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# Pleasant Creek Update

**E**AST CENTRAL IOWA'S NEWEST state owned lake was filled to capacity February, 1978. It is located in Benton and Linn Counties, three miles east of Shellsburg or 11 miles northwest of Cedar Rapids. Comprising 410 surface acres at a maximum depth of 60 feet and mean depth of 17 feet, it will serve as a hub within the later to be developed 1,927 acre State Recreation Area at Pleasant Creek. At the present time only the lake and two perimeter parking lots have been developed for public use. Park facilities are being developed in stages as money becomes available for construction.

This lake will be unique for man-made waters in Iowa. Since a low 6 to 1 watershed to lake area will not provide needed runoff to maintain lake levels, a water pumping station was constructed at the nearby Cedar River to fill the lake. A low land runoff area means less lake silting and water turbidity which in turn will give us a clearer lake.

To enhance fishing potential, much planning and work was put forth before water was impounded. Eight large earthen

PHOTO BY DON PFEIFFER





by Robert Middendorf  
FISHERIES BIOLOGIST

re trapped jetties protruding as much as 300 feet out from  
Bent line were constructed. They will allow anglers to bank fish  
eeper water. Chemical eradication of fish species in the ex-  
g stream bed was undertaken to ensure only desirable game  
stocked by the Conservation Commission were present  
the lake was filled.  
fisheries personnel and some members of the Cedar Rapids  
Bass Masters Club constructed, installed and weighted down  
erous tree brush shelters, wooden stake beds and old tire  
at improvement structures. These devices were placed at  
ategic lake bottom contours for attracting fish.  
for establishment and maintenance of a fishery resource, five  
cies have been introduced since the fall of 1976, when the  
stage of water impoundment occurred. In this new and ex-  
nding environment, stocked prey and predators alike have  
ndant food, minimal competition and grow rapidly. Fish-  
s section field surveys and angler creel surveys verified this  
Pleasant Creek.

Channel catfish were initially stocked at 1 to 2 inches in 1976  
and as 7 to 8 inch fingerlings in 1977. During 1978 they were  
found in large numbers by fisheries section surveys and in  
angler creels, ranging from 12 to 16 inches. Annual main-  
tenance stockings will take place to perpetuate the populations.

Largemouth bass stocked as 1 inch fry in June of 1977 had  
excellent survival and growth, reaching an average size of 13  
inches by September, 1978. Second year 2 inch introductions in  
1978 had reached 7.5 inch average by early fall. A 14 inch  
minimum length limit has been set for bass on the lake. Fisher-  
men success prospects this year will be very promising for cat-  
fish and by mid-summer for legal size bass.

Bluegill and crappie stockings of 1 adult fish/acre to provide  
reproductive potential and expansion took place in May, 1978.  
Their progeny reached 3 inches for bluegill and 4 inches for  
crappie by fall. In late summer of this year they will be of suffi-  
cient size for angler harvest.

The final fish species stocked in Pleasant Creek is of an  
experimental nature, northern pike-muskie cross, or "tiger  
muskie". They were introduced to provide a trophy fishery and  
will have a minimum length limit of 30 inches. Stocked as 2  
inch fingerlings in June of 1978, these fast growing fish will not  
be of legal size for a couple of years.

Pleasant Creek Recreation Area is open to public use 24  
hours a day, whereas conventional state parks have 4:00 a.m.  
to 10:30 p.m. public use laws. A 24 hour use time is welcome  
news to anglers fishing catfish who wish to go after nocturnal  
feeding "old whiskers" in prime hours. □



PHOTOS BY RUSS GENT



PHOTO BY ROBERT MIDDENDORF



# State Forests of Iowa

by Gene Hertel  
STATE FORESTER

IOWA'S STATE FORESTS contain 25,000 acres in several locations and range from 33 to over 9,000 acres.

The Shimek State Forest consists of 8,300 acres and is located in Lee and Van Buren Counties in southeastern Iowa. The forest headquarters is located at Farmington, Iowa with units of the forest located near Croton, Argyle and Farmington. One unit of the forest is located adjacent to Lacey-Keosauqua State Park near Keosauqua.

The Shimek Forest is made up of considerable acreage of second growth native woodland that has resulted from earlier harvesting. There are some areas of mature timber, but these are rather limited. Limestone outcroppings and stream beds eroded into the native limestone are characteristic of the area.

The Stephens State Forest is located in south central Iowa. Portions of the forest occur in Lucas, Clarke, Monroe, Davis, and Appanoose Counties. This forest is comprised of 9,180 acres and is located in an area which was heavily logged for mine timbers and other products. Much of the present timber is in younger pole-sized trees. The area is characterized by rolling country, somewhat eroded under past management practices, but presently covered with woodland and protected from further erosion. The forest is a portion of a timber belt running across Lucas and Clarke Counties, which is one of the larger continuous areas of remaining timber in the State of Iowa.

The Yellow River State Forest is located in Allamakee County in northeast Iowa and is comprised of 6,000 acres. It is located in what is sometimes called the "Little Switzerland" of Iowa. The rough terrain and outcroppings of limestone characterize this area and make it a rather distinctive state forest. It is located near the Yellow and Mississippi Rivers. The well-defined drainage in the area, developed over time, has made this one of the more rugged areas in the state.

There are three other areas; the Holst State Forest in Boone County, the Pilot Mound State Forest in Boone County near the town of Pilot Mound and the Gifford Forest Area in



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Pottawattamie County near Council Bluffs. The Pilot Mound and Holst areas were lands given to the State of Iowa by a Mr. B. P. Holst to be managed as state forests. The Pilot Mound tract is 33 acres in size and the Holst tract contains 334 acres. Both the Holst State Forest and the Pilot Mound State Forest are located near the Des Moines River in some of the rougher country in central Iowa.

The Gifford area in Pottawattamie County is a 40 acre tract located on the floodplain of the Missouri River. It contains typical cottonwood timber which occurred in the river valley prior to clearing for agriculture.

These smaller tracts, although considered state forests, are not managed as intensively as the three larger state forests. They are maintained in a forest condition for observation of natural woodland occurring in the respective localities. Their management is intended to maintain typical woodland growth rather than to maximize recreational use or timber production.

