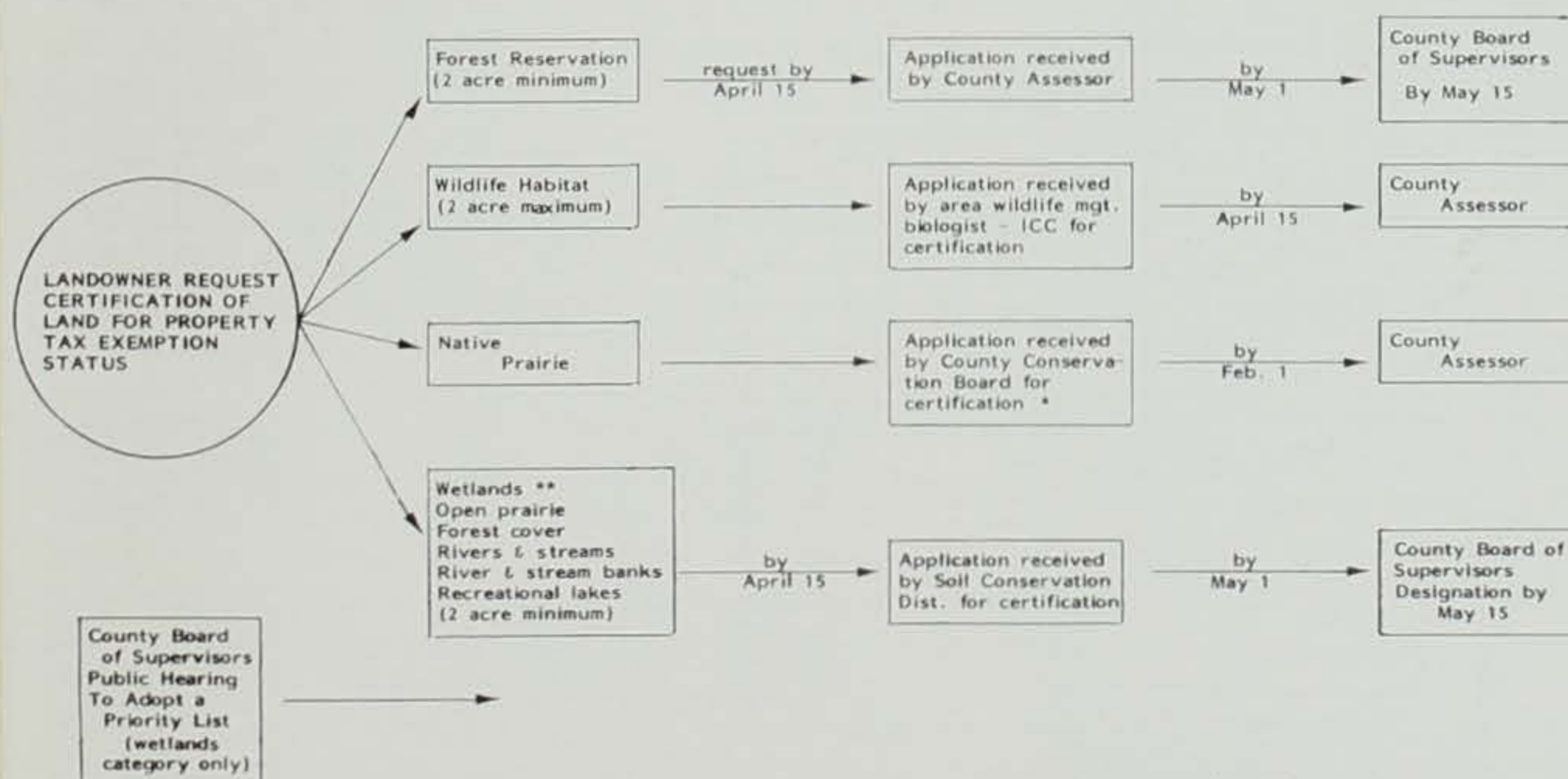
Fish and Wildlife Budgets Cut Again

Proposed 1984 budget figures show another round of big cuts for the Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), and most other federal natural resources agencies. Interior Secretary Watt says he's increasing the FWS budget, but a close look shows significant decreases and inflated estimates of income (including an unlikely doubling of the cost of the duck stamp by fall). Among the FWS losses: zero funds for refuge acquisition; closing all 52 Cooperative Fish and Wildlife Research Units, the entrepreneurial program begun by 'Ding' Darling and operated jointly with state universities and state conservation departments (affects 29 states including Iowa); closing another 24 national fish hatcheries in addition to the 20 closed last year; eliminating 257 permanent staff. For the NMFS, Administration proposals would eliminate 19 of its 24 hatcheries, terminate anadromous fish and research grants to states, end aquaculture research, cripple fisheries management councils, dry dock the fish assessment fleet, decimate coastal habitat protection, and more.

The U.S. Fish and Wildlife Service has released a new guide for visitors to national wildlife refuges.

"Visitors Guide to the National Wildlife Refuges" depicts most of the nation's 413 refuges on handy, pocket-sized maps. On the reverse side is a rundown of activities on each refuge. The guide is available for \$2.25 from the Superintendent of Documents, U.S. GPO, Washington, D.C. 20402.

DIAGRAM FOR "SLOUGH BILL" APPLICATION PROCEDURE



* Except Allamakee Co., Iowa Conservation Commission will certify in this case.

** Application effective for 3 years.

CLASSROOM CORNER

Humans have a tendency to think of themselves as the first, the biggest, the fastest or the "...est" of most things. I remember a book, designed for preschoolers, which compared such inventions as the fly-swatter to a cow's tail, or a fire hose to an elephant's trunk.

I can think of many items which man has copied from nature. The dandelion's and cottonwood's method of seed dispersal may have inspired inventors to create today's parachutes. How many times have you picked a milkweed or dandelion and sent the seeds floating toward the ground in their "parachutes"?

Likewise the idea of helicopters may have been conceived while watching a maple tree drop its seeds.

Spiders have a different method of traveling. It is called ballooning and is similar to both hot air balloons and kites. Baby spiders send out long lines of silk (webbing). This strand is caught by the wind and carries them up and away much like a runaway kite.

Man uses radar for a variety of reasons — detecting space craft and airline activity or determining the speed of a car. Bats emit high frequency sounds which bounce off objects. This radar enables them to maneuver and feed in the dark.

There are many more nature "firsts" for which we can draw parallels with human inventions. Observe nature's organisms and see if you can find the parallels.

A different activity which will be included in Classroom Corner in the future is a conservation quiz. The quizzes will address Iowa — its fish, parks, wildlife, programs, etc. This idea is not entirely new. The following is a quiz developed by Carsten

Ahrens of Pittsburg, Pa. for the *Michigan Out-of-Doors*. The quiz is on conifers. Watch next month for the first Iowa conservation quiz.

CONIFERS

(A score of 8-9 excellent; 7-6 is good; 5 is fair. Multiple choice; circle one)

1. Most conifers (cone-bearers) are evergreen. Which one isn't? — Spruce, Hemlock, Larch, Red Cedar.
2. How many needles does a red pine grow in a cluster? — One, Two, Three, Four, Five.
3. How many needles does a white pine grow in a cluster? — One, Two, Three, Four, Five.
4. How many needles does a larch (tamarack) have in a cluster? — Four, Eight, Twelve, Sixteen, Twenty plus.
5. Cones of most conifers hang down; which points upward? — White pine, Red pine, Balsam fir, Red Cedar.
6. Which conifer has dark blue berries instead of cones? — Red cedar, Larch, Hemlock, White cedar.
7. Which is the tallest conifer in the eastern United States? — Red pine, White pine, Red spruce, Black spruce.
8. The lumber industry regards which of these trees as "soft woods"? — Oaks, Maples, Hickories, Any of the conifers.
9. In which conifer trees are the males and females separated? — Red Pine, Red cedar, Hemlock, Larch.

ANSWERS:

1. Larch 2. Two 3. Five 4. Red cedar
- Any of the conifers 9. Red Red cedar 7. White pine 8. Twenty plus 5. Balsam fir 6.

Book Review

CONSERVING SOIL

24 pages. Published by the U.S. Department of Agriculture Soil Conservation Service

This educational book on soil conservation includes 24 teaching activities, with subjects such as soil ecology, managing soil resources and urban soil conservation practices.

"The book is one we've needed for a long time," says William Brune, State Conservationist for SCS in Iowa. *Conserving Soil* was designed for use by science and social studies teachers in grades 6 through 9.

"The book has a 16-page teacher's guide for background information, as well as 4 overhead transparencies and 24 spirit masters, so it's ready-made for teacher use," says Brune.

"Because of the printing costs involved, there aren't enough books for every teacher in Iowa," Brune says. "But there are enough for a few copies in each school system, and SCS field offices and soil conservation districts are now distributing them.

Teachers or others interested in obtaining a copy of the book should contact their local Soil Conservation Service office.

WARDEN'S DIARY

By Jerry Hoilien

After experiencing a long, cold, miserable winter, or even a relatively mild one such as this one, it is always great that springtime is finally here. I'm always thrilled with spring — the awakening of all living things after a long winter's nap. Most birds go south in the cold weather, some animals and all plants sleep all winter, but it's not so simple for man. I watched my neighbor last winter shovel snow all day to get his car out, drive it downtown to fill it with gas, and come home half frozen.

Spring is when fishing starts to get interesting. Trout fishermen are out just as soon as the streams open up and crappie fishing is popular too. I remember several years ago when Mike Runyan, conservation officer from Albia, and I were watching the ice go out in a back slough right below the Rathbun Dam. When the large slab was blown away from the shore, the fishermen moved in with small jigs with little bobbers and were catching "slab" crappies on every cast. It was

terrific fishing. We checked a lot of licenses that day. Some had "neglected" to buy their license and received a citation to help their memory along for the next time.

I watched one guy down the line with four rods out in front of him. When I checked his license, I asked him if they were all his. "No, sir, I know the law. Two of those belong to Sam. He just ran into town to get 'a Big Mac' and asked me to keep an eye on them." I explained to him that Sam should be attending his poles and I would be back later to check his license and talk to him. The next angler I checked was a lady about fifty yards down the shore. She was pleased to show me her new license and a stringer of fish. As we were visiting, the guy who was watching Sam's poles came walking up. In a loud voice he said, "Sure hope Sam hurries back from town. I'm tired of watching his poles." The lady looked at him strangely and said, "What are you talking about? Who's Sam? I gave you those rods and reels myself!" Such is life!



One new state record was established in 1982 by Roland Rieflin of Cascade. Rieflin's sunfish broke the old mark by one ounce, weighing in at 1 lb. 9 oz. The fish was taken from the lake at Jones County Central Park. Over 300 Big Fish Awards were received by other anglers who entered qualifying fish during the year.

The new record plus the other 346 exceptional catches are listed here. Check who caught them and where and when they were caught. This information may be helpful for the upcoming season. Next year your name may be listed among the top anglers in Iowa.

