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READIN' RIVERS

Harry Harrison

Supt. of Biology

Since the dawn of time, man has pitted his superior intellect with that of the lowly fish in hopes of removing these witless creatures from their aquatic environment. In this great quest, millions of words, dating all the way back to Izaak Walton, have been written on the subject. All sorts of lures, secret potions and sophisticated gadgets have been devised to accomplish the job. Yet in this day of prospective flights to the moon, fishermen often return from a day afield empty handed, wet and hungry and pondering the questions, "Why didn't I catch anything?" "What must or can I do to better my luck?" I certainly can't answer the first question, nor perhaps even the second; but I can offer a suggestion that might help solve the latter problem.

There is one thing, above all others, that you can do to increase your success—**BECOME THOROUGHLY ACQUAINTED WITH THE AREA YOU FISH.** A complete knowledge of a specific water area is the big reason that guides are able to guarantee limit catches of fish.

Before defending my case, I need to bring out a few basic facts concerning fish life, their activities and behavior.

Fact number one: Iowa waters are well supplied with fish. Surveys reveal populations of game fish ranging from 50 pounds per acre to more than a 100 pounds an acre in some instances. This information is important in that it tells us that it matters but very little where you fish.

Fact number two: Fish are non-thinking animals. Everything they do in the whole span of their lifetime is dictated by their surroundings. This means they must live on the foods present in the area, and they must use the available habitat for cover and protection.

Fact number three: Through the long process of evolution, fish have evolved in such a way that each species has developed very specific habitat preferences or needs. It is only where these preferences or needs exist that any given species can be found.

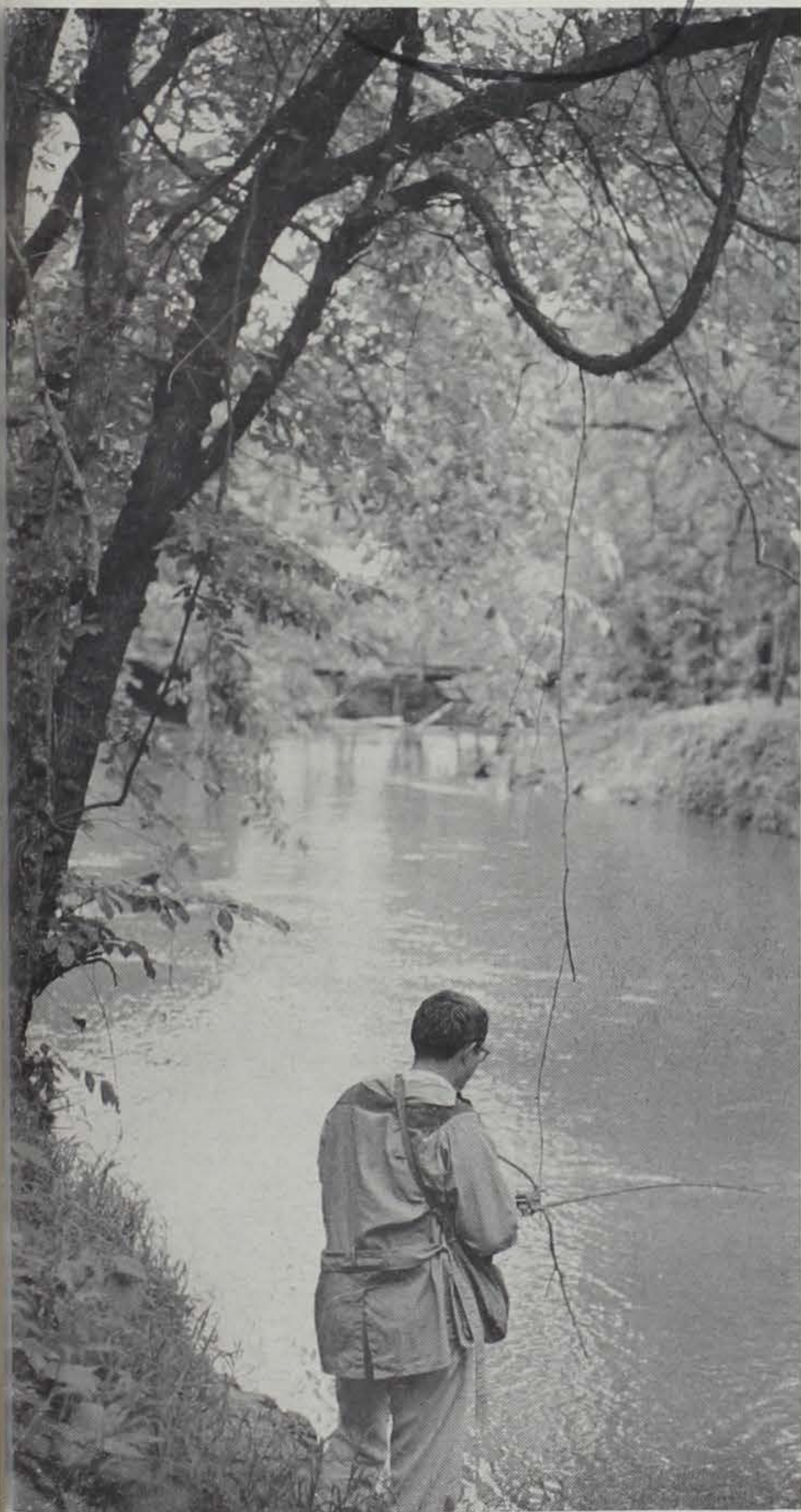
With these principles in mind, let us see how a good knowledge of an area will put more fish on the stringer.

Our first recommendation would be for you to restrict your angling to a rather short stretch of stream—a maximum of two miles. If you prefer to fish lakes, confine your fishing to a single lake. By limiting yourself to these suggested small regions you will be able to become completely knowledgeable with every detailed feature of the area.