## STATE FOREST ACQUISITION

The state forests of Iowa have been acquired since the 1930's by various means. About 12,000 acres of state forest in southern and northeastern Iowa were purchased in 1935 with state appropriated funds intended to complement the Federal Civilian Conservation Corps program. These funds were used for the purchase of state forests, parks and preserves. The early forest acquisitions were for soil protection under public ownership at a time when capital for private land improvements was limited. Land was purchased for \$5 to \$15 per acre.

Also, during the 1930's the federal government was anticipating the purchase of national forest land in Iowa. In 1933 the state passed a National Forest Enabling Act in an attempt to purchase the poorer lands of the state which were unsuited to agriculture. It was the feeling of many that there was a place in the state for relatively small national forests which could serve as forest management demonstration areas.

The U. S. Forest Service set up offices in Des Moines and during the next several years some 40,000 acres of land, mostly in southern Iowa was optioned. The average price of the options was \$10 per acre. Four national forest purchase units were set up in southern Iowa with a possible purchasable area of 825,000 acres as potential national forest.

The Iowa purchases were postponed, presumably because forest land in other states was available at one-fifth the price of the Iowa land. From a national standpoint, the delayed action was probably justified, although the state lost an opportunity for the formation of national forests. Ultimately, the national forest purchase units and plans were abandoned and the 12,000 acres actually acquired in the federal purchase units were acquired by the state and added to the state forest system.

Funds appropriated by the State Legislature through the years have been used to purchase individual tracts to add to the state forests. In more recent years, the Open Spaces program appropriations have resulted in the addition of 2,000 acres to the state forest system. Properties have been added to the Stephens, Shimek and Yellow River State Forests.

Purchases in the future, for making more manageable state forest units or for making the areas larger to fulfill public needs, will depend upon state funding. The Open Spaces approach, which requires that land be purchased from willing sellers, seems the best. The final goal for land acquisition and addition to the state forests will depend upon the demands and desires of the public. The Legislature must appropriate the funds for additions to these areas, and as forests become more popular for the back country type of recreational experience they offer, it may be possible to add considerably to the state forest system.

The total acreage of forest land in Iowa is declining at the rate of at least one percent per year. State lands held and managed as forest lands may finally be some of the most significant natural woodlands remaining in the state. In public

ownership, the timber land can be managed over long periods of time, developing fully the woodland production potential, while maintaining the recreational and other associated values. The long term nature of the forest crop precludes such management from much private land. The state forests can contribute by demonstrating the benefits to be obtained from well managed woodlands. Private owners can judge for themselves whether forest management will fit into their land use goals.

### Forester marks trees for selective cutting.



## MANAGEMENT OF STATE FORESTS

The management of Iowa's state forests is primarily directed at demonstrating the use of forest land for various purposes. Timber growth and harvest, recreation watershed protection, and maintenance of woodland communities are recognized uses.

State forest recreational opportunities are provided for several user groups. Hunting, fishing, hiking, backpack camping, horseback riding and cross country skiing are popular. More intensive uses include picnicking, camping and snowmobile trail riding.

In general, the facilities offered are kept at a minimal level in keeping with the extensive recreational use of the state forest. Only one water source is offered for users of the forest, for example. Fireplaces, fireplace rings and vault-type latrines are provided. There is an attempt to keep the back country experience uppermost. A "primitive" experience is possible because of the larger size of state forests compared with state or county parks.

Although the current facilities are kept at a minimal level, planning for state forests continues. To be considered are: restricting use below current levels, modernizing for uses such as camping and picnicking, expanding camping and picnicking, or restricting use to tent camping and back country use. The planning process of the Conservation Commission provides for public comment which is to be considered in development plans.

Timber management on the state forests provides a continuous return to the state treasury and provides a flow of raw materials for industry. That portion of the state forest which is designated for timber management, and this includes the bulk of the acreage on each of the major state forests, is harvested on a systematic basis. Harvest is based upon the specific number of years required for a complete cycle from young seedlings through harvestable saw log trees. The rotation age or the years which it takes to mature a tree, is usually considered to be 100, 115 or 120 years for the Iowa state forests.

Every 15 years a harvest is made in each forest compartment. Approximately 1/100th of the forest is harvested each year. This method of harvest and establishment of a new forest assures constant tree cover except for the current years' logging site. Under the system presently in use, the acreage devoted to current year logging would be approximately one



percent of the land area. In previously logged areas, seedling and sapling growth as well as older trees represent the next crop.

Income from the sale of forest products returned to the state treasury is relatively constant. The amount and predictability of the income will depend upon several things. These include market availability, quality of trees available, species of trees present, age of the present timber and products which may be produced from the timber, such as saw logs, pulp wood, fuel wood, post, poles and veneer.

The timber growth, and the income from that growth, would double as consistent management is applied. Species composition of the woodland can be improved, the best individual trees can be left to grow, and growth can be obtained on fewer trees through thinning.

### MULTIPLE USE DECISIONS FOR THE STATE FORESTS

Harmony and conflict are a part of multiple use management decisions. Forest lands can be used for an individual purpose to the exclusion of others, or they can be put to many uses, detracting to some degree from each of the individual uses. It is evident that some uses are more compatible than others.

Timber management and wildlife management are easily compatible under most situations. Young trees provide browse and protection for wildlife. Thus, the harvesting of large trees resulting in the regrowth of young trees is beneficial to wildlife. Openings created soon offer prolific young growth of tree and shrub seedlings and saplings, so attractive to wildlife.

Continuous old growth timber, on the other hand, is not good wildlife habitat, nor does it provide high timber production. Den trees of the old stand, left when foresters mark for harvest, are valuable for certain forms of wildlife. Thus, a modified timber management decision favors wildlife with a minor loss of timber production.

Recreational use may or may not conflict with timber utilization, depending upon the recreational activity considered. Some users find the harvesting of timber an infringement upon their use. Others are not affected by it.