How to Enter

Any species of fish taken by hook and line and caught in state or boundary waters is eligible. There are, however, minimum qualifying weight limitations as listed below:

Bass, Largemouth	7 pounds	Freshwater Drum	15 pounds
Bass, Ocean Striped	5 pounds	Muskellunge	40" or 15 pounds
Bass, Rock	1 pound	Tiger Musky	40" or 15 pounds
Bass, Smallmouth	4 pounds	Northern Pike	10 pounds
Bass, White	2½ pounds	Paddlefish	25 pounds
Bass, Yellow	¼ pound	Perch, Yellow	1 pound
Bluegill	1 pound	Sauger	2½ pounds
Buffalo	20 pounds	Sturgeon, Shovelnose	3 pounds
Bullhead	2½ pounds	Suckers, (Misc.)	4 pounds
Carp	25 pounds	Sunfish, (Misc.)	1 pound
Catfish, Blue	20 pounds	Trout, Brook	1 pound
Catfish, Channel	15 pounds	Trout, Brown	3 pounds
Catfish, Flathead	20 pounds	Trout, Rainbow	3 pounds
Crappie	2 pounds	Walleye	8 pounds

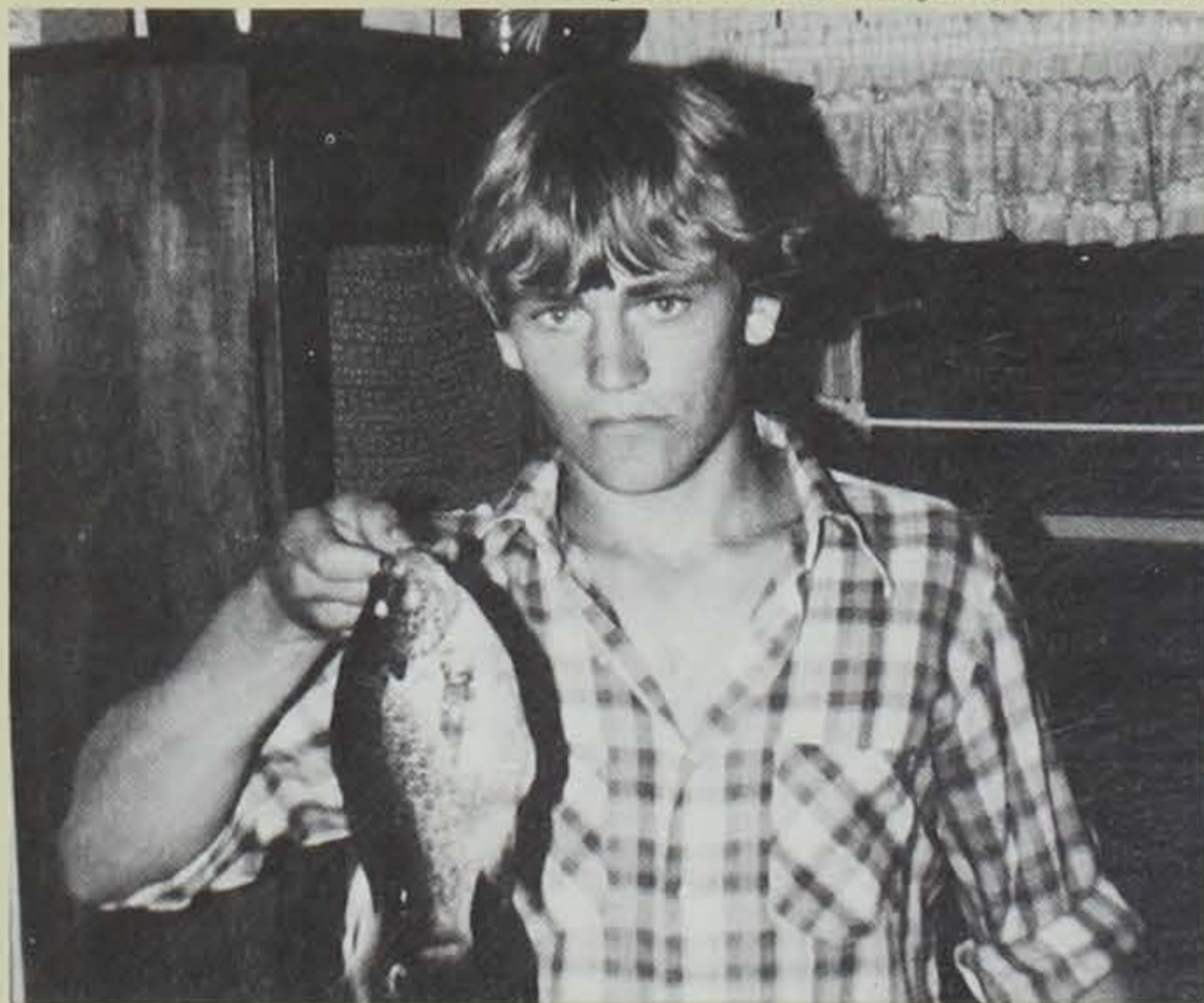
Any entry must be weighed to the nearest ounce on scales legal for trade. The weighing must be witnessed by two persons.

If there is some doubt in species identification, the angler should contact the nearest Iowa Conservation Commission personnel for verification. *Any new all-time record fish must be examined and verified by Iowa Conservation Commission personnel.*

The Iowa Conservation Commission will offer free taxidermy work for any new all-time record fish. The only stipulation is the fish will be on public display at the Rathbun Fish Hatchery until the record is broken. Then the fish will be returned to the angler.

The angler must fill out an official entry blank or facsimile and send it and a photo or color slide of the angler and the fish to Official Big Fish Records, Iowa Conservation Commission, Wallace State Office Building, Des Moines, Iowa 50319, by January 1 (photo will be returned sometime in March). The entry blank includes the name and address, the species of fish, date caught, body of water, county, total length, bait or lure used, and the witnesses' signatures and addresses. Official entry blanks will be included in the annual Fishing Regulations brochure which will be available to the public wherever fishing licenses are sold. Any fish that surpassed the official state record will be publicized through the Conservation Commission's weekly news release. All state records and annual awards will be published in the March issue of the *IOWA CONSERVATIONIST*. Angling award certificates and shoulder patches will also be sent to qualifying anglers.

Rolan Rieflin's record sunfish, 1 lb. 9 oz.