What features should you know about? First, you ought to know the exact location of all cover types including every stump, log, drift pile and boulder, especially those that are submerged and out of sight. These are loafing areas that attract many species of game fish. These are places where fish will be caught when they are not engaged in heavy feeding activities.

Second, be fully aware of distribution and size of the various bottom types—sand bottoms are sterile and devoid of food. Only in rare instances will game fish be found over sand bottoms. Coarse gravel, shattered limestone, rubble and boulder deposits on the other hand are rich in foods and are places where fish will be found when they are feeding. Submerged mud may or may not attract fish. If these areas are caused by continuing siltation, they will be unattractive because food organisms will become unavailable by being continually covered with mud. On the other hand, if silt isn't being deposited, mud may produce lots of food and be an attraction to fish. Whether or not a

(Continued on page 56)



Jim Sherman Photo.

A river is like a book entitled "where to fish." Its chapters are the bends and channels; its sentences are the sunken logs, riffles, cut banks and sandbars.

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CIRCULATION THIS ISSUE 52,000

COMMISSION MINUTES

June 9, 1965

Fish and Game

Approval was given to exercise an option for 21 acres of land on Clear Creek adjacent to Lansing in Allamakee County at \$200 per acre to be used for future fish hatchery improvement.

Approval was given to exercise an option on four and one-half acres of land at a cost of \$110 per acre at West Swan Lake in Emmet County.

Approval was given for assignment of Missouri River Areas to various departments and for an area classification list.

Approval was given to a departmental rule providing for a special teal hunting season for the entire state from September 11 to September 19.

The appointment of Paul Kline as Assistant Superintendent of Game was approved.

Approval was given to exercise an option to exchange 40 acres of agricultural land for 43 acres from Don Thomas at the Hendrickson Marsh Area in Story County on a dollar for dollar value.

A Resolution of Necessity was approved concerning the contemplated development on Otter Creek Marsh in Tama County.

A resolution passed requesting Iowa Congressmen to delay final action on a bill concerning recreational development on Federal areas until a final interpretation of this bill could be obtained.

Lands and Waters

All previous rules concerning speeds and zoning on Lake Manawa were rescinded and a new rule was approved which established 5-mile per hour speed limits on certain bay areas of Lake Manawa.

The appointment of 17 temporary Water Safety Patrolmen was approved.

Approval was given for a recommendation to the Executive Council to sell .85 acre of land located in Beaver Slough, adjacent to a slough on the Mississippi River to

the Interstate Power Company for a plant addition at a specified cost of \$1,000 per acre.

Specifications for mooring buoys and race course markers were approved.

The Commission received a proposal for a land trade from Clough concerning the area around Casino Bay on Storm Lake. This trade was refused and a counter-proposal was discussed.

Authorization was given for the purchase of two crawler-type tractors at a total cost of \$11,936.74 from Valley Equipment Company of Des Moines.

Authorization was given for additional purchase of five tractor-type units from International Harvester Company at a total cost of \$9,494.75.

Approval was given for the purchase of 23 two-way radio units from the Motorola Company at a total cost of \$15,274.

A report was given by the Superintendent of Engineering concerning remedial work needed on the spillway at Lake Keomah.

Authorization was given to the Engineering Department to obtain a contract for remedial work on the Green Valley spillway.

The Commission met with Dean Ray and Dr. T. R. Porter, Director of the Macbride Field Campus at the State University of Iowa and agreed to provide sailboat docking and mooring facilities adjacent to the Macbride Field Campus.

Approval was given to add the Bellevue Park Road to this year's Highway Commission Road Surfacing Program.

Lucas County Telephone Company was given a construction permit to cross the Williamson Pond Area.

County Conservation Board Projects

Worth County received approval for the acquisition of 12 acres of land at a total cost of \$1,200 for the Haugen Timber Area.

Appanoose County received approval for the acquisition of 4.278 acres of land by a 25-year lease at no cost, for the purpose of developing a picnic and outdoor recreational area within the incorporated limits of the town of Cincinnati.

Linn County received approval for the acquisition of a warehouse in Central City at a total cost of \$12,000 to use as a shop and storage building.

Linn County received approval for the acquisition of eight and one-half acres of land which includes the site of the Wapsipicon River Dam at Central City, also the acquisition of flowage easements on the impoundment above, consisting of 690 acres for the purpose of further developing the Pinicon Ridge Park and water area.

Tama County received approval for the acquisition of 58 acres of land at a total cost of \$2,238 to

Principles of Game Management: Part One**HUNTING REGULATIONS**

John Madson and Ed Kozicky

For as long as men have hunted in North America, wildlife has belonged to the people.

And since wildlife belongs to all, hunting is controlled through public agencies charged with managing this wildlife for the common benefit.

The welfare of most game birds and mammals hinges on complete protection during the nesting or breeding seasons, and on a limited harvest of the annual game crop during the hunting season. Wildlife is always benefited by good hunting laws, efficient enforcement of the laws and sympathy with the laws by the public and its courts.

Most modern hunting regulations are based on "biological balance." This exists when all losses to a game population are replaced by natural reproduction or artificial stocking. If hunting is to be in accord with the annual game crop, this biological balance must be determined by continuous inventories of game supplies.

Game biologists have the responsibility for knowing the relative abundance and location of game, and this basic information is valuable to the administrators who set the hunting seasons. In a year bumper game crops, the shooting season may be extended and limits increased. In a poor year, the shooting season and limits may be curtailed. Since wildlife concentrations may vary greatly within a state, biological balance may best be maintained by setting several hunting seasons and limits for a game species. So we have a flexible system of long-season and short-season zones, "two deer districts" and special hunting seasons.