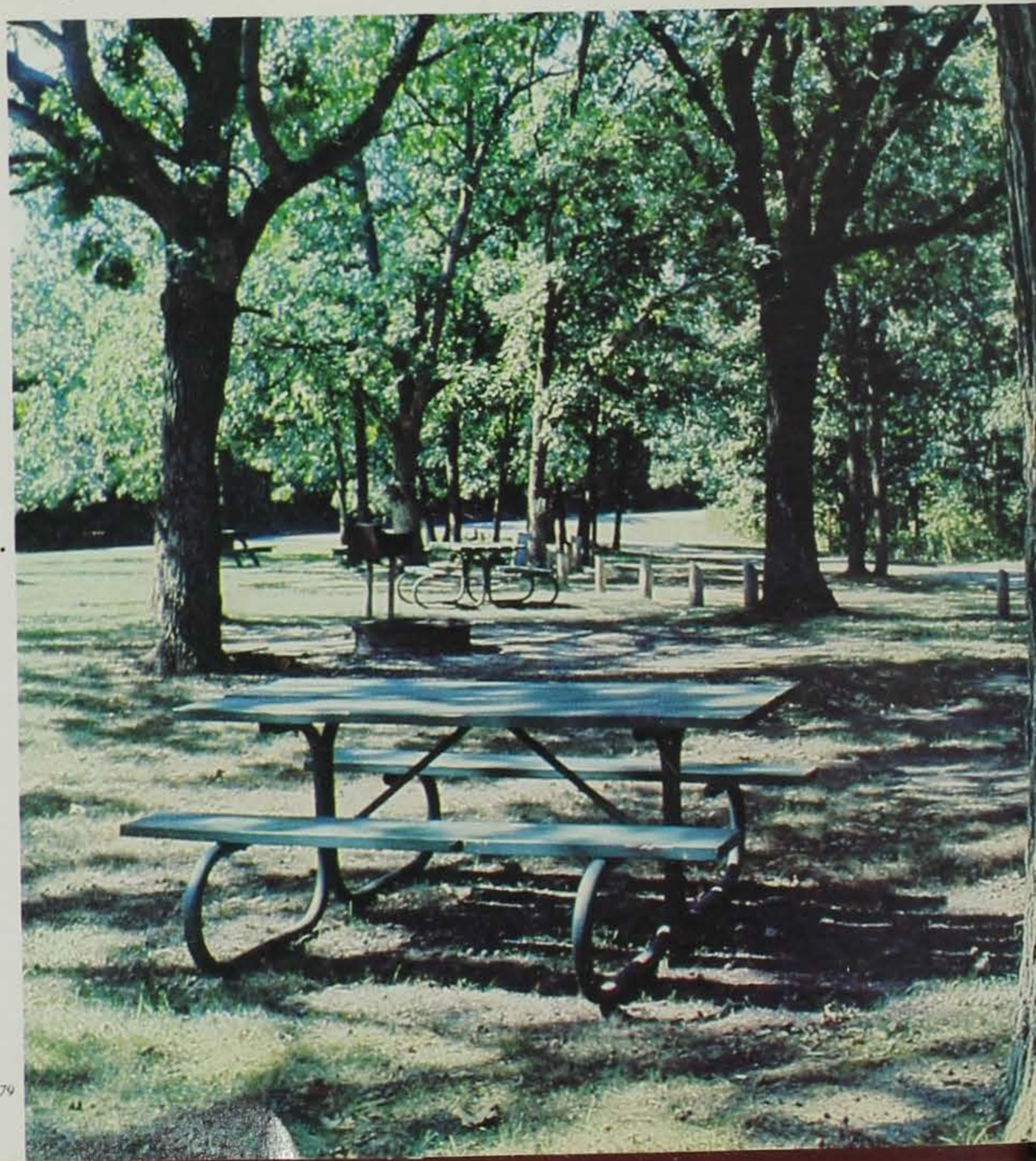
Camping and picnicking, as offered on state forest lands, are usually not affected by logging. Harvests are not made in the immediate vicinity of picnic areas or campgrounds. Campers and picnickers may be unaware of a harvest on another part of the forest. The roads to campgrounds and picnic areas are not often used as logging roads.

Timber harvest has an intermediate impact upon recreational trail users. Hikers, backpackers, horseback riders and snowmobilers will be affected. The trails may cross harvest areas and must occasionally be changed to accommodate log harvest. The presence of logging equipment at a specific site changes the experience sought by the trail user. Individual trail users may find the variety of timber sizes along his route more interesting than a more uniform natural woodland.

Hunting in a forest area is often enhanced because of timber harvest. This returns us to the fact that wildlife depends upon the young tree and shrub growth generated by the harvesting and reestablishment of the forest crop. Greater woodland diversity offers more game to the hunter and more non-game species for enjoyment by all forest users.

PHOTO BY KEN FORMANEK

Stephens State Forest  
near Chariton  
in Lucas County.





Unique areas of vegetation or unique geologic features occurring on the forest could be damaged by careless logging. Greater access afforded by the logging roads could bring about the demise of some protected species of rare plants. The forest manager is in a position to prevent such damage in planning the timber harvest. There are not many such unique features in the state forests and those that exist can be protected.

Harmony in the management and use of the state forests is achieved by a philosophy under which each acre is assigned a "governing use". Management for timber production, recreation, recreation development, special management, wildlife management and watershed management are categories used.

Each acre is managed for a primary use (which governs the management decision) with all other possible uses being secondary. For example, in a timber management area, the harvesting, regeneration and continuous production of timber products is the governing use. Other uses such as backpacking or hiking may be accommodated in the area, but at a low level, as the timber management work is carried out.

On the other hand, an area designated for recreation development is used primarily for recreation; either camping, picnicking, fishing or trail use. Harvesting of trees is done only for the safety of the recreational user.

Watershed management lands are protected primarily for the prevention of erosion and the production of quality water on highly erosive sites. Intensive recreational use or timber harvesting is not permitted because of the fragile nature of these sites.

Adjustments in areas and governing use can be made as time progresses and demands upon the state forests change. The plan is drafted in such a way that new conditions can be considered in future management. The requirements of conscientious forest cropping, however, makes it necessary to plan in a rather detailed way a hundred years into the future.

## CONCLUSION — THE COMPLETE FOREST

The multiple use concept of management attempts to provide something for everyone from a resource that belongs to everyone.

A return on the investment of appropriated funds is obtained by the sale of products. A tax payer living some distance from a state forest, who is unable to use the forest for personal recreation, can still participate in its yield as a tax savings.

Timber from state forests is the raw material for wood using industry in the vicinity of state forests. As these products flow in a continuous and relatively even way from the area, a local sawmill is encouraged to stay in business, thus providing markets for private landowners. In a time of declining timber acreage, these lands may be the difference between the success and failure of an industry.

Users who hike, hunt, fish, camp and participate in other recreational activities on the state forest benefit directly by pursuing their activity.