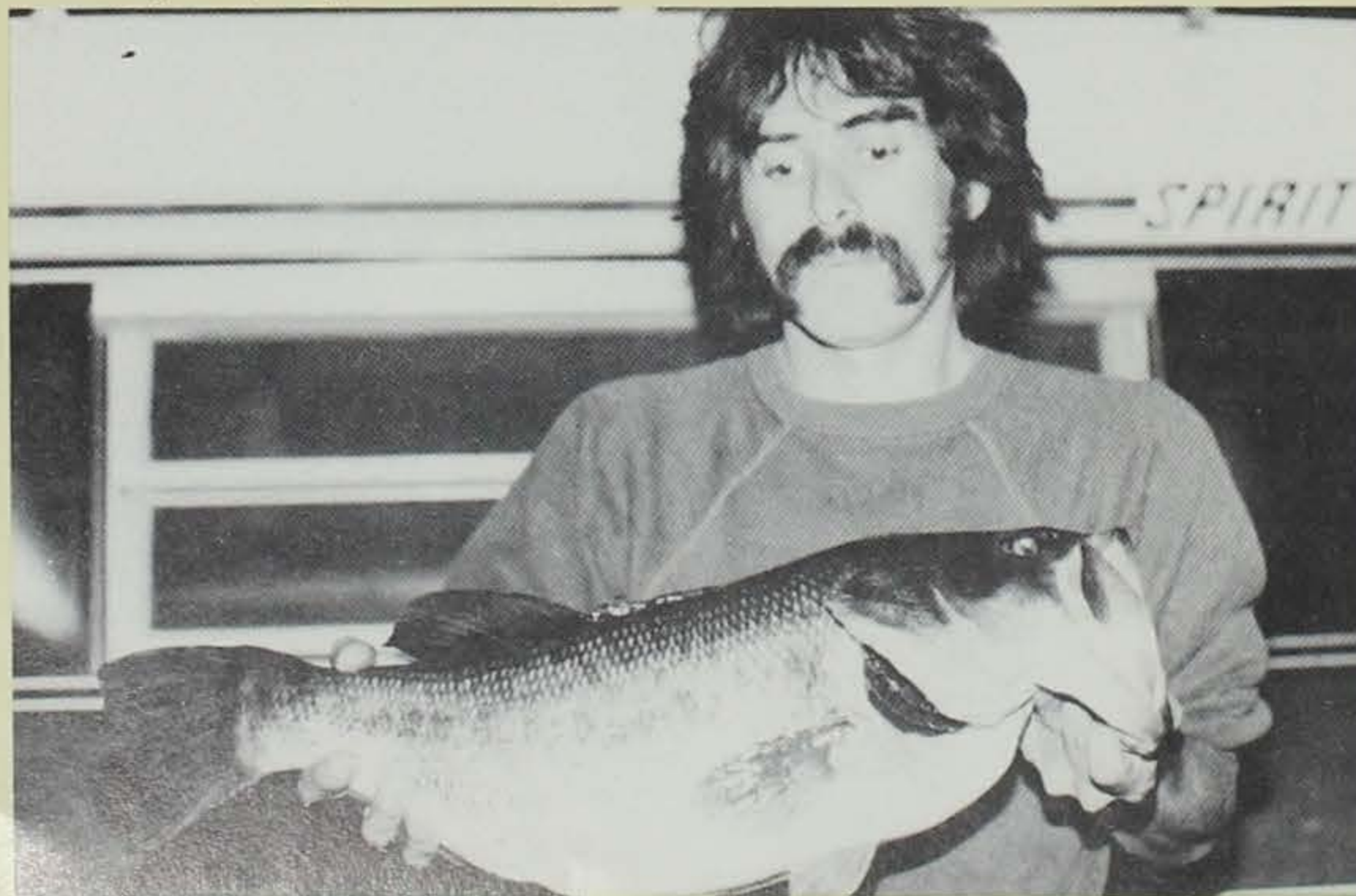


'82 BIG FISH AWARDS

New record set for sunfish

Weight	Length	Where Caught	Date	Name and Address	Weight	Length	Where Caught	Date	Name and Address	Weight	Length	Where Caught	Date	Name and Address
BASS (Largemouth)					4 lb. 1 oz.	19 1/2"	Spirit Lake Dickinson County	5-8	Jerry Peschon Worthington, MN	1 lb. 1 oz.	10"	Farm Pond Davis County	6-20	George White Mount Pleasant
9 lb. 8 oz.	23 1/2"	Farm Pond Muscatine County	10-9	Steve Arguello Davenport	4 lb.	20 1/2"	West Okoboji Dickinson County	10-29	Andy Greenfield Sheldon	1 lb. 1/2 oz.	9 1/2"	Farm Pond Polk County	6-13	Michael Sherwood West Des Moines
9 lb. 1 oz.	23"	Mormon Trail Adair County	6-26	Kenneth Mason Des Moines	4 lb.	20"	West Okoboji Dickinson County	8-28	Earle Yager Hartley	1 lb.	10"	Gravel Pit Greene County	5-24	Don Skalla Scranton
8 lb. 9 oz.	25"	Farm Pond Montgomery County	7-31	Steve Philby Red Oak	4 lb.	19 1/2"	Spirit Lake Dickinson County	5-1	Kirk Klohs Le Mars	1 lb.	10"	Farm Pond Davis County	7-8	George White Mount Pleasant
8 lb. 6 oz.	21 3/8"	Mormon Trail Adair County	6-26	Kenneth Mason Des Moines	4 lb.	19 1/4"	Spirit Lake Dickinson County	9-26	Gerald Cink Algona	1 lb.	9 3/4"	Farm Pond Davis County	7-9	George White Mount Pleasant
8 lb. 3 oz.	23 1/2"	Viking Lake Montgomery County	6-20	John Schultz Omaha, NE	4 lb.	19 1/4"	West Okoboji Dickinson County	6-6	Dwane Krogman Lisimore, MN	1 lb.	9 1/2"	Farm Pond Lee County	5-22	Nathan Adams Domellson
8 lb. 2 oz.	23 1/2"	Farm Pond Madison County	5-1	Gary Jacobs St. Charles	4 lb.	19 1/4"	Spirit Lake Dickinson County	8-16	Betty McKnauchen Spirit Lake	1 lb.	9 1/2"	Lake Anna Cass County	5-15	Jason Peterson Oakland
8 lb.	22"	Farm Pond Polk County	5-24	Dan Scott Altoona	4 lb.	18 1/2"	West Okoboji Dickinson County	5-1	Jim Cowan Algona	1 lb.	9 1/2"	Farm Pond Davis County	6-20	George White Mount Pleasant
7 lb. 12 oz.	23 1/2"	Farm Pond Tama County	4-1	Gene Owens Cedar Rapids	BASS (White)					1 lb.	8 3/8"	Big Creek Polk County	5-23	Curtis Shearer Luther
7 lb. 11 oz.	23"	Strip Pit Marion County	6-26	Robert Stanley Knosville	3 lb.	18 1/4"	Spirit Lake Dickinson County	5-3	Lorraine Hess Estherville	BUFFALO				
7 lb. 10 oz.	23 1/2"	Shemek Forest Pond #1 Lee County	6-15	Joe Stevens Bloomfield	3 lb.	17"	East Okoboji Dickinson County	10-26	Karl Flegler Spirit Lake	43 lb. 8 oz.	41"	Mississippi River Clayton County	4-24	Lavern Robbins Strawberry Point
7 lb. 10 oz.	21"	Winterfield Rec. Area Sioux County	5-9	David Meslink Rock Valley	2 lb. 8 oz.	17 1/2"	East Okoboji Dickinson County	5-15	Terry Nissen Spencer	37 lb. 8 oz.	40 1/2"	Lost Island Lake Palo Alto County	3-24	Dave Crogrove Spencer
7 lb. 8 oz.	22 1/4"	Ellis Lake Lucas County	6-9	Bob Noble Des Moines	2 lb. 8 oz.	16"	West Okoboji Dickinson County	5-5	Irv Schnell Milford	28 lb. 8 oz.	42"	Manna Lake Pottawattamie County	5-20	Daney Shamblen Council Bluffs
7 lb. 6 oz.	23 1/2"	Farm Pond Wayne County	4-24	Patrick Collison Des Moines	2 lb. 2 oz.	17"	West Okoboji Dickinson County	6-2	Larry Eckman Arnolds Park	22 lb. 10 oz.	33"	Cedar River Linn County	5-10	Frank Smith Cedar Rapids
7 lb. 5 oz.	23 1/2"	Farm Pond Muscatine County	5-31	Alvin Stender Donahue	BASS (Yellow)					BULLHEAD — No entries.				
7 lb. 4 oz.	24"	Farm Pond Harrison County	6-14	Sue Davis Logan	13 1/2 oz.	11 1/2"	Mississippi River Allamakee County	10-2	Donald Coffin Postville	CARP				
7 lb. 4 oz.	22 1/2"	Farm Pond Davis County	5-6	Kenneth Pennington Ottumwa	BLUEGILL					40 lb. (Amur)	39"	Cold Springs Cass County	9-19	John Johnson Oakland
7 lb. 4 oz.	22 1/2"	Farm Pond Harrison County	10-15	Michael Davis Logan	2 lb. 2 oz.	11 3/4"	Farm Pond Wapello County	5-13	Jerry Woten Ottumwa	26 lb. 10 oz.	36"	Skunk River Henry County	4-1	Doug Farr Mount Pleasant
7 lb. 4 oz.	19 3/4"	Mormon Trail Adair County	6-26	Kenneth Mason Des Moines	1 lb. 13 oz.		Farm Pond Keokuk County	6-27	Robert James Sjournery	20 lb. 2 oz.	36"	Moffit Reservoir Polk County	5-22	Gary Larrew Des Moines
7 lb. 3 1/2 oz.	23 7/8"	Wolf Lake Marshalltown	10-4	Craig Danner Marshalltown	1 lb. 12 oz.	11"	Farm Pond Warren County	6-28	Marvin Neset Algona	CATFISH (Blue) — No entries.				
7 lb. 3 oz.	23 1/2"	Nine Eagles Lake Decatur County	10-16	James Heitz Omaha, NE	1 lb. 11 oz.	12 1/2"	Wilson Lake Lee County	4-12	Mike Cochran Fort Madison	CATFISH (Channel)				