But it takes time for biologists to gather and process game population data, and the administrator may not be able to wait. He has many pressures: hunters who want to plan vacations, resort owners who must plan for the hunters, the job of drafting administrative orders and an early printing deadline so that the new regulations are available to the public well ahead of the hunting season.

So instead of setting regulations on the basis of nesting and brood inventories and early fall game supplies, the administrator may be forced to set seasons based only on winter and spring game counts. And in certain years—between the time regulations are made and

(Continued on page 54)

complete an artificial lake site for park development.

Washington County received approval for the acquisition of 40 acres of land at a total cost of \$3,300 in the southeastern part of the county for the purpose of preserving an excellent piece of hardwood timber and for picnicking, camping and fishing access to Main Crooked Creek, and other uses.

Woodbury County received approval to acquire 50 acres of land at a total cost of \$4,000 located one mile west of the town of Smithland to preserve an excellent stand of hardwood timber which will be retained in its natural state with a small picnic area adjacent to Highway 141.

Woodbury County received approval for the acquisition of .26 acre of additional land at a total cost of \$129.15 to improve the entrance to Snyder Bend Park.

Appanoose County received approval for a plan to construct a picnic shelter in Cincinnati County Park.

Grundy County received approval for the Nason-Highway 14 Safety Rest Area development plan.

Jackson County received approval to construct a fishing peninsula 150 feet wide to extend 300 feet south of Highway 64 right-of-way in the back waters of the Mississippi River near Sabula on U. S. Corps of Engineers Land under license to the State Conservation

Commission to be submitted to the Corps of Engineers as part of the over-all development plan for the area.

Washington County received approval for a development plan for Iowa Township Park for picnicking, camping, field sports and development of a small pond.

General

Approval was given for transfer to the Missouri River Basin Inter-Agency Meeting at Denver; Canadian Waterfowl Banding Program in North Dakota; Midwest Fish and Game Commissioners at Toronto; and the Missouri River Basin Comprehensive Planning Meeting at Jefferson City, Missouri.

The Commission approved a departmental rule to permit spearing of rough fish by scuba and skin divers from May through October 1 of each year except on West Okoboji and Spirit Lake in Dickinson County where no seasonal limitations will be invoked.

A request for permission to drill for oil at Forney's Lake was denied.

Informational items included report on work in the Planning Section; extension of a campsite area on Emerson Bay; Hatchery operations; a Boating Law Administrators Association regional meeting; objection from landowners concerning water levels on Lake Cornelia and Tuttle Lake and status of the Lake Manawa road right-of-way.

TIPS FOR BOW FISHERMEN

Max Schnepf

The end of the snow season along in February signals the beginning of a long dry spell for bowhunters that lasts 'til rabbits and deer become legal game again in the fall. Drawing arms get weak, and shooting eyes get a little rusty. What's more, it's darn tiresome plunkin' at the same knotted hay bale day after day.

But to the rescue comes ol' *Cyprinus carpio*, the prolific European import of oriental extraction that's found in nearly every stream and lake in the state, to provide a moving target that's sure to keep the edge on any bowman's game.

Beginning in early May, these large minnows swarm into sloughs, backwaters and shallows to spawn and root for food in the vegetation. They remain in such easily accessible areas throughout most of the summer. And for the archery enthusiast with a little patience and the right equipment, it can be a field day.

The right bowfishing equipment includes a bow, reel or makeshift spool to hold line, line and arrows with barbed heads. Equipment other than the bow is inexpensive; in fact, most of it can be homemade for practically nothing.

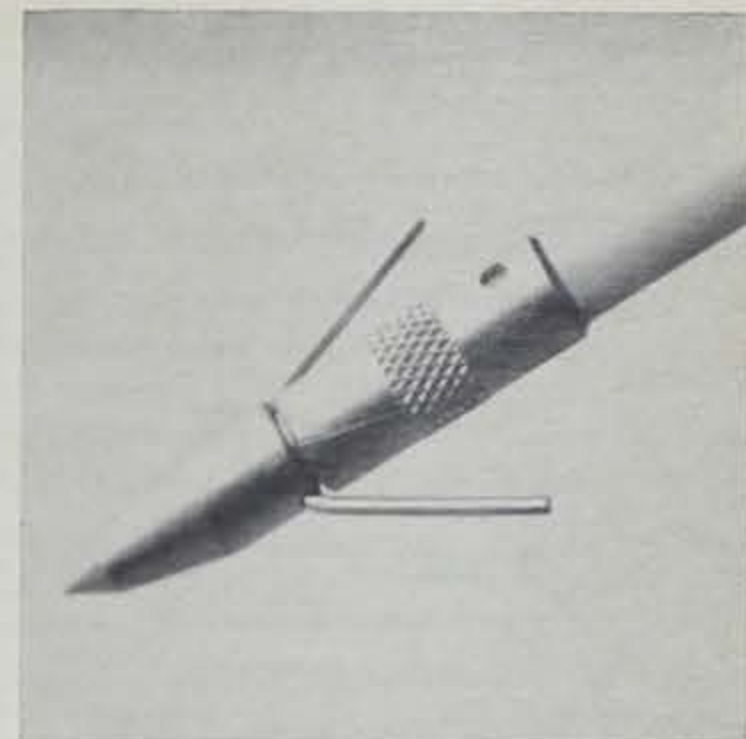
Any bow suitable for hunting will suffice for bowfishing. A heavier bow may be capable of penetrating a carp two or three feet under the surface of the water, but most shots will be much shallower, probably within five or six inches of the surface. Furthermore, the chances of hitting a target more than a foot or so under the surface are very slim. Aiming becomes guess work because of light refraction and the tendency of an arrow to plane in the water. Any bowfisherman will soon learn that if he wants to score consistently he must aim low on a fish or even under it depending on its position in relation to the water's surface.