The balancing of uses in the management of these lands is now done by the Forestry Section of the Conservation Commission. The management goal is to maximize the return to the State from product sales, consistent with the current need for watershed protection while demonstrating forest management and providing for compatible recreational use. The planning process, which should be continuous, permits the adjustment of state forest and state forest management to reflect the needs and desires of the public. It is sometimes difficult to determine the best mix of uses for the land in public ownership. A plan which becomes a means of communication about a forest and its many values serves to best determine the proper balance of use.

The multiple use philosophy of management is intended to provide the greatest return for the greatest number of people in the long run from our state forests. Enjoy them. Appreciate them. They offer a continuing variety of public benefits. □

# FISH STOCKING

by Marion Conover

FISH MANAGERS MAY UTILIZE five management techniques to improve fishing and shorten the time between bites. They are (1) habitat improvement such as vegetation control or jetty construction (2) removing undesirable fish (3) fish stocking (4) fishing regulations and enforcement (5) information education to direct the public to fishing hotspots and methods. A successful management program on a lake or stream usually includes more than one technique.

Fish stocking above all is looked upon by the majority of the angling public as the most important fish management technique. Professional fisheries managers, while not selling it short, realize stocking is not a cure-all and often can be wasteful or impractical unless one or more other management techniques are utilized. For instance, it does little good to continually stock game fish into a lake dominated by carp. Newly stocked game fish cannot survive unless adequate food is available. As so often happens, the cause of poor fishing must be corrected before fish stocking can be successful. In this case, removal of the carp population and possible habitat improvements will be necessary prior to initiating a stocking program.

There have been three fish stocking eras in this country. A period of indiscriminate stocking characterized the first era, beginning one-hundred years ago and lasting until about 1910. Millions of fish of all sizes were stocked with little regard to life requirements and available habitat. Atlantic salmon plants into Iowa rivers during this period is one such example.

Fisheries managers began to look more closely at fish stocking during the second era, 1910 to 1950. It was during the beginning of this era that the German carp introduced earlier was recognized as a threat to game fish populations. Fish research during this period identified life requirements so that species were generally stocked where suitable habitat was available. The emphasis during this era was on numbers. Millions of little fish were thought better for stocking than thousands of larger fish.

Research findings in the third era, which continues today, has shown that fish stocking is more complicated than meets the eye. Existing habitat, fish populations, fishing pressure, mortality rates and growth rates all figure to determine the worthiness of a stocking program. If stocking is advised, the timing and size of fish stocked is important. Generally, this era is characterized by hatchery production of larger more expensive fish.

Iowa's 1979 fish stocking program reflects the most current knowledge available to fisheries managers. As you read the list of fish to be stocked, remember that this is only one of five programs available to improve fishing. Try to ask the question, "what are you doing to improve fishing, and why do you believe that program will show results?" instead of "How many fish do you stock?"

## 1979 STOCKING

105 million walleye fry (statewide lakes and rivers)  
160 thousand walleye fingerling  
205 thousand largemouth bass fingerling  
1.5 million bluegill fingerling for new lakes  
140 thousand channel catfish 6-8"  
110 thousand channel catfish cage release  
350 thousand channel catfish small fingerling for new lakes  
4.5 million northern pike dry in flood control reservoirs and northern Iowa rivers  
82 thousand ocean striped bass in Rathbun & Saylorville. (First angler returns in '78)  
4 thousand Musky 6-12". (Spirit, West Okoboji, Clear Lake)  
37 thousand "Tiger Musky" 6-7". 30 inch length limit. Real line busters. Fast growth — hybrid vigor, etc.  
300 thousand rainbow & brown trout (average 1/2 lb.) April 1 - Nov. 30 in 49 cold water streams





PHOTOS BY THE AUTHOR

## POTHOLE COUNTRY:

### *The Spring Run Wildlife Management Area*

by Douglas Harr

WILDLIFE MANAGEMENT BIOLOGIST

**D**UCK HUNTERS, wildlife biologists, and others interested in waterfowl or its habitat often hear the term "pothole" tossed around considerably. Sometimes the incongruous sounding phrase "duck factories" is thrown into the discussion. To uninitiated listeners this terminology appears to be just so much unintelligible gibberish. Avid waterfowlers, however, immediately recognize the topic as being our continent's richest, duck-producing wetlands.

#### *Origin of Potholes*

The pothole country sweeps down in a huge arc from Alberta, Canada, through Saskatchewan, Manitoba, eastern Montana, both Dakotas, western Minnesota, and into northern Iowa. It was here that once stood gigantic Pleistocene glaciers, the last ice age which ended 10,000 to 14,000 years ago. As these ice sheets, often rising a mile above the earth, advanced and later retreated, their stop-and-

start motions pushed up or deposited mounds of rock, gravel, and sand. Today these randomly scattered, knobby hills remain and are known collectively as glacial moraines. Lacing the lowlands between these small hills are numerous marshy basins or "potholes", varying in size from less than one acre to more than a hundred. Originally filled by glacial meltwaters, these wetlands are now maintained by annual rainfall and snowmelt.

Iowa, at the southern terminus of the great glaciers, once claimed countless potholes and larger marshes. But Iowa was also blessed with rich prairie soils, so thousands of potholes were drained early in this century to allow ease of farming surrounding fertile fields. Fortunately, some tracts of original prairie pothole country were saved by joint efforts of dedicated waterfowlers and the Iowa Conservation Commission. Examples of preserved glacial wetlands may presently be viewed at several state-owned wildlife management areas near Ruthven and Estherville, and at Spring Run near Spirit Lake.



## The Spring Run Complex

Located about 2½ miles east and 2½ miles south of the city of Spirit Lake, Spring Run typifies a classical pothole complex — numerous and scattered, glacial marshes and a few, bigger, deepwater marshes. Native prairie vegetation characterizes much of the dry hills interspersing the area, never touched by plowshare. Most smaller wetlands hold water throughout much of an average summer but will dry up completely in drought years such as 1976-77. Swales or flowages connect potholes, draining spring overflow waters into Lower Gar Lake and eventually into the Little Sioux River. By late summer the potholes have become dead-end depressions hosting a wealth of aquatic plant and animal life.

"Duck factories" aptly describes Spring Run's wetlands. Each April migrating waterfowl, especially the species known as dabbling ducks, are attracted to these marshes for breeding and to surrounding grasslands for nesting. Discrete little potholes offer special enticement to mallards, which prefer exclusive privacy from other mallards, for their pairing and mating rituals. Teal, pintails, shovelers, gadwalls, and wood ducks also take up residence here to raise their downy, yellow broods, as they have for ages untold.