7 lb.	23"	Central Park Jones County	6-23	Warren Elter Wyoming	1 lb. 8 oz.	11"	Farm Pond Winnebago County	6-11	Steven Edness Lake Mills	20 lb.	35 1/2"	Raccoon River Greene County	8-4	Brian Quirk Jefferson
7 lb.	22 1/2"	Sand Pit Fayette County	4-22	George Paulson Cedar Rapids	1 lb. 8 oz.	10 3/4"	Mississippi River Clayton County	7-30	Gary Whitehead Delhi	19 lb.	35"	Muscatine Slough Muscatine County	3-31	Donald Weggen Muscatine
BASS (Ocean Striped) — No entries.					1 lb. 8 oz.	10 1/2"	Gravel Pit Sioux County	7-10	Curtis Koele Hull	18 lb.	35 1/2"	Storm Lake Buena Vista County	7-3	Paul Hair Lake View
BASS (Rock) — No entries.					1 lb. 7 oz.	10 3/4"	Big Spirit Lake Dickinson County	5-20	Ellis Brooks Sioux Rapids	18 lb.	34 1/2"	Nodaway River Page County	5-10	Bobby Wilson Bradyville
BASS (Smallmouth)					1 lb. 7 oz.	10 1/2"	Farm Pond Marion County	5-20	Robert Stanley Knosville	16 lb. 8 oz.	33"	Viking Lake Montgomery County	9-10	Donald Briggs Red Oak
4 lb. 12 oz.	21"	Cedar River Mitchell County	10-27	Herman Merten Charles City	1 lb. 5 oz.	10"	Farm Pond Monroe County	7-26	Ronald Palmer Des Moines	16 lb. 2 oz.	32"	Des Moines River Webster County	8-23	Donald Rogers Fort Dodge
4 lb. 12 oz.	20 1/2"	West Okoboji Dickinson County	9-25	John Treglia Sioux City	1 lb. 4 oz.	11 3/4"	Cocklin's Fish Farm Cass County	6-23	Stewart Edge Council Bluffs	15 lb.	37"	Minnewachita Dickinson County	8-1	Carl Rose Arnolds Park
4 lb. 11 oz.	21"	Cedar River Mitchell County	5-2	Ann Souder Rudd	1 lb. 4 oz.	10 3/4"	Farm Pond Monroe County	6-6	Jim Arnold Marshalltown	CATFISH (Flathead)				
4 lb. 9 oz.	20 1/2"	West Okoboji Dickinson County	9-18	Lloyd Johnson Bellevue	1 lb. 4 oz.	10"	Farm Pond Marshall County	6-23	Eddie Breed Marshalltown	44 lb.	46"	Nine Eagles Lake Decatur County	8-3	Wayne Ward Chio
4 lb. 9 oz.	19 1/2"	West Okoboji Dickinson County	9-24	Dean Taylor Sioux City	1 lb. 4 oz.	10"	Farm Pond Cass County	5-16	Stacy Christensen Anita	38 lb.	46"	Des Moines River Polk County	10-2	Sue Dye Des Moines
4 lb. 8 oz.	20 1/2"	West Okoboji Dickinson County	1-27	Virg Harrison Cherokee	1 lb. 3 3/4 oz.	11 3/8"	Farm Pond Fremont County	7-31	Brian Shirley Sidney	37 lb.	44"	Mississippi River Clayton County	7-7	Merlin Lucas Guttenberg
4 lb. 8 oz.	18 3/4"	Mississippi River Allamakee County	7-25	Dick Strauch Dubuque	1 lb. 3 oz.	11 1/2"	Farm Pond Dubuque County	6-27	Shonna Dimitrovich Epworth	35 lb. 8 oz.	47"	Des Moines River Polk County	9-13	Sue Dye Des Moines
4 lb. 7 oz.	19 3/4"	Gravel Pit Butler County	9-18	Hiko Ubben Ackley	1 lb. 3 oz.	10 1/4"	Mississippi River Clayton County	6-1	Clyde Oberbroeckling Holy Cross	33 lb.	41"	Skunk River Washington County	4-29	Ron Sotka Washington
4 lb. 5 oz.	20 7/8"	West Okoboji Dickinson County	11-1	Jerry Peschon Worthington, MN	1 lb. 2 oz.	10 3/4"	Pleasant Creek Benton-Linn Counties	6-16	Glenda McKinley Vinton	32 lb. 8 oz.	40"	Des Moines River Polk County	9-24	Sue Dye Des Moines
4 lb. 5 oz.	20"	West Okoboji Dickinson County	10-16	Dean Taylor Sioux City	1 lb. 2 oz.	10 1/2"	Farm Pond Davis County	7-23	George White Mount Pleasant	32 lb.	39"	Iowa River Marshall County	6-25	Bob Wylack Marshalltown
4 lb. 4 oz.	20"	West Okoboji Dickinson County	4-13	Barry Day Sibley	1 lb. 2 oz.	10"	Farm Pond Monroe County	5-9	Steve Ploxx Turin	29 lb.	38 1/4"	Des Moines River Polk County	6-10	Jeff Johnson Des Moines
4 lb. 2 oz.	19 1/2"	West Okoboji Dickinson County	5-8	Barry Day Sibley	1 lb. 2 oz.	10"	Farm Pond Warren County	4-29	Frank Gustafson West Des Moines	27 lb. 8 oz.	40 1/2"	Des Moines River Polk County	7-3	Sue Dye Des Moines
4 lb. 2 oz.	19 1/2"	Quarry Benton County	6-12	Chuck Phelps Vinton	1 lb. 2 oz.	10"	Farm Pond Clarke County	4-23	Jim Ohnemus Des Moines	26 lb.	40"	Des Moines River Polk County	9-27	Sue Dye Des Moines
4 lb. 2 oz.	19 1/4"	West Okoboji Dickinson County	10-7	Gary Gravis Coraville	1 lb. 1 oz.	10 1/4"	Farm Pond Johnson County	5-27	Tracy Schreiner Marengo	25 lb. 1 oz.	37 1/2"	Raccoon River Dallas County	6-20	Lessly Cassidy Adel
4 lb. 2 oz.	18 1/2"	Greenbrier Pit Black Hawk County	5-8	Bob Mervin Waterloo	1 lb. 1 oz.	10 1/4"	Farm Pond Keokuk County	5-13	John Terrell North English	24 lb. 8 oz.	39"	Red Rock Lake Marion County	4-29	Ron Day Indianola
					1 lb. 1 oz.	10 1/4"	Gravel Pit Monona County	6-9	Al Willis Sloan	23 lb. 8 oz.	37 1/2"	Des Moines River Polk County	9-13	Sue Dye Des Moines

Steve Arguello, largemouth bass, 9 lbs. 8 oz.

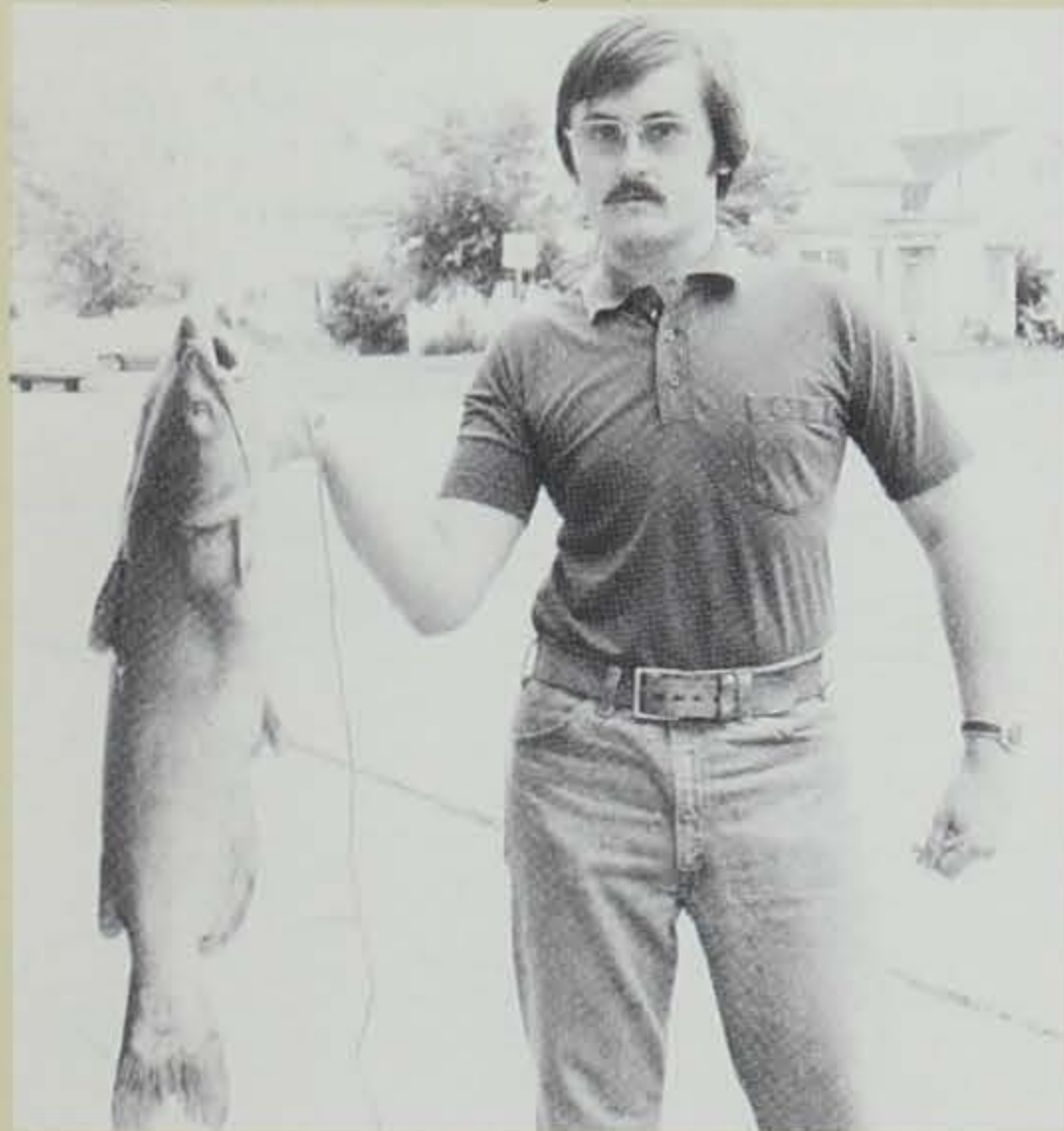


Herman Merten, smallmouth bass, 4 lbs. 12 oz.