A bowfishing reel, which is taped to the face of the bow near the handle, may vary from a true spinning reel to a makeshift line arbor. Any good archery shop or sporting goods store should carry a selection of reels. For the do-it-yourselfer, a reel can be constructed from a small tin can, or better yet, an empty fishing line spool. One edge of the plastic spool should be shaved down so line peels off freely. By fastening the spool or tin can to a narrow wood strip with a screw, the makeshift rig can be easily taped to the bow face.

Forty to 50 feet of relatively heavy fishing line is all that is needed



Max Schnepf Photo.
Bowfishing reel and line



Jack Kirstein Photo.
Bowfishing arrowhead

on the reel since most kills will be made within 10 to 20 feet. State law requires archers to use a line of at least 90 pound test.

Arrow shafts come in a real duke's mixture, ranging all the way from wood to fiberglass. Remember, however, that even though wood is cheaper, it breaks easier than glass.

Cheap bowfishing arrows can be made by pounding small nails that serve as barbs into the wood shaft of old target arrows just behind the target head. Barbs can also be made by forcing a piece of small diameter wire through a hole drilled in the arrow shaft behind the head. The protruding ends can be bent to form the barb. Line is easily attached to these homemade arrows by drilling a small hole just ahead of the nock. Fletching is not necessary since most shots are short. Most commercially made bowfishing arrows, however, do have rubber fletching.

All equipped? Then try a little rough fish control of your own. Whether on a lake or river, head for the shallows. Mud flats, cattail beds and brush piles are ideal spots. Move slowly and quietly along the bank. Dull clothing is an aid. If, perchance, you spook a batch of carp while moving in on them, stop and stand pat. Patience will be rewarded. They'll soon be back.

Watch for unnatural ripples on the water. Ofttimes, moving vegetation will betray a carp's presence, and sometimes the fish's noisy feeding habits are a dead give-away. Remember, shoot low. When you score, especially on a big female, pat yourself on the back, because you've just completed a real rough fish removal operation. A big female may carry over two million eggs.

And don't pass up buffalo, quillback, gar, dogfish, mehers, redhorse or gizzard shad. They're all legal as long as you own a fishing license and limit your bowbending activity to the hours between sunrise and sunset.

CARDINAL RULES FOR FISHERMEN

Harry Harrison
Supt. of Biology

Want to catch more fish? Here are a few cardinal rules that will improve your luck. The successful fisherman uses them.

1. Fish areas that you are acquainted with. Fish are creatures of habit. They seek out areas they like particularly well and stay there. If you catch a bass, pike, catfish or bluegill from a preferred cover area or habitat type another one will likely move in from a less preferred spot. He, then, will be available the next time you come by.
2. Have confidence in your bait, equipment, and skill. Positive thinking always pay off. If you lack confidence you will fish poorly, and miss strikes that would have produced a fish for the stringer had you been alert.
3. Handle your bait and equipment as little as possible. In other words you can't catch

fish if your bait is out of the water.

4. If you use natural bait—minnows, frogs, crayfish, etc.—fish then naturally. Remember crayfish are not found on the surface nor are frogs found on the bottom. Consequently, fish frogs on the surface and crayfish on the bottom.
5. Do not create unnecessary disturbances in the water. Fish like all animals have a sense of fear. They will run for cover from unusual disturbances.
6. Fish during times of rain or when water stages are on the increase. Water pouring into lakes, streams or ponds from the surrounding land carries in food. Fish have learned to take advantage of these "land falls."
7. Fish every chance you get. The more times you fish the better your chances of being present when the fish are biting.



Max Schnepf Photo.

A carp bites the dust, and an archer's eye gets a little sharper.

RATTLESNAKE HUNTING: THE UNPOPULAR SPORT

Ron Schara

Rattlesnake hunting may not be the most popular outdoor sport in Iowa, but it is, to say the least, a very different sport.

Imagine walking atop a limestone bluff searching for a camouflaged reptile equipped with two poisonous, needle-like fangs and possessing only a pea-sized brain to control their use. You soon begin wishing you could walk with both feet off the ground, especially when you know a rattler's senses tell him only that you are warm-blooded. Small rodents are warm-blooded; the rattlesnake preys on small rodents.

It is also comforting to know that the timber rattlesnake isn't impressed by your stately upright position. He doesn't look for trouble, but he won't run from it either. With thoughts such as these storming your mind, you begin to feel sorry for yourself. But, there is no sympathy in rattlesnake habitat; you went looking for him; he didn't come looking for you!



Jim Sherman Photo.

In rattlesnake country it pays to stop, look and listen!

The place he calls home is under the rocks of the towering limestone bluffs in northeastern, eastern and scattered parts of southern Iowa. He favors the south facing bluffs because the sun strikes them through most of the day. All reptiles are cold-blooded. The sun is their life blood.

Hunting rattlers is most productive in the spring and fall. During these periods, they are found near their rock dens. In mid-summer, rattlesnakes are known to "travel" and are too dispersed for effective hunting. It is also at this time that rattlers are found in unusual areas not ordinarily considered snake habitat.

To most people, the question is not when to hunt them, but WHY! Harvey Dickens, who has a summer hobby of hunting the dark-banded reptile around the Marquette-Harpers Ferry area, asks himself that question every time he starts climbing the face of a "snakey" bluff. He's been bitten once and scared more often, but he keeps hunting.

Though he has hunted and handled hundreds of rattlesnakes, the activity has not dulled his respect for the pit viper. He is a picture of care and caution as he quietly steps along the bluff tops. According to Harvey, the main thing to avoid is stepping over one rock layer onto another layer without first checking to see if a rattler is lying underneath.

A rattlesnake hunt is not a social affair. No one talks. A distraction at the wrong moment could prove dangerous, even fatal. Harvey said it bluntly, "If you get bit back here (deep in the timber), forget it . . . it's too far back to the car!"