Managed as part of the Spring Run WMA, several nearby marshes of greater depth and size soon gain importance. Lily Lake, Pleasant Lake, and Prairie Lake serve as favored brood rearing places by female ducks once their young have hatched and are gaining size. Relatively greater safety from predators than afforded by small potholes is the hens' prime concern. On these larger waters they join redheads, ruddy ducks, and even a rare canvasback or two, all birds preferring to nest in emergent vegetation of big marshes. Drake mallards, deserting their mates after nesting, may also be found lazing around in "stag parties" on Lily, Pleasant, and Prairie Lakes.

## Water Levels Determine Production

As is true of almost all prairie potholes, Spring Run produces ducks by a boom-or-bust approach. In wet years duck broods are raised in sometimes astounding numbers. Drought years produce very few birds except on more permanent lakes. Wildlife researchers Krapu, Parsons, and Weller documented just such a population decline in 1965-68 while doing studies for Iowa State University. A similar drop was observed in 1976-77. But such fluctuations are merely natural cycles in dynamic ecosystems like the one at Spring Run. Overall, these types of marshes are still our most important contributors to continental waterfowl populations. Although North America's pothole country makes up only 10% of all available waterfowl nesting habitat, it manages to produce more than 50% of the continent's ducks in an average year.

Prairie potholes are the basis for a luxuriant diversity of life. Because each marsh varies in size and depth, each might host plants entirely different from its neighbors'. Some are typified by solid bulrush stands or fringes of cattails. Another may be loaded with floating duckweeds or coontail, while still another hosts bladderwort, a curious plant that lives by digesting minute animal life. Showy blue flag, actually a wild iris, or rarely a beautiful orchid might be seen near a marsh edge.

A large variety of avian and mammalian life is associated with the marshes and environs. Muskrats utilize emergent plants for food and shelter, in turn attracting their chief predator, the mink. Rare upland sandpipers (formerly "plovers") nest in prairie grasslands, while hawks perch on dead branches of small trees that shoot up from marsh bottoms during a drought, only to be drowned out upon returning normal water levels. Common mammals range from tiny meadow jumping mice to magnificent white-tailed bucks. All in all, it's a wonderful place for recreationists to enjoy nature's bounty, be they duck hunters or amateur botanists.

## Future of Spring Run

The 946 acres of land and water currently comprising Spring Run WMA will always be maintained in essentially a natural state to maximize wildlife production. Some uplands are farmed under cooperative agreement, with part of the crops left standing for game cover and food. Line plantings of trees and shrubs encircle much of the complex and attract colorful songbirds. Small dikes on certain marshes help hold up water levels to assure some consistence of waterfowl production, and more dikes may be constructed. Other marshes will remain exactly as left by glaciers, assuring diversity of aquatic habitats.

In April, 1978, a controlled burning program was initiated on remnant prairie uplands in attempt to restore native vegetation. By mid-June of 1978 this prairie appeared more verdant than it has for perhaps years, responding to the prescribed burn and very timely rainfall.

Recreational opportunities abound here. Duck hunters may walk in to smaller marshes or utilize boats and blinds on larger ones. Upland gamebird hunting is among the best in northern Iowa. A small rifle range for target shooting and sighting-in is maintained on the main tract for those who might wish to sharpen their eye. Plant and nongame wildlife species afford naturalists, professional orome-grown, an ideal study area.

Though Spring Run preserves a fair representation of how true prairie pothole country appeared prior to drainage in much of northern Iowa, more must still be done. Near these state lands exist several additional tracts of privately-owned potholes and uplands. It is imperative that at least some of these areas, perhaps another 300 acres, be acquired and added to Spring Run. This would better assure natural integrity of a complex ecosystem, one in which both publicly and privately held wetlands are dependent upon each other for survival. With rising land values, it is otherwise only a matter of time before economic justification results in landowners draining their marshes to create only marginal croplands, once again robbing Iowa of its resource diversity.

Noted conservationist and philosopher Aldo Leopold once wrote, "As for diversity, what remains of our native flora and fauna remains only because agriculture has not got around to destroying it. The present ideal of agriculture is clean farming; clean farming means a food chain aimed solely at economic profit and purged of all non-conforming links . . . Diversity, on the other hand, means a food chain aimed to harmonize the wild and the tame in the joint interest of stability, productivity, and beauty."

May Spring Run forever preserve that diversity. □





## Profile of an Endangered Species

# BOBCAT

BY DEAN M. ROOSA  
STATE ECOLOGIST

**T**O MANY PEOPLES' surprise, the bobcat still exists sparsely in Iowa, mainly in the heavily wooded parts of northeast Iowa. Though never common in the tall-grass prairie region, it was undoubtedly more common when the state was settled than it is now. Appearing much like an over-grown house cat with a short tail and black ear-tufts, the bobcat is about a yard long, 20-30 inches high at the shoulder and weighs from 12 to 25 pounds, although specimens up to 50 pounds have been taken. Its pelage is light tan to rusty brown, with streaks and black spots.

This cat lives throughout the United States in a variety of habitats, from deserts to swamps and even in rural areas near cities. Because it is largely nocturnal, solitary and blends well into its surroundings, it is rarely seen by humans, even though its territory may be close to his habitation. The territory of a bobcat may span 10 to 12 square miles. While the adults are curious and nomadic, the juveniles are especially given to wandering and tend to show up in unusual places, occasionally near heavily populated centers.

Food is principally rabbits

and hares, but the cat is an opportunist and will take easily-captured prey like muskrats, opossum and grouse. Very rarely are stock animals or deer taken. In states like Iowa, where the bobcat is very scarce, it does no damage and is an interesting part of our native fauna. It should be given every chance for survival. This means we should determine what management strategies would benefit the species, how to enhance its prey and how to augment the population. Now that concern is being shown for our rare species, perhaps we should continue to consider

re-introducing such species as the bobcat, now facing extirpation from our state. Iowa is a more exciting state with the knowledge that remote places still exist which harbor such species as bobcats, rattlesnakes and peregrine falcons. Think of your last outing to a wild area where rattlesnakes or bobcats were said to occur — didn't your spine tingle a bit at the thought of seeing one? Do we want to live in a world devoid of a bit of adventure and danger? We should try to pass on that same feeling to following generations of Iowans.