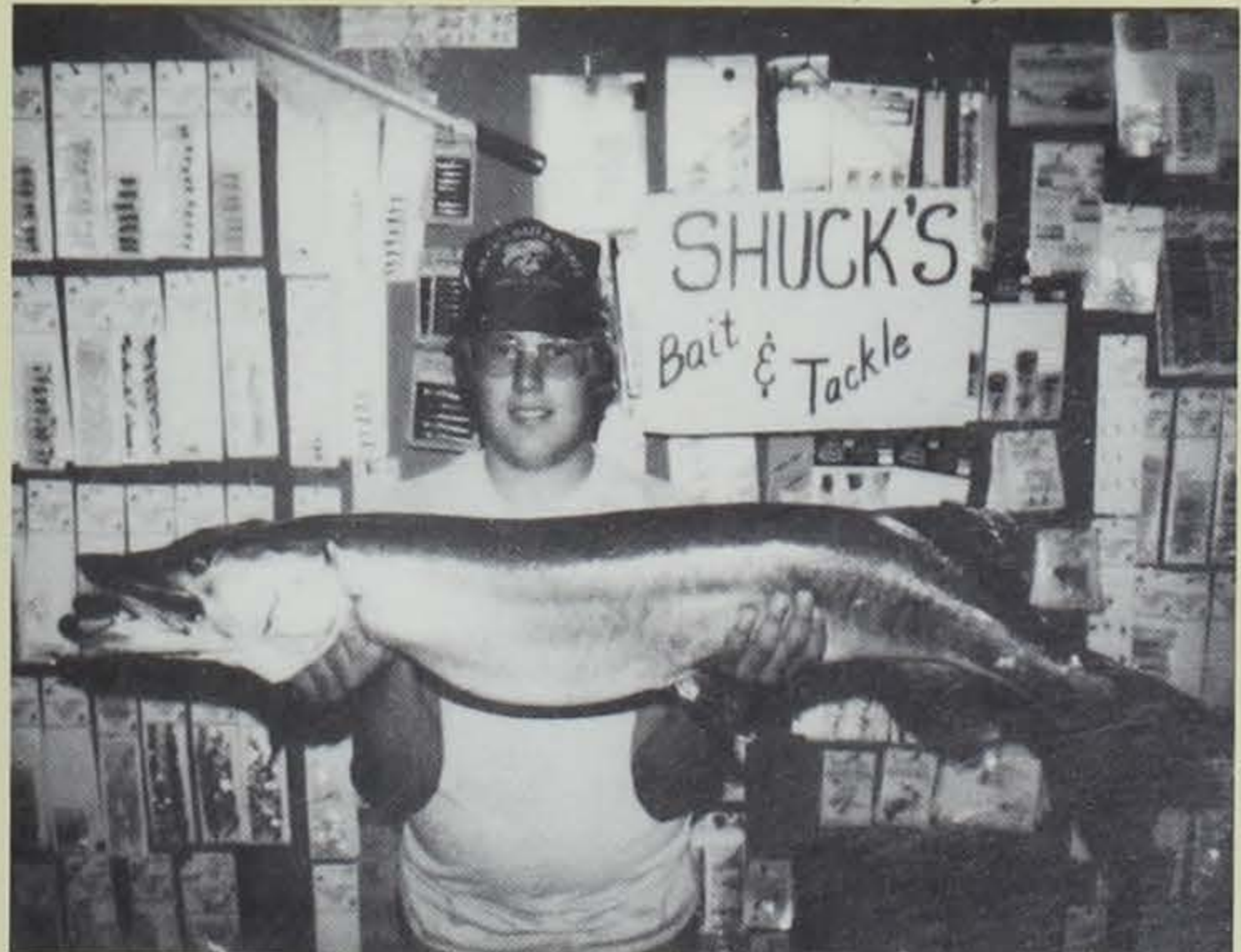


Weight	Length	Where Caught	Date	Name and Address	Weight	Length	Where Caught	Date	Name and Address	Weight	Length	Where Caught	Date	Name and Address
23 lb. 4 oz.	35"	Des Moines River Polk County	9-12	Stu Dye Des Moines	18 lb. 1 oz.	42"	Spirit Lake Dickinson County	5-3	Bob Crandall Fort Dodge	10 lb. 2 oz.	36"	West Okoboji Dickinson County	8-20	Dick Pautvert Indianola
21 lb. 4 oz.	36"	Mississippi River Allamakee County	6-14	Carl Lund Harper's Ferry	17 lb. 12 oz.	42"	Spirit Lake Dickinson County	5-1	Irene McCoy Wadena, MN	10 lb. 1 oz.	34 1/2"	West Okoboji Dickinson County	9-25	Stephen Lyman Sioux City
20 lb. 8 oz.	35"	Des Moines River Polk County	10-6	Stu Dye Des Moines	17 lb. 9 oz.	42 1/2"	West Okoboji Dickinson County	7-7	Don Johnson Spirit Lake	10 lb. 1 oz.	34"	Winnebago River Winnebago County	12-23	Larry Mattinson Forest City
20 lb. 8 oz.	33"	Raccoon River Calhoun County	8-20	George Miller Lytton	16 lb. 8 oz.	40"	Spirit Lake Dickinson County	5-16	Roger Ackerman Sibby	10 lb.	36"	Wapsipicon River Brenner County	6-8	Richard Schweizer Readlyn
20 lb. 3 oz.	35"	Wapsipicon Park Jones County	7-26	John Derk Anamona	15 lb. 8 oz.	38"	Spirit Lake Dickinson County	7-18	Doug Carlson Sioux City	10 lb.	34 1/2"	West Okoboji Dickinson County	5-31	Mike Hirschman Sioux City
CRAPPIE					Released 45"					PADDLEFISH				
3 lb. 12 oz.	19"	Farm Pond Appanoose County	1-8	Hardin Marvin Moulton	Released	44 1/2"	Spirit Lake Dickinson County	6-30	Don Sander Holstein	41 lb. 12 oz.	57 1/2"	Mississippi River Jackson County	3-28	Leslie Boyles Center Point
3 lb. 4 oz.	17 1/2"	Lake Lacey Van Buren County	8-26	Geoff Soltau Davenport	Released	44"	Spirit Lake Dickinson County	7-3	Bryan Jewell Spirit Lake	39 lb.	54"	Mississippi River Jackson County	3-17	Al Girth Olin
3 lb.	19"	Green Castle Lake Marshall County	5-5	Bart Parrshall Garwin	Released	43"	Spirit Lake Dickinson County	7-14	Kay Jewell Spirit Lake	38 lb.	54"	Mississippi River Jackson County	3-18	Byron Bach Urbana
3 lb.	17"	Farm Pond Davis County	7-18	Roscoe Day Ottumwa	Released	41"	Spirit Lake Dickinson County	10-6	Don Sander Holstein	38 lb.	54"	Mississippi River Jackson County	3-24	Larry Glick Springville
2 lb. 14 oz.	16 1/2"	Farm Pond Appanoose County	10-27	Jeff Peffley Centerville	Released	40"	Spirit Lake Dickinson County	10-5	Bryan Jewell Spirit Lake	34 lb.	56 1/2"	Mississippi River Jackson County	3-21	Mark Tompkins Bellevue
2 lb. 14 oz.	15 3/4"	Little Field Lake Audubon County	4-24	Joe Knight Des Moines	Released	40"	Spirit Lake Dickinson County	9-26	Don Sander Holstein	33 lb.	56"	Mississippi River Jackson County	3-14	John Vacek Oxford Junction
2 lb. 11 oz.	18 1/2"	Nine Eagles Lake Decatur County	6-10	Lu Stone Des Moines	TIGER MUSKY — No entries									
2 lb. 11 oz.	16 1/2"	Farm Pond Appanoose County	2-13	Albert Peffley Centerville	NORTHERN PIKE									
2 lb. 11 oz.	16"	Farm Pond Fremont County	6-4	John Mitchell Council Bluffs	18 lb.	39"	Wapsipicon River Buchanan County	5-3	Geroge Kovanda Independence	31 lb.	55"	Mississippi River Jackson County	12-26	Todd Boyles Center Point
2 lb. 6 oz.	17"	Farm Pond Iowa County	5-13	Larry Moyer Millsburg	17 lb. 3 oz.	41"	West Okoboji Dickinson County	11-27	North Groff May City	30 lb.	56"	Mississippi River Jackson County	3-14	Ken Vacek Oxford Junction
2 lb. 5 oz.	15"	Farm Pond Mills County	5-15	Toby Thompson Bellevue	16 lb. 13 oz.	38 3/4"	Winnebago River Winnebago County	4-19	Tim Bohl Lake Mills	28 lb. 6 oz.	52"	Mississippi River Muscatine County	3-7	Larry Wieggen Muscatine
2 lb. 4 1/2 oz.	16"	Farm Pond Appanoose County	10-19	Albert Peffley Centerville	13 lb. 13 oz.	35 1/2"	West Okoboji Dickinson County	2-28	Lloyd DeGard Sanborn	27 lb.	53 1/2"	Mississippi River Jackson County	12-27	Charles Boyles Cedar Rapids
2 lb. 4 oz.	15 1/2"	Meadow Lake Adair County	5-30	Harold Garner Russell	13 lb. 8 oz.	37 1/2"	West Okoboji Dickinson County	11-8	C. J. Van Steensck Okoboji	26 lb. 4 oz.	52"	Mississippi River Jackson County	3-28	Charles Boyles Cedar Rapids
2 lb. 2 oz.	16 1/4"	Farm Pond Appanoose County	1-30	Bill Hansen Centerville	12 lb. 8 oz.	37"	Wapsipicon River Buchanan County	3-29	Jim Peters Waterloo	26 lb.	51"	Mississippi River Muscatine County	3-11	Larry Wieggen Muscatine
2 lb. 2 oz.	15 1/8"	Diamondhead Lake Guthrie County	5-1	Jack Glenn Redfield	12 lb. 4 oz.	38"	Spirit Lake Dickinson County	7-8	Jan Anderson Peterson	25 lb. 12 oz.	51"	Mississippi River Jackson County	3-24	Kaye Boyles Center Point
2 lb. 2 oz.	12 1/2"	Millers Lake Pottawattamie County		Desek Harman Council Bluffs	12 lb. 4 oz.	36"	North Twin Lake Calhoun County	7-18	Gary Junkman Manson	PERCH				
2 lb. 1 oz.	15"	Farm Pond Cedar County	6-24	Lauri Vitense Tipton	12 lb. 2 oz.	37"	West Okoboji Dickinson County	9-13	Bob Leyer Omaha, NE	1 lb. 8 oz.	14"	Big Spirit Lake Dickinson County	10-23	Paul Anderson Estherville
2 lb.	17"	Nine Eagles Lake Decatur County	6-27	Kenny Dunek Kellerton	11 lb. 14 oz.		West Okoboji Dickinson County	11-14	Ron Woods Spencer	1 lb. 8 oz.	13 1/2"	Lost Island Lake Clay County	10-17	Donald Malm Spencer
2 lb.	15 1/2"	Arrowhead Lake Sac County	5-23	George Miller Lytton	11 lb. 10 oz.	37 1/2"	West Okoboji Dickinson County	8-21	Lary Bendlin Spencer	1 lb. 5 oz.	14"	Swan Lake Emmett County	11-20	Dean Dadds Spirit Lake
2 lb.	15"	Teak Walton Duck Pond Brenner County	4-16	Craig Bienenmann Waverly	11 lb. 10 oz.	35 3/4"	Elk Creek Marsh Worth County	7-15	Tim Bohl Lake Mills	1 lb. 5 oz.	12 1/4"	Farm Pond Butler County	7-20	Douglas Handley Janesville
FRESHWATER DRUM					11 lb. 8 oz.	37"	West Okoboji Dickinson County	8-28	Wilma Holden Ames	1 lb. 4 oz.	13"	Sand Pit Sioux County	1-13	Judd Schunbohm Hawarden
23 lb.	33 1/2"	Mississippi River Clayton County	10-26	Doris Pieper Garnaville	11 lb. 4 oz.	36"	West Okoboji Dickinson County	6-13	Art Van Meeteren Sheldon	1 lb. 4 oz.	12"	Spirit Lake Dickinson County	4-17	Phil Thelen Estherville
19 lb.	33"	Mississippi River Allamakee County	9-19	George Paulson Cedar Rapids	11 lb. 4 oz.	15 3/4"	Cedar River Benton County	9-4	David Campbell Vinton	1 lb. 4 oz.		Spirit Lake Dickinson County		Brian Bland Superior
MUSKY					11 lb. 2 oz.	34"	West Okoboji Dickinson County	1-14	Rick Anderson Linn County	1 lb. 3 oz.	12"	Spirit Lake Dickinson County	4-17	Phil Thelen Estherville
25 lb. 2 oz.	46"	West Okoboji Dickinson County	8-23	Don Johnson Spirit Lake	11 lb. 2 oz.	34"	Cedar River Linn County		Neil Kreici Marion	1 lb. 2 oz.	13 1/2"	Lost Island Lake Clay County	10-30	Donald Malm Spencer
24 lb.	44 1/2"	West Okoboji Dickinson County	10-31	Dave Brunsvold Estherville	10 lb. 14 oz.	36"	Mississippi River Jackson County	10-17	Tom Gerardi Clinton	1 lb. 2 oz.	12 1/4"	East Okoboji Dickinson County	1-2	Alvin Akin Spirit Lake
23 lb. 4 oz.	46"	West Okoboji Dickinson County	8-30	Perry Parks Arnolds Park	10 lb. 13 oz.	37 3/8"	Elk Creek Marsh Worth County	7-15	Tim Bohl Lake Mills	1 lb. 2 oz.	12 1/4"	Spirit Lake Dickinson County	4-15	Dave Lingreen Spirit Lake
23 lb.	45"	Spirit Lake Dickinson County	6-26	Larry Olson Marion	10 lb. 13 oz.	33"	Wapsipicon River Clinton County	10-3	Alvin Sieder Donahue	1 lb. 2 oz.	12 1/4"	Mississippi River Allamakee County	4-19	George Paulson Cedar Rapids
22 lb. 6 oz.	44"	Spirit Lake Dickinson County	10-15	Bill Paris Estherville	10 lb. 12 oz.	36 1/2"	West Okoboji Dickinson County	9-17	Marlin Eloberry Boone	1 lb. 2 oz.	12"	Pickeral Lake Barnia Vista County	12-31	Doris Anderson Storm Lake
20 lb. 1 oz.	43"	Spirit Lake Dickinson County	7-5	Kirby Iselds Spencer	10 lb. 11 oz.	35 1/2"	Wapsipicon River Linn County		Dorance Hefte Central City	1 lb. 1 oz.	12 1/2"	Big Spirit Lake Dickinson County	6-22	Steve Runge Waterloo
19 lb. 6 oz.	43"	Spirit Lake Dickinson County	7-10	Dane Jolley Peterson	10 lb. 11 oz.	35"	Cedar River Black Hawk County	2-14	Ruben Piper Cedar Falls	1 lb. 1 oz.	12 1/4"	West Okoboji Dickinson County	12-16	Rod Douma Sanborn
18 lb. 14 oz.	42"	Big Creek Polk County	7-13	Rick Wiseman Polk City	10 lb. 9 3/4 oz.	38"	Berds Lake Franklin County	6-8	LaVerne Thompson Bradford	1 lb. 1/2 oz.	12"	Lost Island Lake Palo Alto County	8-29	William Yager Storm Lake
18 lb. 11 oz.	42"	Spirit Lake Dickinson County	1-2	Charles Case Jefferson	10 lb. 7 oz.	34 1/2"	West Okoboji Dickinson County	1-3	Joyce Mammenga Little Rock	1 lb. 1/8 oz.	11 1/2"	Lost Island Lake Palo Alto County	9-5	Cathy Klepper Emmettburg
18 lb. 10 oz.	42 1/2"	Spirit Lake Dickinson County	8-3	Gary Wilson Cherokee	10 lb. 6 oz.	35 1/2"	George With Park Black Hawk County	5-30	Dean Dickson Waterloo	1 lb.	12 1/2"	West Okoboji Dickinson County	8-28	Bill Edwards Pryghar
18 lb. 2 oz.	42"	Spirit Lake Dickinson County	7-14	Mike Malisch Spencer	10 lb. 4 oz.	35 1/2"	Cedar River Linn County	5-4	Jane Schneider Palo	1 lb.	12 1/4"	West Okoboji Dickinson County	9-26	Lloyd Benkman Sheldon