Tools for the art of snake hunting include two long-handled poles, a fine mesh sack and nerves of steel. On the end of one pole is a heavy wire bent into a hook shape which is to reach under the layer rock to locate the snakes. The other pole has a V-shaped end that is used to pin the snake down. The V-shaped end must be placed directly behind the head. Contrary to what most people think, a rattlesnake does not have to be coiled to strike. A rattler stretched flat, but with a free head, can strike a considerable distance.

Despite their ability to defend themselves, timber rattlers are shy and will disappear quickly if they detect an unusual noise. Hence to hunt them one must actually stalk when near the dens. However, if they cannot make a retreat and are cornered or surprised, their shy disposition becomes a defensive one. Frequently, they'll sound a warn-

BOOK REVIEW

Guarding the Treasured Lands, Ann and Myron Sutton, J. B. Lippincott Co., Philadelphia, 160 pp., \$3.75.

Guarding the Treasured Lands is a slick presentation of the story of the National Park Service. The authors treat their subject with a fondness based on a deep love for their subject—the out-of-doors as preserved in our great system of National Parks and Monuments.

Their examination of 15 topic areas ranges from an explanation of the variety found in the Park Ranger's daily life—rescuing people from cliffs, welcoming people to the park, and fighting forest fires—to the crazy questions asked by visitors, "Is this cave all underground?"

Because the authors have worked in the National Park Service for many years, they are equipped to color their efforts in a way that creates intimacy. This technique tends to gloss over the book's major deficiency—a shallowness that serves to whet the appetite, but never satisfies the desire to know more about the subject under discussion.

Perhaps the greatest good that

will come from the book will be the service given to youthful readers, particularly those with a naturalistic bent. This is due to emphasis given to the educational background and training needed by those who would enter the Park Service.

The entire volume is profusely illustrated with first rate black and white photos. Interesting photographs dating back to the 1800's provide a pictorial history to both supplement and complement the written word.

Summing up: Adults will find this work mildly stimulating. Younger readers will find it both interesting and stimulating. One can only hope that this book will grace many school libraries this coming year.—J. H.

The cottontail does not shed its summer brown coat as does its cousin, the varying hare or snowshoe rabbit, but remains the same color all year long.

* * *

While most other bears hibernate for the winter, the polar bear stays awake and is very lively year long.

ing with a rapid vibration of rattles located on the end of their tails. The high-pitched noise sounds like a nervous musician shaking maracas. They do not always rattle before striking, however, especially if surprised. In such cases, they forget about being so courteous.

An actual survey of rattlesnake populations has never been made in Iowa; however, according to the bounty reports for 1964, a total of 1,041 rattlers were bountied. Of these, Allamakee County bountied 303 snakes followed by Madison County with 302.

Like all predators, the rattlesnake will never become overly abundant. Predators are meat-eaters and their numbers are strictly controlled by the amount of food available. Iowa's rattlesnake population does seem to be stable, however, as indicated by a fairly constant number of rattlesnakes bountied each year. Assuming the number of hunters remains the same or increases, that means that every spring the rattlesnake population is about the same as the previous spring.

This is fortunate. Regardless of why we may condemn the rattlesnake, in the natural world, he has a place in the scheme of predator-prey relationships. The world of predators and prey is a realistic world; our condemnation of predators and sympathy for the prey is not. Perhaps, the reason we've colored the rattlesnake black is because he reminds us of our prejudices. But, he does it with fair play. He is one of the few creatures that remains unimpressed with our rules of hunting. To hunt him, means you also can be hunted. Like it or not, that in itself is an admirable quality.



"Sorry, dear, but my hook is caught!"

CONSERVATION BY PERMISSION ONLY

Jack Higgins

Something unique has come into Iowa's conservation picture in recent years—the establishment of inviolate preserves. The areas are under the control of the Linn County Conservation Board. They are unique only because Iowans are more familiar with multi-use preserves as represented by our State Park and Forest Reserve systems.

To understand the difference between a preserve and an inviolate preserve, it's necessary to understand that two philosophies of conservation exist. Over the years a friendly division has occurred among the rank and file in the conservation movement. On one hand we find the "conservationist" who feels that the wise use of our natural resources means a multiple use management concept. On the other is the "preservationist" who feels that the carrying capacity of nature is such that the presence of much human activity destroys that which should be saved.

Since Iowa has never experienced a real pitched battle between these two ideologies, there has been no fru-fra over the establishment of the preserves in Linn County. In fact, it's been so calm that few people know that inviolate preserves have been established; nor do many Linn County residents have the slightest inkling of the values the areas may possess.

There are four separate tracts in the Linn preserve system, each serving a different purpose. Because the Palisades-Dows Preserve is in a more natural state than the rest, we'll examine it first. The area is adjacent to that portion of the Palisades-Kepler State Park that is on the south side of the Cedar River. It is intended to be a botanical and wildlife preserve for "oncoming generations to enjoy."

When the area was first acquired, an "improvement" program was begun. This took the form of extensive plantings of white pine on acreage formerly cultivated. This was, of course, a violation of the preserve concept of natural management. Consequently, there has been no concerted effort to maintain the plantations. This management "accident" may prove to be valuable, however, as it offers an opportunity to study the competition between native hardwoods and introduced conifers. There has been some talk of establishing a prairie area on these fields; again, this introduction of an outside influence would be in violation of the inviolate preserve concept of the agreement into which the Board has entered with the donor.

What, then, can, or should the Linn County Conservation Board do to manage this tract? The answer seems to be merely to restrict access, or intrusions of large groups into the area. This course has been allowed for the past five years, and the results are fascinating.

The steep, wooded ravines had been pastured for many years. These have retained their open, woodland charm, with the sod seeming to be holding its own against any encroachment by the type of vegetation one usually finds on a forest floor. The open fields on top of the ridges are another story. Here one can see definite signs of nature healing herself. The alfalfa, clover and pasture grass is being replaced by oplar, sumac and an occasional oak. A real life drama is being slowly unfolded; the preserve concept prevents it from being widely viewed and studied, however.