In 1977, the bobcat was placed on Iowa's Endangered Species List, which means it is fully protected. Because of restrictions placed on the larger cats, the bobcat pelt became much more valuable, often reaching \$100 and even up to \$400 for a large prime pelt. This put pressure on populations in the United States, with the result that the Endangered Species Scientific Authority (ESSA) held public hearings and published interim regulations that banned the export of pelts and listed the animal in Appendix II. This does not mean the animal is endangered, but that import-export trade is regulated by the Secretary of the Interior.

With a new awareness on the part of the public and management strategies discovered and applied by professional biologists, perhaps Iowans can be assured of retaining some things which epitomize wildness. What better than the bobcat? □







*A typical segment of Bloody Run Creek in the trophy brown trout area.*

# Bloody Run BROWNS

by Gaige Wunder

PHOTOS BY THE AUTHOR

WITH OVER 24,000 TROUT STAMPS SOLD ANNUALLY, one of the important goals in managing Iowa's trout fishery is to provide an enjoyable fishing experience for every angler no matter what his interest. The variety of Iowa streams presently stocked ranges from a trickle to near river-size and angler access ranges from a few steps to well over a mile from the nearest road. However, the parameter applied to all these streams revolves around a basic brown-rainbow stocking program. A trout angler survey conducted in 1976 revealed that although this put-and-take program was on the right track, a significant number of trout anglers were interested in additional remote, walk-in fishing areas and the development of some special trout fisheries. At the top of the suggestion pile were several specific requests for an artificial lure restriction combined with a trophy trout fishery, preferably for brown trout. Similar specific requests were being received by Commission employees attending public and organizational meetings and by mail.

In past years this type of remote-area, trophy brown trout fishery was pretty tough to find on a consistent basis in Iowa. Our put-and-grow brown trout streams are far off the beaten track and offer a good chance for the dedicated angler to catch a good size brown but access is sometimes a problem as most of these small streams flow through private property. Small numbers of brood browns are released along with the regular spring stockings in the larger catchable streams and

provide a very good chance for an angler to tie into a larger trout. However, the stocked fish are usually caught within a short period and being fresh from the rearing station environs are normally not suitable trophy stock because of poor coloration or fin abrasion.

To bring it all together, what was needed was a special fishery where a dedicated trout angler could have a reasonable chance of creeling a "trophy" brown trout in a suitable atmosphere where public access was guaranteed. For a fishery such as this to be successful, a special area was needed that would provide suitable trout habitat, a remote setting and reasonable access for anglers on foot. In addition, special regulations would have to be formulated to prevent over-harvest of the adult trout and provide some protection for the subadult trout in the stream until they could reach a trophy size.

Coincident with this increased interest in remote area trout fishing, the Conservation Commission purchased a 300 acre tract of land on the lower end of Bloody Run Creek that would be perfect for the development of a trophy brown trout fishery. The stream segment in this parcel has excellent brown trout habitat and has a history of producing occasional brown trout of exceptional size and quality. The setting along the stream is as remote and attractive as can be found in Iowa and yet access is reasonably good for anglers walking in from local county roads or from the Clayton County Conservation



Board Park located adjacent to the lower boundary of the property approximately 1.5 miles west of Marquette, Iowa, on a county gravel road.

As soon as the area was purchased, boundaries were marked, fences built to exclude livestock and special regulations for the controlled harvest of the brown trout submitted to the Conservation Commission. These regulations would set up the unique fishery and include restricting tackle to artificial-only. Natural baits such as cheese, worms or minnows are prohibited while "hardware" such as spinners, flies, jigs, or small molded lures are allowed. A 14-inch minimum length limit was added to require anglers taking smaller browns to return them unharmed to the stream.



*The initial population was stocked in 1977.*

*One of the larger adult brown trout collected in 1978 population survey.*



The initial stocking of brown trout into the special project area took place on October 6, 1977, when a total of 700 subadults were distributed along the stream. Two additional groups of larger browns, 50 in November 1977 and 51 in May 1978 completed the stocking effort to establish three successive year classes and provide some trout of legal size (>14 inches) for immediate fishing. The sub-legal size trout were stocked to simulate a natural, stratified fish population. As these smaller trout then convert to natural food and grow they will replace the legal size trout being taken by the anglers. This format will be followed in later years as necessary to maintain a fishable population of legal-size browns in the stream.

The Fisheries Section of the Conservation Commission conducted a population survey on the project site late in 1978 and found the trout to be in excellent body condition and well distributed through the stream segment. Most of the larger trout sampled, up to 23.0 inches and 5.2 pounds, came from deep pools at the base of the bluffs or beneath the railroad trestles that span the stream at several points. Over 40 percent of the sample were legal size trout (>14 inches). The average size of all brown trout sampled was 13.0 inches and 1.2 pounds. Approximately 9,000 fingerling trout were stocked in the special area in the fall of 1978 to provide an additional year class of browns.

Initial success of the program seems to have been very good although it has been difficult to get many of the normally close-mouthed brown trout fishermen to talk about their success on the area. However, consistent fishing pressure, survey results and vague rumors of several large trout being taken all seem to indicate the project is very popular with Iowa trout anglers.

A few do's and don'ts are in order for those of you wanting to try your luck on Bloody Run Creek. Public access is available from only a few points, the best of which is through the county park west of Marquette. Please be sure to study a copy of the Iowa Trout Fishing Guide or a Clayton County plat map to be sure you're on state property. Boundaries are well marked and if you must cross private property be sure you have permission from local landowners. The project segment is posted at both ends of the stream but state ownership is not contiguous through the entire segment and you must respect private property. Also, please be aware that the stream is quite deep in spots and unseen dropoffs are the rule rather than the exception. Take it as good advice from one who has gone for an unannounced swim more than once in Bloody Run.

Suggested fishing techniques are similar to those used on other trout streams with the exception of the special regulations already mentioned and posted on the stream. A good assortment of lures with emphasis on several sizes and types of small spinners, jigs or bugs are most popular. In many sections the bank vegetation is low enough for unrestricted use of a fly rod so don't hesitate to throw yours in along with an assortment of both wet and dry flies. Early morning or late evening seem to be best for browns and don't forget the insect repellent and long sleeves for anything but early spring or late fall fishing.

Future plans call for an angler creel and attitude survey to be conducted in conjunction with another population survey of the trout in the project area during 1979. Information from these two surveys will determine angler use and attitudes toward the project, and condition of the stream's brown trout population. Additional year classes of browns will be stocked as necessary to maintain a sufficient base for a fishable adult trout population.