Brian Quirk, channel catfish, 20 lbs.



Don Johnson, musky, 25 lbs. 2 oz.



Weight	Length	Where Caught	Date	Name and Address	Weight	Length	Where Caught	Date	Name and Address	Weight	Length	Where Caught	Date	Name and Address	
1 lb.	12 1/4"	West Okoboji Dickinson County	12-22	Rod Douma Sanborn	TROUT (Brown)	12 lb.	29 3/4"	Upper French Creek Allamakee County	6-5	Eric Sorum Waukon	4 lb.	20"	Sny-Magill Clayton County	6-9	Marty Cory Iowa City
1 lb.	12"	West Okoboji Dickinson County	12-14	Joe Shuck Arnolds Park	8 lb. 8 oz.	26"	French Creek Allamakee County	5-14	Al Rohmer Waterloo	3 lb. 6 oz.	19 1/4"	Wexford Creek Allamakee County	5-30	Edward Peck Cedar Rapids	
1 lb.	12"	Spirit Lake Dickinson County	4-17	Phil Thelen Estherville	7 lb. 8 oz.	27"	Waterloo Creek Allamakee County	6-4	Fred Daugs Minneapolis, MN	3 lb. 4 oz.	18 3/4"	South Cedar Creek Clayton County	5-11	Terry Manders Dubuque	
1 lb.	11 1/2"	East Okoboji Dickinson County	1-11	Jim Burgeson Arnolds Park	7 lb. 8 oz.	22"	French Creek Allamakee County	5-26	Kevin Becker Clarksville	WALLEYE					
SAUGER					6 lb. 9 oz.	22"	Trout Run Winnebago County	5-24	Pat Herman Mason City	13 lb.	31"	Cedar River Black Hawk County	4-1	Bill Kahler Cedar Falls	
5 lb. 4 oz.	25"	Mississippi River Clayton County	1-4	Cliff Haugland Solon	6 lb. 8 oz.	21 1/2"	Twin Springs Winnebago County	5-11	Ron Evisitzer Denison	12 lb. 15 oz.	31 1/2"	Shell Rock River Butler County	3-10	Jeff Steere Greene	
5 lb.	22 1/2"	Mississippi River Clayton County	4-13	Brian DeCook Guttenberg	6 lb. 1 oz.	22"	Bankston Creek Dubuque County	6-8	Gregory Paisley Dubuque	12 lb. 3 oz.	31"	Shell Rock River Butler County	3-10	Jeff Steere Greene	
4 lb. 11 oz.	21 3/8"	Mississippi River Muscatine County	3-11	Harold Wingerter Muscatine	5 lb. 14 oz.	23 1/2"	Bloody Run Clayton County	6-4	Leo Steist Monona	12 lb.	30"	Des Moines River Boone County	11-22	Joe Borsch Boone	
4 lb.	21 1/4"	Mississippi River Clayton County	12-10	Gene Owens Cedar Rapids	5 lb. 13 1/2 oz.	23"	Spring Branch Delaware County	12-2	Brian Beasmore Cedar Rapids	10 lb. 8 oz.	30"	Twin Lakes Calhoun County	5-29	Dewayne Hinton Rockwell City	
3 lb. 12 oz.	19 1/4"	Mississippi River Muscatine County	3-13	Cliff Haugland Solon	5 lb. 10 oz.	23 1/2"	North Bear Creek Winnebago County	11-7	Mike Booth New Hampton	10 lb. 3 oz.	31"	West Okoboji Dickinson County	10-5	Bob Richman Arnolds Park	
3 lb. 9 1/2 oz.	22 1/4"	Missouri River Woodbury County	10-27	Steven Jauron Sargeant Bluff	5 lb. 8 oz.	23"	Pine Creek Delaware County	7-23	Mike Burns Dubuque	10 lb. 2 oz.	28"	Chariton River Appanoose County	1-28	Gary Freshwater Albia	
3 lb. 8 oz.	21 1/2"	Mississippi River Clayton County	4-18	Milo Lucas Guttenberg	5 lb. 6 oz.	22"	Little Mill Creek Jackson County	6-4	Jim Harding Clinton	10 lb. 1 oz.	28"	Rathbun Lake Appanoose County	3-29	Jerry Arbogast Centerville	
3 lb. 7 oz.	21"	Missouri River Woodbury County		Larry Myhre Sioux City	5 lb. 5 oz.	22 1/4"	Pain Creek Allamakee County	7-24	Richard Stolfus Lawler	10 lb.	29"	West Okoboji Dickinson County	11-16	Jerry Peschon Worthington, MN	
3 lb. 6 oz.	19"	Mississippi River Jackson County	4-14	Bob Albers Clinton	5 lb. 4 oz.	23"	Buck Creek Clayton County	10-29	William Noel Davenport	10 lb.	28"	Cedar West Fork Butler County	10-9	Leon Smoot Allison	
3 lb. 4 oz.	21 1/2"	Mississippi River Clinton County	11-24	Jamey Ocker Clinton	4 lb. 4 oz.	22 1/4"	Little Mill Creek Jackson County	4-15	Jamie Tyler Davenport	9 lb. 14 oz.	28 1/2"	Mississippi River Jackson County	4-16	Red Henton Maquoketa	
3 lb. 4 oz.	21"	Mississippi River Allamakee County	10-7	Carl Lund Harpers Ferry	4 lb. 3 oz.	22"	French Creek Allamakee County	9-5	Jim Downs Webster City	9 lb. 11 oz.	27 1/2"	North Twin Lake Calhoun County	6-12	Martha Buttolph Rockwell City	
3 lb. 2 1/2 oz.	19"	Mississippi River Clayton County	4-14	Kenneth Bowers Strawberry Point	4 lb. 2 oz.	20 1/2"	North Bear Creek Winnebago County	6-17	Kraig Runquist Rochelle	9 lb. 8 oz.	28 1/2"	Rathbun Lake Appanoose County	4-1	Terry Stubbs Albia	
3 lb. 1 oz.	20 3/4"	Missouri River Woodbury County	11-1	Steven Jauron Sargeant Bluff	4 lb. 2 oz.	19 7/8"	Patterson Creek Allamakee County	7-1	Steven Brandel Dubuque	9 lb. 8 oz.	27 1/2"	Rathbun Lake Appanoose County	3-28	Bernie Ripberger Indianola	
3 lb.	22"	Missouri River Woodbury County	10-7	Larry Myhre Sioux City	3 lb. 14 oz.	20 1/4"	Little Turkey River Delaware County	7-16	Richard Riden Dubuque	9 lb. 8 oz.	27 1/2"	Rathbun Lake Appanoose County	8-12	Norma Stevens Bloomfield	
3 lb.	20 1/4"	Mississippi River Clayton County	4-1	LaVern Robbins Strawberry Point	3 lb. 10 oz.	20"	Silver Creek Allamakee County	5-6	Kevin Haas Waukon	9 lb. 6 oz.	27 1/2"	Dickinson County	11-24	Dick Crail Algona	
2 lb. 14 oz.	19"	Mississippi River Jackson County	1-19	Harry Hauger Maquoketa	3 lb. 8 oz.	20 1/2"	Hickory Creek Clayton County	8-22	Chuck Andriacchio Dubuque	9 lb. 3 oz.	27 1/2"	Wapsipicon River Buchanan County	3-14	Chris Anderson Independence	
2 lb. 14 oz.	16"	Mississippi River Jackson County	4-12	Tom Walsh Maquoketa	3 lb. 5 oz.	20 1/4"	Big Mill Creek Jackson County	9-21	Jim Faulhaber Dubuque	9 lb. 1 oz.	27 1/2"	Des Moines River Polk County	4-10	Fred Warren Norwalk	
2 lb. 12 oz.	20"	Mississippi River Allamakee County	5-7	George Paulson Cedar Rapids	3 lb. 4 oz.	19"	Mossey Glen Clayton County	7-14	Steven Pelley Marion	9 lb.	29"	Lost Island Lake Clay County	11-8	John R. Nagle Ernestberg	
2 lb. 12 oz.	19"	Mississippi River Clayton County		Ken Roling New Vienna	3 lb.	18"	Maquoketa River Delaware County	4-29	Steven Pelley Marion	9 lb.	28 1/2"	West Okoboji Dickinson County	10-23	Dick Crail Algona	
2 lb. 11 oz.	19 1/2"	Mississippi River Clinton County	10-29	Michael Brokaw Camanche	TROUT (Rainbow)					8 lb. 14 oz.	28"	Spirit Lake Dickinson County	12-4	Roger Hough Algona	
2 lb. 11 oz.	19 1/4"	Mississippi River Jackson County	12-1	Jim Clark DeWitt	15 lb. 2 oz.	31 1/2"	South Bear Creek Winnebago County	6-11	William Voshell Ankeny	8 lb. 13 oz.	29"	Lake Cornelia Wright County	7-3	Charles Butler Klemme	
2 lb. 11 oz.	19"	Missouri River Woodbury County	11-20	Larry Myhre Sioux City	14 lb. 1 oz.	28 3/4"	Backbone State Park Clayton County	11-16	Don Hanna Cedar Rapids	8 lb. 13 oz.	29"	West Okoboji Dickinson County	11-7	Norb Groff May City	
2 lb. 10 oz.	20"	Missouri River Woodbury County	11-6	Larry Myhre Sioux City	11 lb. 8 oz.	28 1/4"	Mestad Springs Winnebago County	5-6	Norma Mestad Decatur	8 lb. 12 oz.	31"	Lost Island Lake Palo Alto County	5-15	Dick Crail Algona	
2 lb. 9 oz.	19"	Missouri River Woodbury County	6-27	Jim Rodgers Sioux City	10 lb. 4 oz.	30"	Bear Creek Fayette County	6-3	Jim Davis Oelwein	8 lb. 12 oz.	28"	Spirit Lake Dickinson County	9-29	Art Johnson Fort Dodge	
2 lb. 9 oz.	18 3/4"	Mississippi River Jackson County	4-16	Richard Mores Whiting, IN	10 lb. 2 oz.	29"	South Bear Creek Allamakee County	5-1	Harold Peters New Hampton	8 lb. 10 oz.	27"	West Okoboji Dickinson County	11-8	Larry Bending Spencer	
2 lb. 9 oz.	17 3/8"	Mississippi River Muscatine County	1-2	Cliff Haugland Solon	9 lb.	27"	Sny-Magill Clayton County	5-15	Doug Mayer Grinnell	8 lb. 10 oz.	27"	Lost Island Lake Clay County	9-18	Richard Schwarz Spencer	
STURGEON (Shovelnose) — No entries					8 lb. 12 oz.	25"	Sny-Magill Clayton County	5-5	John Hochberger Dubuque	8 lb. 7 oz.	29 1/2"	Big Creek Lake Polk County	6-20	Dale Mitchell Ankeny	
SUCKER (Misc.)					7 lb. 2 oz.	25 1/4"	Swiss Valley Dubuque County	10-10	Daniel Basten Dubuque	8 lb. 5 oz.	28"	Shell Rock River Butler County	6-6	Lorraine Kramer Shell Rock	
5 lb. 1 oz.	22"	Farm Pond Sac County	5-2	Greg Currie Early	7 lb.	24"	Joy Springs Clayton County	4-22	Louis Pieper Van Home	8 lb. 4 oz.	29"	Mississippi River Clayton County	5-31	Lee Fischer Guttenberg	
SUNFISH					5 lb.	24"	Bohemian Creek Howard County	4-22	Robert Brummond New Hampton	8 lb. 2 oz.	28"	Shell Rock River Butler County	4-7	Jeff Steere Greene	
1 lb. 9 oz.	10 1/2"	Central Park Lake Jones County	5-18	Roland Rieflin Cascade	5 lb.	23"	Bloody Run Clayton County	6-26	Bob Corrick Long Grove	8 lb. 2 oz.	28"	Spirit Lake Dickinson County	5-7	Rick Boer Sheldon	
1 lb. 5 oz.	11"	Farm Pond Jefferson County	7-9	Jeff Overgaard Northwood	4 lb. 15 1/2 oz.	21"	Waterloo Allamakee County	4-24	Kenneth Perry Cedar Rapids	8 lb. 1 oz.	27"	Mississippi River Allamakee County	4-2	George Paulson Cedar Rapids	
1 lb. 3 oz.	9 1/4"	Viking Lake Montgomery County	1-24	Steven Baumbach Stanton	4 lb. 14 oz.	22 1/4"	Little Mill Jackson County	4-27	Frank Mickelson Dubuque	8 lb.	28"	West Okoboji Dickinson County	12-14	Leonard Skalisky Arnolds Park	
1 lb. 2 oz.	10"	Pleasant Creek Linn County	8-7	Chad Roberts Cedar Rapids	4 lb. 13 oz.	22 1/2"	Spring Branch Creek Delaware County	9-6	Kevin Howes Dubuque	8 lb.	28"	Mississippi River Allamakee County	4-17	Glenn Sommer Elk Run Heights	
1 lb. 1 oz.	10 1/4"	Lake Icaria Adams County	5-31	Howard Paul Carroll	4 lb. 11 oz.	22 1/2"	Fountain Springs Delaware County	4-26	Dennis Jobe Hiawatha	8 lb.	27"	Spirit Lake Dickinson County	10-5	Alvin Akin Spirit Lake	
TROUT (Brook)					4 lb. 2 oz.	22 1/8"	Big Mill Creek Jackson County	9-9	Jim Faulhaber Dubuque	8 lb.	25 1/2"	Mississippi River Clayton County	2-3	Bill Deutmeyer Dyersville	
1 lb.	13"	Spring Branch Delaware County	5-7	Brad Hansen Cedar Rapids	4 lb. 2 oz.	22 1/8"				8 lb.	25"	Mississippi River Dubuque County	10-11	Paul Kies Dubuque	

William Voshell, rainbow trout, 15 lbs. 2 oz.



Bill Kahler, walleye, 13 lbs.



Conservation in the Classroom

By Sonny Satre

The Des Moines Alternative School (south campus, located at 1000 SW Porter in Des Moines) offers a conservation and outdoor skills class which gives students an opportunity to participate in outdoor activities while learning to appreciate the conservation of our natural resources. The school provides an opportunity for students to receive a high school diploma who would not otherwise have satisfied graduation requirements.

Cliff Rooney, a 20-year veteran in the teaching profession, instructs the conservation course. Rooney is a past

president of the Des Moines Izaak Walton League and is an avid outdoorsman and conservationist. Rooney receives teaching assistance from outside groups such as the Iowa Conservation Commission, Des Moines Izaak Walton League, American Red Cross, Polk and Warren County Conservation Boards, Saylorville Dam Snowmobile Club, and the Des Moines Water Works.

Examples of courses students participate in include an American Red Cross first aid course, hunter safety, snowmobile safety, trap shooting and a compass course. Outdoor classroom activities have included a canoe trip on the Des Moines River, an overnight campout at Green Valley State Park, studies of farm pond ecology, ice fishing with a

state fisheries biologist, cross-country skiing, fire building and outdoor cooking, and wildlife observation trips.

This year the class is constructing 200 wood duck nesting boxes with a goal to have them in place by late March. The Des Moines Izaak Walton League donated \$600 for the required materials for the project.

A final exam requires the use of the year's knowledge and skills. The test consists of a two-day, one night camping trip. This year the class will go to the Upper Iowa River for its test.

All activities require learning outdoor skills and information. In addition to being enjoyable they also teach respect and a desire to conserve our natural resources.



Ron Johnson



Ron Johnson



Ron Johnson

Top left: Donations from the Des Moines Izaak Walton League enabled this year's class to construct over 200 wood duck nesting boxes.

Top right: Conservation Commission personnel lend teaching assistance in courses such as hunter safety and snowmobile safety.

Left: The class is instructed on snowmobile maintenance as well as other safety tips.



SWITCHGRASS

More than Wildlife Habitat

Ken Formanek

By Jeff Joens and Ernest Hintz

Jeff Joens is a wildlife management assistant located in the commission's central office in Des Moines. He has been with the commission since 1977 and is a graduate of Iowa State University.

Ernest Hintz is a state conservation agronomist with the Soil Conservation Service. He is responsible for pasture programs in Iowa and is a graduate of Iowa State University.

Agricultural trends over the past several decades have dramatically affected wildlife populations. As more and more land was placed into row-crop production, fields of oats and alfalfa, fence rows, waterways, ditches, odd areas and similar habitat types which were once important nesting sites have disappeared. Ground nesting birds such

as pheasant, quail, dickcissel, upland sandpiper and others were soon without adequate nesting cover.

Wildlife biologists were well aware that safe, undisturbed nesting cover was a key to maintaining wildlife populations. They knew that if they were going to affect land use, they must develop a program which was economical to the landowner. Research had already begun on the benefits of warm-season grasses for wildlife. Early results suggested native grasses could provide significant economic incentives to landowners, while providing much-needed nesting habitat for ground nesting birds and other species. Warm-season grasses appeared to provide one answer to the problem of declining habitat.

Of all the native warm-season grasses, switchgrass seemed to be best suited to agriculture and wildlife. Con-

sequently, in 1979 a program was designed by the Iowa Conservation Commission to demonstrate the values of switchgrass as a cattle forage. Today \$100,000 is spent annually to cost-share the establishment of switchgrass pastures on private land. From these demonstration areas, other farmers in the area can view the effect of switchgrass on a cattle operation.

Previous articles in the *Iowa Conservationist* have discussed the value of switchgrass as a wildlife habitat. Studies by Commission biologists have shown that switchgrass pastures are readily accepted as nesting covering by pheasant, quail and several ground-nesting songbirds. Since these warm-season grasses are not utilized until midsummer, switchgrass fields are relatively undisturbed — as opposed to cool season forages which are often cut for

hay during the peak nesting periods of May and June. The tall, erect switchgrass plants also resist flattening by snow; this helps give excellent winter cover for birds and mammals which must survive Iowa's harsh winters.

Switchgrass can also be a valuable forage when used in conjunction with traditional cool-season forages. Pasture efficiency can be improved by converting one-fourth to one-third of the cool-season pasture acreage to the warm-season grass. Cool-season grasses can be grazed during the early and late part of the grazing season, and switchgrass during midsummer. This system provides a larger and more uniform forage supply during the entire grazing season. While cattle use switchgrass, cool-season grasses are given a rest, improving their vigor and providing a greater supply of forage for late season grazing.