Of what use is Palisades-Dows Preserve? Only time can tell. Some say that in 50 to 100 years it will prove invaluable to scientists. Others dispute this, claiming that since the surrounding properties drain through the preserve there is no way to prevent pollution of the soil by farm chemicals; consequently, the area will not offer evidence of what the earth was like before man commenced to poison his habitat.

A direct, observable benefit to wildlife will be present for the next few decades. The area deer herd will find a particularly good home during the period the hardwood forest is expanding across the open ground. As the forest thickens and approaches a climax stand, browse will diminish and cause the deer to move elsewhere for suitable habitat. And until such a time as some natural force reopens wide areas of the woodland floor, the only place which will appeal to life will be the forest edge.

Up the river, northeast of Cedar Rapids, are preserves of a different nature. The first is a 20-acre prairie area called the Rock Island Preserve. Its prime value is scientific, as the flora and fauna found on the small sand prairie and adjacent bog are unique. To preserve it, the Linn Board found it necessary to limit research to observation and restrict the number of visitors as well.

Still further upstream, just one-half mile north of Palo, is another special use area. It's the 144-acre Palo Marsh Wildlife Refuge. The marsh is being preserved mainly for migratory waterfowl. Because of this, all active outdoor sports are strictly prohibited. Nature study by cognized groups is permitted, but only with written permission.

The final area in the complex is also the largest. It's the 500-acre Louis Wildlife and Timber Preserve, thought to be the biggest gift of land ever presented to any Iowa County Conservation Board. Located

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Earl Jarvis.



Dr. Keith A. McNurlen.

COMMISSIONERS TAKE OFFICE

Newly appointed Conservation Commissioners, Dr. Keith A. McNurlen, D.D.S., Ames, and Earl Jarvis, Wilton Junction, reappointed for second six-year terms on the commission, began their duties on July 1. Terms of office for both men will end on June 30, 1971.

Dr. McNurlen's participation in conservation work has been long and active. He has served as Ames Chapter and Iowa Division President of the Izaak Walton League of America, District Director of the League and is currently serving his seventh year on the National Board. In addition to

Waltonian work, Dr. McNurlen has long been engaged in such varied pursuits as Boy Scouts, scuba diving and American Legion activities. He has also served on the Story County Conservation Board, Governor's Committee on Conservation of Outdoor Resources and the Iowa Conservation Education Council.

Earl Jarvis was first appointed to the Conservation Commission in July of 1959. He has remained active in many conservation and service organizations. He is employed by Eastern Iowa Light and Power Company as a service supervisor.



Jack Kirstein Photo.

CONSERVATION AWARD TO HUGHES

The 1965 Conservation Award of Merit for outstanding service to conservation was presented to Governor Harold E. Hughes last month by the Iowa Chapter of the Wildlife Society.

The Society indicated that the award was based on the Governor's establishment of an Advisory Committee on Conservation of Outdoor Resources, his strong stand on preserving the Big Sioux River and his general support of wise-use of the state's natural resources.

Presenting the award to Governor Hughes is Earl Rose, Chairman of the Society's Award Committee. Also present at the brief ceremony was (left to right) Dr. Eugene Klomglan, Secretary-Treasurer; Bob Moorman, President, and Sylvan Runkel, First Vice-President.

WAYS AND MEANS TO MATRIMONIAL HARMONY

Ron Schara

Matrimonial harmony makes for a wonderful institution. Anyone will testify to that. In fact married couples are so intent on achieving this end, that modern husband-wife spats are quickly ended with compromising, forgiveness or the wife winning.

These arrangements for settling issues is fine for some people, but the man who's a dedicated fisherman is faced with a marital war that starts when the ice is out and doesn't end until the fishin's over. Usually the battles are over a conflict of interests. For example, when the "ol' man" catches the fishin' urge, the "old lady," invariably wants to go see "mother" (for the fifth time that week.)

This summertime battle is as old as the Model T (which allowed her to visit mother), but in these days of modern methods, a difficult but nerve-racking solution exists!

Men! Train your wife! That's right, train her to be a fishing partner. Why not? If you had a Labrador dog that wouldn't hunt, you'd train it. The same goes for your wife. (No reflection on the dog)

Here's how to go about it. First acquaint her with the proper equipment. Speak gently, but firmly. "Dear, this is a fishing pole." (For the first few lessons, stick with the fundamentals.) "There are telephone poles, tad poles, a North pole and many other kinds of poles, but they aren't used for fishing purposes." (You must explain the difference in poles so as to not confuse her. Also she'll be impressed with your knowledge.) This should be the only explanation necessary. If she's normal (don't try to figure that out now), the first lesson should enable her to recognize a fish pole when she sees one.

Next present the fishing reel. "Honey, a reel holds your line while you're not using it, but it also holds the line while you are using it. (That's simple enough isn't it? Continue. . .) "In either case you turn this crank to . . . ah . . . let's study the hook." (Better come back to the reel later.)

Probably the most important lesson is Lesson No. II, The Purpose of Fishing. In this lesson you explain why you stand on a river bank all afternoon. "Sweetie, the object of fishing is to place a hook in the fish's mouth." (This is important, repeat it two or three times.) "Once this is done, "set" the hook to make sure it is firmly entrenched in its mouth." (Don't wince when you say that.)

"No, it doesn't hurt the fish."

"No, I've never ASKED a fish!"

"I don't know how I know!" (Don't panic, just change the subject.)

"Dear, this is a sinker. . ."

After she has been introduced to other "necessary" fishing aids, she should be well-versed on fishing equipment.