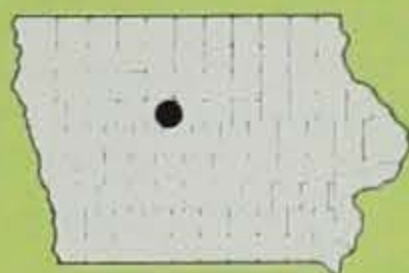
Good luck and I hope to read about your Bloody Run brown in the Commission's Big Fish Awards. □





# DOLLIVER State Park

by Jim Farnsworth  
PARK RANGER



*"I've never seen such a beautiful park in all my travels across the United States or Canada."*

*"I don't know why Iowans travel to other states when they have places like this so close to home."*

*"You don't have to go to northeast Iowa to see the fall color. The trees along this valley are just as beautiful and vivid."*

*"We like to ski (cross country) here better than any other place we've tried. Even when it's very windy, it's calm down here and the scenery and solitude can't be beat."*

*"The wild flowers are so thick and varied. It's been a long time since I've seen Marsh Marigolds."*

*"I've found all the mushrooms I need. And such a pretty place to walk through."*

These are comments made by people who are visiting one of Iowa's oldest state parks and although it may be one of the oldest, I think it is one of the nicest. Of course, I may be prejudiced but when people take time to come up to the house or stop me on the road I think my prejudices are well founded.

Dolliver State Park was dedicated to the memory of one of this area's more famous people, Jonathan P. Dolliver, a U.S. senator who died in 1910.

The original 400 acres of the park were purchased for \$48,500. Funds for the project came from a joint effort of the state and local citizens. The state money was in the form of allocations to start a state park system in a bill passed in 1919. The local citizens donated \$10,000 from a memorial fund they had set up for Senator Dolliver. The park was dedicated on June 28th, 1925 and became Iowa's third state park preceded by Backbone and Lacey Keosauqua. The dedication was attended by 13,878 people who saw the unveiling of a bronze memorial plaque made by Loreda Taft, one of the foremost sculptors of the time.

Dolliver State Park is located in Webster county about 12 miles south of Fort Dodge. It is situated along the deeply cut Des Moines River valley and presents a dramatic change from the surrounding flat prairie land. The erosion of the river and Prairie Creek, which also runs through the park, on the recently glaciated landscape has given exposure to massive sandstone bluffs. Dolliver is one of only three state parks with sandstone bluffs of this magnitude.

The park, being one of Iowa's oldest and a popular place for many years prior to its purchase and dedication, is steeped in history and legend. Boneyard Hollow is where the Indians, legend has it, drove herds of buffalo over the cliffs to perish below. And where, in 1912, a lead tablet inscribed in Latin was found. It proclaimed this land the property of France and was dated 1701. There was even a feud between two adjacent property owners, which was said to be akin to the feuds of Appalachia. This problem was finally resolved by the love of a boy and girl and culminated by the gift of the disputed land to the newly married couple. Indian mounds situated high on a plateau over looking the Des Moines River, and the copperas beds where the native Americans procured pigment for ceremonial use can also be found here. These are the seeds from which imaginations can wander as the body wanders along the nearly six miles of foot trails that wind almost endlessly through the deep forests of the hills that flank the valley.

The surrounding area is also heavily laden with history. Lehigh, a once flourishing river town was supported by coal, railroads and a still operating tile plant. In Woodman Hollow one can easily imagine the time before man inhabited the continent or the winter hunting camps of the continent's first nations. The Cardiff Giant, a replica of which is on display at the Fort Museum in Fort Dodge, was carved here.

Today, Dolliver has modern facilities to help you enjoy your stay whether it be just a picnic or several days of camping. There are 42 overnight campsites with modern flush toilets and showers and electric outlets for those who want to stay awhile. Two lodges are for rent on a reservation basis and are very popular for family reunions and weddings. A "group camp" offers organized youth groups as well as other organized groups an inexpensive summer camp or retreat. There are ten cabins with bunks for ten people in each. A well-equipped mess hall for dining and a lodge for meetings and worship services is also available. A modern shower and toilet building completes the complex.

Picnic facilities abound. Over 250 tables, two open shelters, and an enclosed shelter are on a first-come, first-served basis. Fishing in the Des Moines river and Prairie Creek offer the angler a chance at catfish, smallmouth bass, walleyes and an occasional northern pike. A boat ramp in the park gives access for the boater and canoeing from Kalo (about five miles north of the park) offers a three to four hour scenic tour. Besides the smallmouth bass fishing, Prairie Creek is also a favorite place for kids of all ages to wade on hot summer days.

I hope I have given you an idea of what Dolliver has to offer its visitors. I would encourage you not to miss Iowa's third oldest park or any of the state's fine parks. They are there for you to enjoy and use wisely. I would also like to add that if you have any questions, comments or suggestions while visiting a state park, don't hesitate to ask the ranger. We all enjoy talking to people and will help you in any way we can.

I would like to acknowledge Irving Black of Fort Dodge for much of the historical information gleaned from the pages of his unpublished paper entitled *The Establishment of Dolliver State Park* and the many area residents who have volunteered information and memories of the area. □



FROM THE

# Warden's diary

By Rex Emerson  
LAW ENFORCEMENT SUPERVISOR

A PERKY LITTLE CHIPMUNK became very curious and unafraid of the stranger who frequently visited his part of the woods during the summer months. I was that stranger. We had received reports of motorcycles using the foot trails in a county conservation board park. When I could get a few minutes to spare from my regular duties I found it was a pleasure to walk the trails through the woods of this park. The appearance of the forest floor changes almost week by week from spring through fall. The early spring flowers are so bright and showy, and such a welcome sight after a long, hard winter. A person should take along a good book on spring flowers and make frequent trips to the woods during the spring because nature adds new blooming flowers quite frequently at that time of the year.

During my visits to the forest that summer I would usually sit down on the same big log to rest and enjoy the peace and quietness. A chipmunk had a home in a small brush pile about ten feet away. When I would make a clucking sound with my tongue against the roof of my mouth he would soon make an appearance, sometimes from the brush pile and other times he would come scampering down the side of a tree. He seemed very nervous and shy, but still he was curious. If I sat very still he would come within a few feet of me. I enjoyed many visits to the forest that summer and always looked forward to seeing "Charley" the chipmunk. Somehow I felt the feeling was mutual.