Obviously, if one-fourth of all the cool-season pastures in Iowa were converted to switchgrass, the positive impact on wildlife would be widespread. But this will not occur unless Iowa cattlemen can realize financial gain from switchgrass as a forage. New concepts such as warm-season grasses require time to be tested and thoroughly evaluated. Several questions must be

answered before they are readily accepted. The remainder of this article is intended to answer some of the most common questions asked during the three years that the switchgrass program has been in existence.

1. Do warm-season grasses grow well in Iowa?

Warm-season grasses were present long before our forefathers first settled this state. Big bluestem, Indiangrass, little bluestem and switchgrass are all native, and once covered about two-thirds of Iowa. Much of our original prairie was destroyed by the advent of the moldboard plow and an agricultural philosophy which promoted grain farming. But patches of these native grasses have survived along stream banks, forest margins and untilled areas. Over the years these grasses have adapted to local environmental conditions and developed a wide range of characteristics, allowing them to be used today.

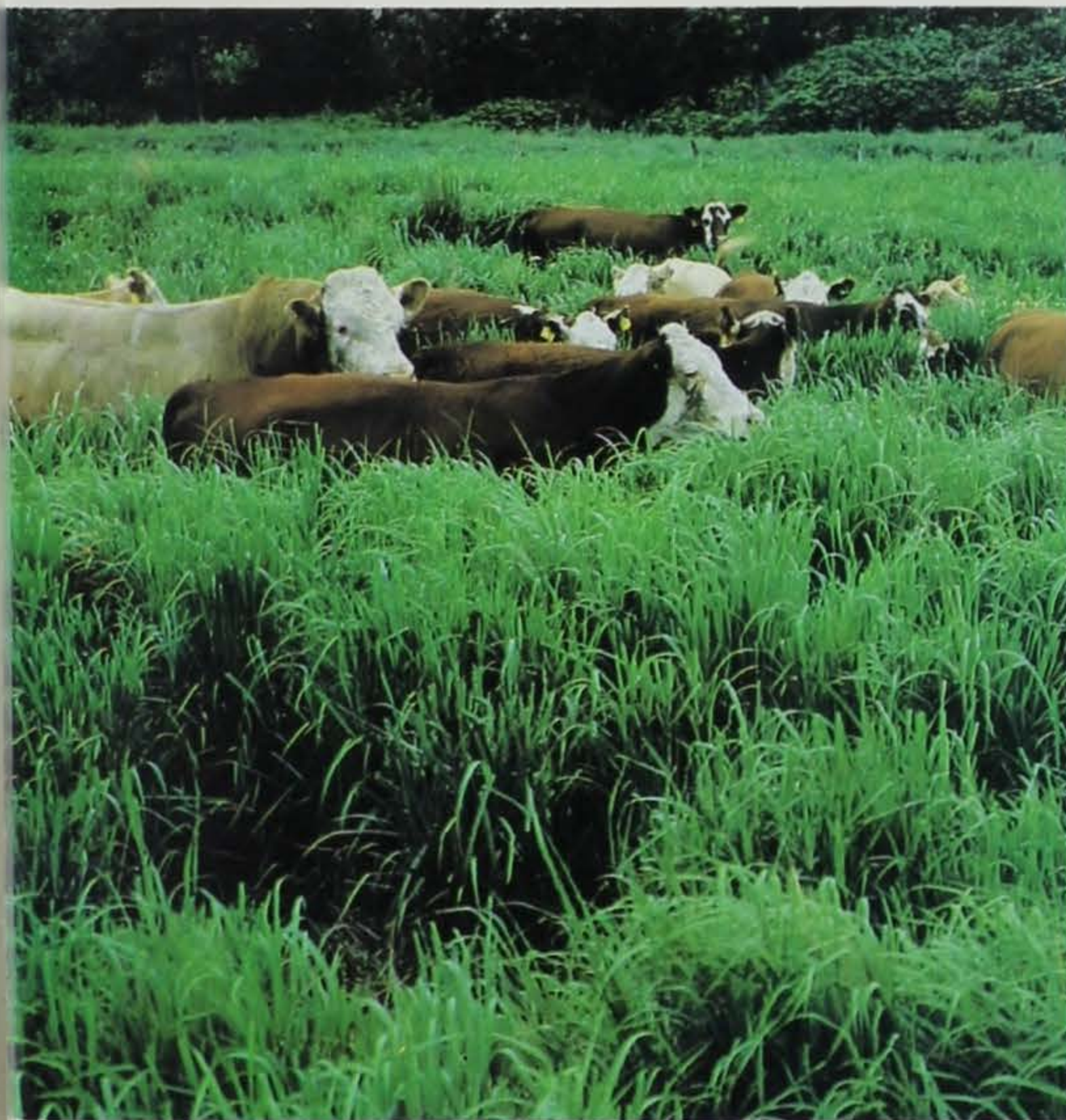
Switchgrass and other prairie grasses are winter hardy and will grow in all areas of Iowa. They have very extensive root systems that extend 5 to 11 feet into the ground. Switchgrass appears to be the most widely adaptable and can tolerate moderately wet soil conditions

and occasional flooding, as well as droughty soils. Both big bluestem and Indiangrass require better drained soils.

2. Are warm-season grasses difficult to establish?

On the average, it takes two years to establish a stand of switchgrass for pasture use. Although some stands become well established and produce a good seed crop the first year, it is not recommended they be grazed during the first year. Warm-season grasses appear to grow more slowly than cool-season grasses because they are unable to tolerate other vegetative competition. Without competition, warm-season grasses will usually develop more rapidly and produce more dry matter the first year. They require temperatures of 80 degrees Fahrenheit or higher before they achieve their peak growth rate. (This is also why they are effective pastures during the hot summer months when cool-season pastures can go dormant.)

Warm-season grasses require a firm seedbed. We recommend the seedbed be disced once or twice and then rolled, both before and after seeding, to ensure a firm seedbed. A grain drill should be used for planting. Atrazine should be



Left: Pasture efficiency can be improved when switchgrass, a warm-season grass, is used in conjunction with cool-season forages.



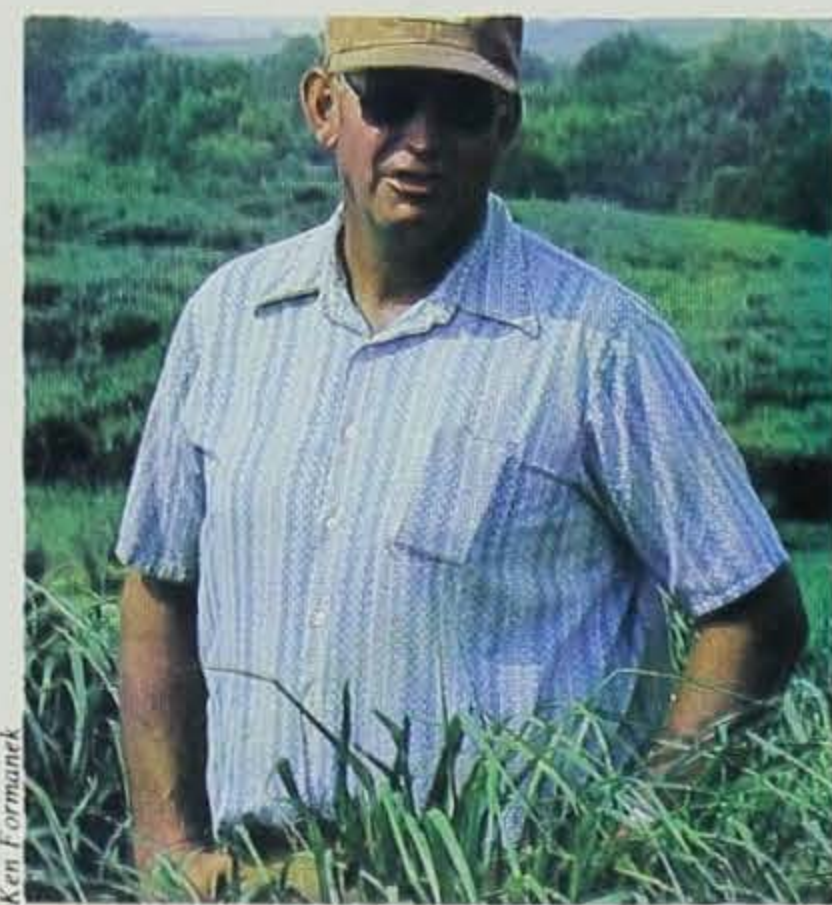
Above: Of all the native warm-season grasses, switchgrass seems to be best suited to agriculture and wildlife. Switchgrass pastures are readily accepted as nesting cover by pheasants, quail and several ground-nesting songbirds

SWITCHGRASS

applied *after* planting to control weeds which compete heavily with warm-season grasses. If weed competition exists, a loss of production may occur for one year and possibly two years while the switchgrass stand is becoming established. However, with proper management switchgrass and other warm-season grasses will persist indefinitely.

3. My neighbor tried to establish switchgrass about 10 to 15 years ago and failed. Why should I believe it can work today?

Many of the fields established during that time were considered failures for various reasons. Lack of patience, improper seedbed preparation and a general misunderstanding of warm-season grasses were the key factors. Within only the last five years Aatrex atrazine has been labeled for use on both switchgrass and big bluestem. Experience has also provided us with improved seedbed preparation techniques and seeding dates. New varieties of seed have been produced which are more adaptable to Iowa's climatic and soil conditions. Field demonstrations by landowners and resource agencies throughout the state have proven that switchgrass and other warm-season grasses can be readily established. On the horizon and soon to be introduced are new varieties of big bluestem and Indiangrass which have been developed for Iowa conditions.



Good grazing — that's what Lee Faris gets from his switchgrass fields. He planted his first 12 acres of switchgrass pasture in 1978 and has since increased to 70 acres of the forage.

4. What do landowners have to say about switchgrass as a forage?

To answer this question, here are excerpts of an article which appeared in the March, 1982 Beef Extra insert of *Farm Journal Magazine*.

When Lee Faris planted his first 12 acres of switchgrass pasture in 1978, he hoped it would provide extra forage for his 100-head cow herd in midsummer. The Ringgold County, Iowa, cowman-farmer also expected the native warm-season grass to provide grazing insurance during dry years when his forage supply can sometimes be stretched to its limit.

The tall-growing grass quickly paid off. The first year after he established it, cows fared well on the new pasture. "I noticed no difference in condition between cows on switchgrass and those on orchardgrass pastures," Faris says. And the warm-season native performed well despite a heavier stocking rate. "My first 12-acre field of switchgrass supported 20 cow-calf pairs compared with an 80-acre orchardgrass pasture next to it that carried 40 pairs."

"In 1977, dry conditions forced cows off many farms in this area," Faris recalls. "I thought a little extra management (planting warm-season grass) would take pressure off my orchardgrass-alfalfa pasture."

Faris is so enthusiastic about switchgrass that he has expanded his acreage in each of the last three seasons. He now has 70 acres, out of a total 720-acre grain and livestock operation, planted to the forage.

Another test of Faris's warm-season grass came during 1980, when dry weather again plagued the area. "Switchgrass produced up to 90% of its capability — it spelled relief for my other pastures, which were down to nearly nothing by early summer," he says.

The Iowa cowman sees an important extra benefit in his switchgrass pastures. "Cattle have fewer eye problems when they graze on switchgrass," Faris claims.

Careful management of switchgrass pasture is basic but essential, Faris believes. His rule of thumb is to turn cows into the pasture around June 15 and bring them out around September 1. He figures he can graze one and one-half animal units per acre on the grass for three months if he fertilizes the pasture.

"But it is essential to avoid grazing before the switchgrass is at least 18" tall

in the summer and to leave 18" of stubble in the fall," Faris says. In 1981, the grass was already the desired 18" to 24" height by June 1, allowing a couple weeks earlier grazing.

An Iowa State University study showed fertilized switchgrass gave cattle a higher average daily gain than smooth brome grass from mid-June to late August. It also revealed 50% higher live weight gains per acre on switchgrass. And the research indicated that the performance of the brome was bolstered by the midsummer rest, and that animal gains were steady throughout the entire grazing period when rotated from brome to switchgrass.