So far, so good. The next lesson is on live fishing baits and with it comes a real problem. WORMS! You must remember that because your wife's mother (who is the cause of all of this) was afraid of earthworms, your wife will be, too. (Here's where you get sneaky) Most women abhor slimy things whether its worms or your false teeth. Consequently, select an appropriate time to present her with a handful of the slimy creatures. One of the best times is while she is doing dishes. The filmy soap and water on her hands makes a perfect coverup for the "slime." (Note: if her reaction to worms is favorable, capitalize on it; she may be willing to dig for them too.)

She should now be ready for an actual field trial. Here again you must use extreme caution. Women are fidgety and seem to have a higher metabolism rate than men (that's why she wakes up before you do on Sunday morning). If the fish aren't biting, she will quickly become bored. Therefore, as a safeguard, use all of the fishin' know-how you can muster and plan her trip only when you know the fish will bite feverishly. If you hit it right, teachin' her to fish will be downhill from then on.

One last warning! If she starts catching bigger and better fish than you, or if you continually get "skunked" while her stringer is full, then friend, next time she should stay home. After all, lopsided competition like that could start family arguments!

CAUTION URGED

Recently a Colorado youth nearly died of asphyxiation while sleeping in a newly dry cleaned sleeping bag. His mother had taken the bag to a self service dry cleaning establishment the day before it was to be used.

Evidently the bag was too bulky to be adequately dried by the automatic machinery. When the young lad used it, the trapped chemicals were still releasing deadly fumes. Tragedy was averted only because the boy managed to awaken a companion who got him out of the bag and summoned aid.

The wise camper will take heed and be cautious with newly cleaned sleeping bags. Have the bags dry cleaned days in advance of any planned use. This will allow the bag to be hung outside to thoroughly air and dry.

Failure to take this advice may make the old complaint, "I woke up feeling dead this morning" be literally true.

The ring-necked pheasant has the longest tail of any American game bird.

HUNTING REGULATIONS—

(Continued from page 50)

hunting season is opened—the game crop collapses. Result: a season of liberal regulations, a poor hunting season and an angry public.

The wildlife administrator has other problems in making possible hunting regulations. Because of local hunting tradition, it may be impossible to set seasons at the time of greatest game abundance. Hunters may balk at rabbit hunting before the first snow, even though the rabbit crop is much smaller later in the year. Farmers balk at an early pheasant season when the corn is still standing, and some hunters may complain that early-season cover is too heavy. And yet biological balance demands a hunting season when game is most abundant, which may be in late summer!

The men who set our hunting seasons and limits must consider many things, yet never lose sight of the fact that good hunting regulations must always attempt to provide equal hunting opportunities for all. They must also safeguard an adequate breeding stock of game by harvesting only the annual game surplus. **If hunting laws don't give all hunters an even break, or if they sap our wildlife "capital," they are not sound laws.** However, game laws made and administered by professionals are usually sound laws. Poor game laws usually result when pressure groups or private interests promote legislation of such things as sweeping bounty payment programs, ill-advised stocking projects or pork-barrel lake, marsh and refuge schemes.

The average hunting regulation is restrictive, as opposed to the rare "bonus regulation." Restrictive regulations say "Thou shalt not." The more liberal bonus regulations say: "Thou may, by certain methods at certain times." Most restrictive regulations stem from the past when some American game species were waning and national conservation was an austerity program. However, many of our most restrictive laws have become liberalized as game management methods have improved and as some game crops have flourished. Deer and turkey hunting were once outlawed in many states; today it is important outdoor recreation in those same areas.

The newer "bonus regulations" promote greater harvest. They may extend waterfowl seasons in areas of crop depredation, or "two deer" seasons in districts where herds are too large. These laws may be temporary—set during times when game populations erupt and can tolerate an increased harvest, such as the spring pheasant hunting of the early 1940's. Or they may become permanent, such as "either sex" deer laws in many states that once had only "buck laws."

A relatively new type of law—an outgrowth of modern population pressure—is the "incentive law." Such laws attempt to stimulate private interest in production of game for the purpose of increasing hunting opportunities. This is done by paying the landowner to produce game—the only known way intensive game management can be conducted on expensive private farmland.

Incentive regulations may be temporary plans that provide state payments to landowners who permit public hunting on their property. Or incentive regulations may be permanent. One example is the new shooting preserve laws now in effect in 41 states—laws under which the rearing, stocking and harvesting of game birds for profit are controlled by the state. These regulations protect the interests of the public and the shooting preserves operators and provide a legal foundation for the development of hunting opportunities by private enterprise with a profit motive. They also create six-month game bird seasons in states where the natural game supply permits only short bird seasons or none at all.

Efficient enforcement of all hunting regulations is the keystone of modern game management. Without law enforcement our game management programs would fail, for all are based on state control of breeding stock and surplus game crops.

The broad enforcement of game laws does not simply include arrests and punishment, but also public education. Most modern game administrators agree that the game warden has a dual job. He is a policeman who specializes in public relations. The modern game warden not only makes arrests, but works with schools, sportsmen's clubs, civic and church groups, scouts and many other organizations.

Most game wardens—even the saltiest oldtimers—welcome the chance to meet the public in an educational way rather than a strictly punitive one. An officer's value was once based only on the number of his successful "cases"; today his value may hinge on the number of successful contacts with schoolchildren. The best modern game warden is less an enforcer, and more a teacher.—Olin Mathieson Chemical Corporation.

Cover cooking items on your picnic table with a plastic sheet to protect from rain and dew at night, or while you are away from the camp site during the day.

Do not use rocks around a campfire that have been gathered from wet ground or stream beds. Often they will contain enough water to explode if heated.

SENSE AND SAFETY ARE SHIPMATES

Jack Higgins

The increased use of water craft on Iowa's natural lakes and navigable streams resulted in a 100 fold increase in the number of boating deaths in 1964. There were seven boating fatalities in 1963 and 14 in 1964. Eleven serious injuries were also reported last year.