One late fall day just before winter weather was to take over I visited the forest once more. It was late afternoon but the sun felt nice and warm as I sat on the log making the clucking sound which Charley had learned was the sound of his human friend. After awhile he made an appearance from under the brush pile. He lay down on a small log that was part of that brush pile. The sun was shining through the treetops like a spotlight on his sleek fur. He was fatter than I had seen him all year. Instead of acting nervous he would close his eyes and almost doze off. My chipmunk friend was ready for a long winter nap.

As I left he scampered back under the pile of brush. I didn't know that would be the last time I would ever see him.

The next spring when the sun warmed the forest floor I made a special trip to see if "Charley" had made it through the winter and wondered if he would still remember me. Not wishing to startle him, I walked very quietly to the log next to his brush pile. The clucking sound and the waiting were all in vain. The chipmunk did not appear.

As I was leaving, I glanced up into the tall trees. High up on a limb in one of the trees sat a great horned owl looking down at me. I know it isn't likely, but it seemed to me she had a smirk on her face. Then I noticed her nest nearby with a downy, white baby owl sitting on the edge of it. No doubt they had made a meal of Charley. I felt a little sad, but that is the way of life in nature.

A great horned owl will lay her eggs (usually two) in January. When the first egg is laid she must stay on the nest to keep it from freezing. Thus, incubation of that eggs starts immediately. The second egg will not hatch until a day or two later. Quite often the first baby owl to hatch will eat the second one when it hatches. Just another way of life in nature.

What happened next was not a way of nature. It was about two weeks later. I hadn't been back to the woods during this time. It was drizzling a little rain. I had been out for two days and was tired; the only thing on my mind was to go home. For some reason that I do not quite understand, when I got to the corner that goes to the woods, I turned. It was only one mile, but I drove faster and faster until I reached the woods. The car had hardly come to a stop when I bailed out and ran the quarter of a mile to the tree where the owls lived. There, on the ground was the baby owl, dead from a gunshot wound, still bleeding. Again, for some unknown reason I ran to the edge of the woods, where I had never been before, and they lay the old owl. It was still warm, but had also been shot.

It started to rain hard as I searched the area for the "slob" with the gun. My instinct, or whatever it was that had brought me there didn't last quite long enough. I couldn't find the killer.

When a vandal does a destructive act such as this there is usually a great public outcry about, "There should be a law to prevent such a cruel thing from happening." There is such a law. All owls are protected. You will find that there are villains from all walks of life and they don't have to buy a license to be one.

## LOOKIN' BACK

### Ten Years Ago



CAMPING — The Vacation That Pleases the Whole Family

the *Iowa Conservationist* featured an article on camping vacations in Iowa. With today's high prices for gasoline this suggestion is even more meaningful in 1979.

A picture-story on reconstruction of Rock Creek Lake was also in this issue. The spillway was repaired; 13 new jetties installed and a boat lagoon and beach diving area were dredged. The lake, when refilled was completely restocked.

### Twenty Years Ago



RESEARCH FOR BETTER CONSERVATION

we ran an article explaining the research done by the Cooperative Wildlife Research Unit. This program combined the efforts of Iowa State College at Ames, the ICC, the U. S. Department of Interior and the Wildlife Management Institute. The Iowa Unit, incidentally, is the oldest in the nation.

### Thirty Years Ago



MAGIC FOR THE WALLEYE FISHERMAN

the magazine printed a guide to walleye fishing. The hot spots were Storm Lake, Okoboji, Spirit, Clear and the Mississippi River. The more things change the more they remain the same. Also in this issue was a call for the legislature to establish a trout stamp which it did in 1961.

### Magazine Tip

It takes eight weeks for new subscriptions, renewals or address changes to go into effect after we have been informed. If you can anticipate changes and let us know as soon as you know, there should be no interruption in service.



# Classroom Corner



by Robert Rye

ADMINISTRATOR,  
CONSERVATION EDUCATION CENTER

What animal found in Iowa is the size of the eye of a blue jay? What animal can be found with three or four pairs of legs depending on its age? What animal is the color of a fall leaf? What animal appears to bury its head in its food?

A tick is the answer to all

these questions. As pesky as they may be, they also allow us many opportunities for fun and learning. Have you ever watched tick races or hunted for ticks in places other than on your body? These activities can provide observers with a wealth of knowledge, such as



how they move and how they get on their hosts.

The body of a tick is more or less oval. It belongs to the same class as the mite. Ticks and mites have unsegmented abdomens which are broadly joined to the rest of the body — they don't have a small waist.

The leathery integument is a cuticle which is ornamental with granulations and tubercles (various size bumps) and in some even circular discs. This shield covers the entire dorsal (back part) surface of the body in the males and only the anterior (head end) part in the females. This serves as a protective structure, but also a limiting one.

The male ticks cannot become bloated with blood while feeding because of the integument covering. On the other hand, females which possess a small covering can and do become greatly distended while engorging blood.

Of the free-living tick-relatives, mites are the most abundant and are most common in the soil. The parasitic forms are important pests of man and domestic animals. These include chiggers, mange mites, spider mites and ticks.

The parasitic animals — those which feed on other animals — are found in both terrestrial and aquatic ecological niches. Ticks feed on both vertebrates (with backbones) and invertebrates (without backbones).

The main interest in ticks stems from their parasitic habits, as well as their role as

intermediate hosts of other parasites and carriers of micro-organisms. Ticks are best known for transmitting Rocky Mountain Spotted Fever from rabbits to man. This disease is most common in the Rocky Mountain region of the Northwestern United States.

Conservation/Environmental Education means the life long education process dealing with people's relationship with each other and with their natural and altered surroundings and includes the relation of population, pollution, resource allocation and depletion, conservation, transportation, technology and planning to the total human environment.

The Conservation Education Center strives to start its visitors in their life long education process. It uses the natural and altered surroundings as its study sight. The plants and animals found are great interest starters. Once a group has found a particular animal they will come up with information, in this case the description of a tick. We then lead the participants into population and conservation (wise use of natural resources) studies. There are many means to use in reaching this end.

Go out yourself or take a group and find one of our natural resources. Then decide what way would be the most fun to lead from discovery to the wise use of your natural resources. Try math — timing or measuring the resource, English — write poems or metaphors, or art — draw the habitats.

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