In a Nebraska study, steers rotated between cool-season pastures and warm-season native grass showed a net advantage of 74 lb. per animal over those grazing only cool-season species.

Although switchgrass makes economic sense to Faris, he says the native has a certain beauty and a number of wildlife conservation benefits, too. And those conservation advantages also helped him offset the considerable cost of establishing the native forage. Cattlemen in some areas can receive financial help to raise switchgrass and other natives through state or federal cost-sharing programs. Faris's \$100 per acre establishment costs were offset with a 50% cost-sharing payment from the Iowa Conservation Commission's Switchgrass Cost-Sharing Program. The program is funded from hunting and trapping license fees.

Although switchgrass can be tricky and expensive to establish, once it is growing well it needs little attention beyond occasional fertilization. "The grass I seeded in 1978 keeps spreading and getting thicker by the year," Faris says.

Switchgrass and other warm-season grasses appear to have definite potential in Iowa for both cattlemen and wildlife enthusiasts. They can be established on marginal ground and similar sites which should not be in rowcrops. The US Soil Conservation Service recommends the use of warm-season grasses as part of a sound pasture management program and for its soil erosion values. They support the switchgrass program and assist the Commission in promoting and establishing switchgrass pastures.

For more information, contact your local USDA, Soil Conservation Service District Conservationist or Iowa Conservation Commission Wildlife Biologist.

Popping Panfish

By Joe Schwartz

Joe Schwartz is a district fisheries supervisor for southwest Iowa stationed at Cold Springs State Park. He has been with the commission since 1971 and holds a B.S. degree from Ohio State University and a M.S. degree from Iowa State University.



Ken Formanek



Ken Formanek

Bluegills can be caught on worms, minnows, grasshoppers and other live baits, but one of the most enjoyable ways to catch them is with a small flyrod and popping bugs. Few Iowans use this method and they don't know what they're missing.

If you don't own a flyrod buy one which is fairly short and light in action. An eight-footer is a good first choice, being fairly light and easier to cast than very small rods. Prices range from reasonable for fiberglass rods to very expensive for split bamboo types. You can obtain a lightweight, single action reel at little cost.

Unlike other fishing methods the weight of the flyline, not the lure, carries the bait out so the appropriate line size must be selected for the particular rod you have. Equipment catalogs or your sporting goods dealer can help match the line to the rod. For bluegill angling, a floating line is needed. A leader is used to form an invisible connection between the flyline and the fly. Ardent fly fishermen often buy tapered leaders of different sizes for different size flies, but bluegills are not particular and a 7- to 8-foot length of 2- or 4-pound test monofilament fishing line is suitable. I'd recommend four-pound test because there is a good chance a bass will take a bug

being fished for bluegill and the added strength will help in landing the larger fish.

You can use a flyrod anytime during the day, but early morning or late evening when the water is calm and the fish are feeding is best for fishing with surface lures. Many people believe quiet swimming bugs of the old-fashioned moth design or sponge rubber crickets and spiders work best. However, I prefer popping bugs because I am able to see the fish take the lure and this adds to the excitement.

Just as the overall rule for panfish tackle is "go light," the best method of fishing is "work it slowly." Bluegills are comparatively slow swimmers and quick motions frighten them. Lay the popper softly on the water close to a weedbed or brushy area. Cast to rings made by feeding fish in your favorite bluegill lake or pond. Allow the popper to remain motionless on the water for several seconds then give an occasional twitch to give the lure the appearance of a helpless insect caught in the surface film. A hungry bluegill will suck in the bug, often causing a furious boil on the surface. Set the hook quickly and the battle is on.

Bluegill mouths are small so use a popper with a hook in the 8 to 12 size range. Popper bugs come in a large

variety of colors, styles and feather combinations and many have quivering rubber legs. I like small yellow poppers with black tail feathers, but about any type will work when the fish are hungry.

The bluegill's fight is not spectacular but it resists vigorously by swimming at right angles to the pull of the line. On light tackle a big "blue" can give a credible performance. The best part of a bluegill fishing trip comes after the fish are cleaned. Bluegills are second to none for good eating. Simply fillet the fish, season with salt and pepper, dip in a mixture of corn meal and flour and fry. Then, dig into some of the best eating there is.

Fishing Clinics for Kids

By Celia Smith-Burnett

Celia Smith-Burnett is a student at Iowa State University in Ames. She is double majoring in fisheries and wildlife biology and journalism.

At nine years of age, David had been fishing with his father a number of times. Dad had tried to teach him how to cast the line out smoothly and to reel it in slowly, how not to cast shadows on the water and to watch for telltale ripples, how to cut a worm in half and tie it, squirming, onto the hook. The basics.

But this was different. It was the Iowa Conservation Commission's Youth Fishing Clinic. And he would learn more than the basics.

It was a special one-day school to learn fish identification and proper casting techniques, about fishing bait and tackle and how to clean fish.

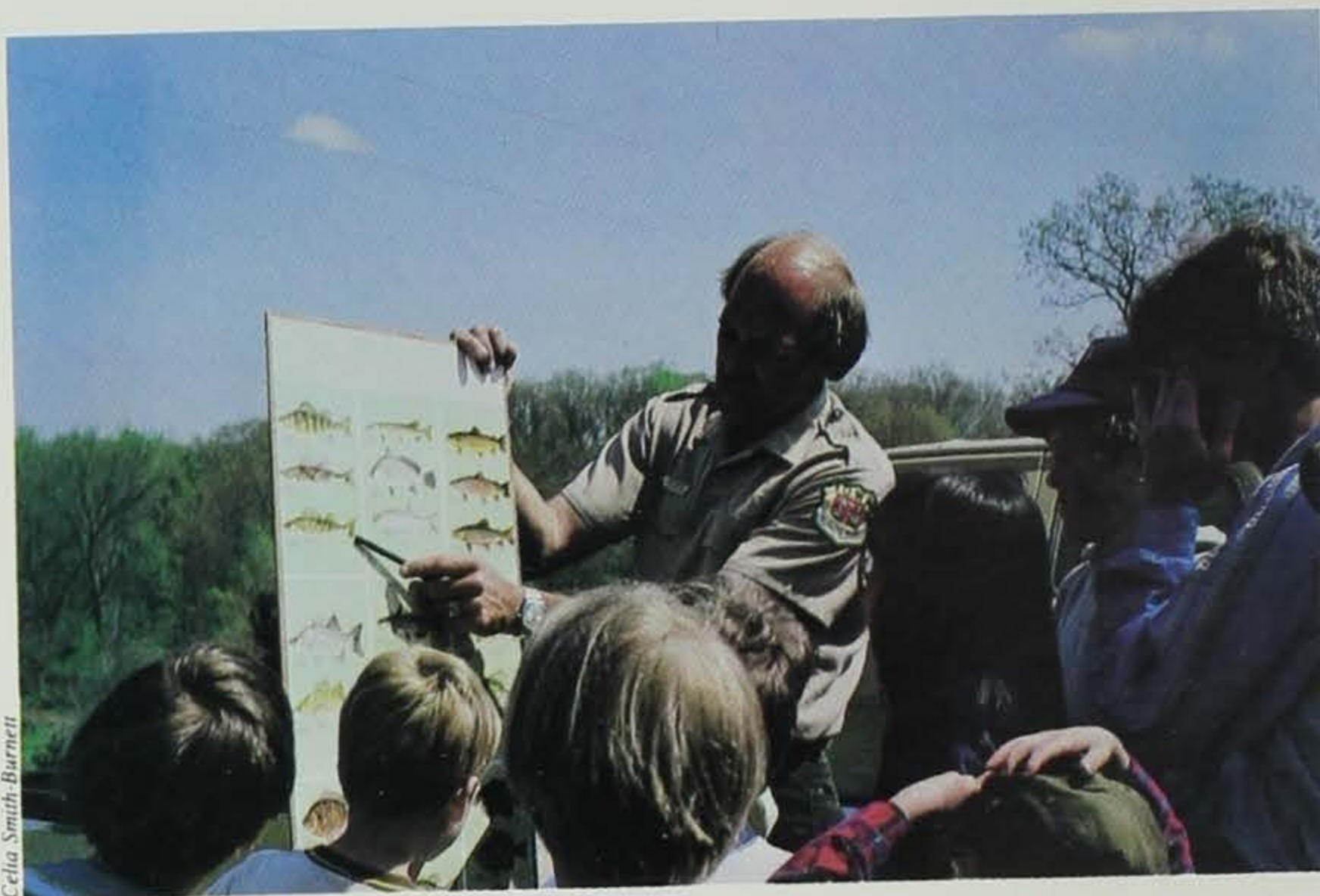
The clinic was held in Ames and was co-sponsored by the Izaak Walton League. The Commission sponsored 15 clinics across the state last spring and summer with the help of Lions and Kiwanis, bass clubs, city parks and recreation departments and county conservation boards.

The reasons for sponsoring the clinics are simple enough. Fishing is fun and an enjoyable, lifelong form of relaxation and recreation. It's relatively inexpensive and relatively easy to learn the basic skills. It gets people outdoors and in touch with nature. And it's best, if you're going to learn at all, to learn it correctly from the start.

So almost 50 boys and girls moved from station to station, learning and participating in the various skills demonstrations lead by Commission fisheries staff as well as interested and experienced individuals.

After a picnic lunch, photos for the newspaper and drawings for donated prizes of tackle and equipment (everyone got something), the kids viewed movies on casting and fish management.

At the end of the clinic 50 very enthusiastic kids trooped home full of fish stories. David was especially ex-



Celia Smith-Burnett



Ron Johnson

cited since he had been promised his very own tackle box. A half-hour was spent carefully picking out just the right lures and supplies.

Now when David goes fishing with Dad he asks lots of questions and is willing to understand the answers. He understands why fish are sometimes stunted and why it's necessary to have predator and prey species. He understands about the food chain and carrying capacity. He knows the fishing rules and regulations and he understands the importance of them.

Perhaps David's behavior is the best reason for the Commission to help sponsor the youth fishing clinics. It's self-pride and self-confidence. It's knowing how to do something well, doing it right, understanding how and why.

It's sleeping with a brand new tackle box on the table next to your bed. If your group or agency would like to help sponsor a youth fishing clinic in your area, contact the Iowa Conservation Commission, Wallace State Office Building, Des Moines Iowa 50319.



Opposite page, top: Fisheries biologist, Tom Putnam, instructs a group of kids on fish identification. Bottom: One participant picks up a few pointers from an instructor on the fine art of casting. Left: Children attending the special one-day school learn a number of special fishing skills including how to clean fish. Below: By moving from station to station children are able to participate in various demonstrations and receive individual attention. Bottom: All in all, everyone has a good time.



Celia Smith-Burnett



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Dean Roosa

PLANT TALE OF THE MONTH

Scarlet Cup *Sarcoscypha coccinea*

By Dean M. Roosa and Mary Jean Huston

People who postpone a woodland visit until the trees are leafed-out, the sun is warm, and the ground is dry may be missing some of the most interesting aspects of woodland ecology. Before the leaves unfold, the full strength of the sun is felt on the forest floor. This is when the mosses grow most rapidly, when the earliest spring flowers issue forth, and many fungi complete their life cycle. Those intrepid late winter wanderers may notice on the forest floor something so startlingly red as to be unreal. Indeed, redder than any flower, in fact as scarlet as the tanager which will soon grace the woodland, the woodland visitor has found the Scarlet Cup (*Sarcoscypha coccinea*), a fairly common and widespread cup fungus. It grows on fallen limbs, partially buried

in the leaf duff and seems to have a preference for the wood of basswood (*Tilia americana*).

Ranging from smaller than a quarter to larger than a silver dollar, the scarlet cup appears about when the skunk cabbage and pasque flower bloom. The exterior of the stalkless cup is whitish or pale pink. As in most cases, the scientific name has a meaning — *sarcoscypha* means 'fleshy cup' and *coccinea* means a deep bright red. If the scarlet cup is allowed to stand for a time in a warm, dry room, one can see a puff or cloud of spores being released by tapping the rim of the cup.

Since this attractive forest dweller may last from late March until mid or late May, perhaps this is the year you can enjoy nature's most colorful tribute to Spring.