A breakdown of the figures shows that there were 43 reported accidents involving 53 vessels. (An accident must be reported within 24 hours if there is a death, or within five days if there is either an injury requiring treatment or damage amounting to more than \$100.00.) Twenty-nine of the accident reports involved collisions of two or more vessels.

Interesting enough, the "hotbeds of the waterways" are not teenagers, but men in the 26 to 50 year age group. Records indicate that all too often a disturbing lack of judgment as to speed and distance was displayed by boaters in his age bracket. In addition to collisions, four Iowa boaters hit fixed objects, while two managed to hit people with their motor's propeller.

Other types of accidents include even capsized boats, one flooded boat, one sunken craft, four individuals falling overboard, and two not specified.

Water Safety officials hope that an awareness of past mistakes that caused death and injury will alert boaters to the need of practicing the very sensible rules and regulations set up to govern waterways. An alert public, they point out, could visibly reduce the number of deaths and injuries. A public that chooses to ignore water safety rules will create situations which will only promote an increase in the number of accidents.

If boaters will observe the following rules and insist that every other boater on the lake or river do the same, many accidents will be averted.

1. **The right-of-way rules** are sensible and easy to follow. When passing from the rear, keep to the operator's left. When passing at right angles, the vessel at the right has the right-of-way. Manually propelled vessels **always** have the right-of-way over all other

vessels, while sailboats have the right-of-way over all motor driven vessels. Motorboats, when meeting or overtaking sailboats, must pass the craft on the leeward side. Finally, any vessel backing from a landing has the right-of-way over incoming traffic.

2. **Speed and distance regulations** should be followed religiously. Boaters may not operate their boats faster than 10 miles per hour when they are within 300 feet of shore. (If a boat goes by pulling a water skier, and the skier is standing, then that boat is speeding, as it is impossible to pull a skier on the surface at this speed. The only exception might be a very small child.)

No boat may exceed 5 m.p.h. when vision is obstructed beyond 300 feet. An obstruction may be a point of land, a pier, dock, etc.

If the passage of two vessels requires a distance of 250 feet or less, and one craft is moving at less than 5 m.p.h., than the passing craft may not exceed that speed in its passage.

3. **Water skiers** have two additional rules to follow. The first requires the presence of a responsible person, **in addition to the operator**, in a position to observe the progress of the person or persons being towed. Also, water skiing is prohibited from one hour after sunset to one hour before sunrise.

4. **Life saving devices** will do what they say they will. Every vessel shall carry at least one life preserver, ring buoy, or approved cushion for each person on board. (NOTE: a ski belt does not meet the regulations set out by the Coast Guard.) The Coast Guard announced last spring that any device bearing approval numbers 160.007 or 160.008 no longer meet specifications and that their continued use is prohibited.

5. **Know the Buoy System** before taking your boat out. Space doesn't permit a detailed listing of all the bouys and markers used in the state. A colored brochure illustrating these devices may be obtained by writing to the State Conservation Commission, East 7th & Court, Des Moines, Iowa 50308.

These aren't all the rules that a boater has to observe, but they are important ones. And remember, these rules are designed to prevent tragedy, and not the prevention of fun on the water.

CONSERVATION BY PERMISSION ONLY—

(Continued from page 53)

Cedar River bottom land, the preserve was donated with strict stipulations as to its use. The "conservation control" agreement of the deed calls for the return of 100 acres to walnut tree, the dominant species of the hardwood forest that once covered this portion of the valley. As the trees mature they will be harvested and replaced. This forestry management angle singles out the preserve and places a "value" on it that the others lack.

Complementing this tract is an adjoining 106 acres known as the Lewis Bottom Access. Here the lease agreement calls for 30-40 acres multi-use management with the remainder to be kept as a wilderness area for use by youth groups. Lease provisions would allow the area to be used as a nature center if the Boards should so desire. The



Jim Sherman Photo.

The red and white International Diver's Flag must be displayed by spear fishermen.

SCUBA DIVERS AND SPEAR FISHING

Two years ago, scuba divers and skin divers, who patrolled the bottoms of Iowa's lakes and streams with spear guns in search of rough fish, had their air bladders popped when the attorney general ruled that spear fishing violated state law. He opined that underwater fishing was "spearing within an enclosure which materially hides the fisherman from view," and such activity is prohibited because of the enforcement problem it creates.

Legislators of the recently adjourned 61st General Assembly, however, amended the Code of Iowa to legalize underwater spear fishing and stipulated that the sport be regulated by the Iowa Conservation Commission.

As of July 4, scuba divers and skin divers can re-inflate their air bladders, cock their spear guns and once again prowl the deep . . . under the following regulations.

Spearing of rough fish by scuba divers and skin divers is prohibited in all natural lakes of Iowa between May 1 and October 1 of each year, except in West Okoboji and Spirit Lake in Dickinson County where there are no seasonal limitations. The underwater activity is prohibited in all artificial lakes and in all state-owned strip mines, county conservation board areas and fish and game management areas that are posted as such. Open waters include all state-owned meandered

streams and all streams, and impoundments on private land where access is permitted by the owner or lessee.

Fish spearing by scuba and skin divers is prohibited within 100 feet of any swimming beach area. A valid fishing license is required; and only carp, buffalo, quillback, gar and dogfish can be taken. The activity is lawful from sunrise to sunset.

Hand or pole spears, rubber band powered spear guns, spring powered spear guns and pneumatic spring powered spear guns are legal. All spears used on powered spear guns must be attached to the gun by a cord not more than 20 feet long, and no powered spear gun can be discharged above the surface of the water. No exploding spear heads as well as explosive or compressed gas powered spear guns can be used.

The International Diver's Flag must be displayed on a buoy, float or boat during any diving or underwater spear fishing activity.

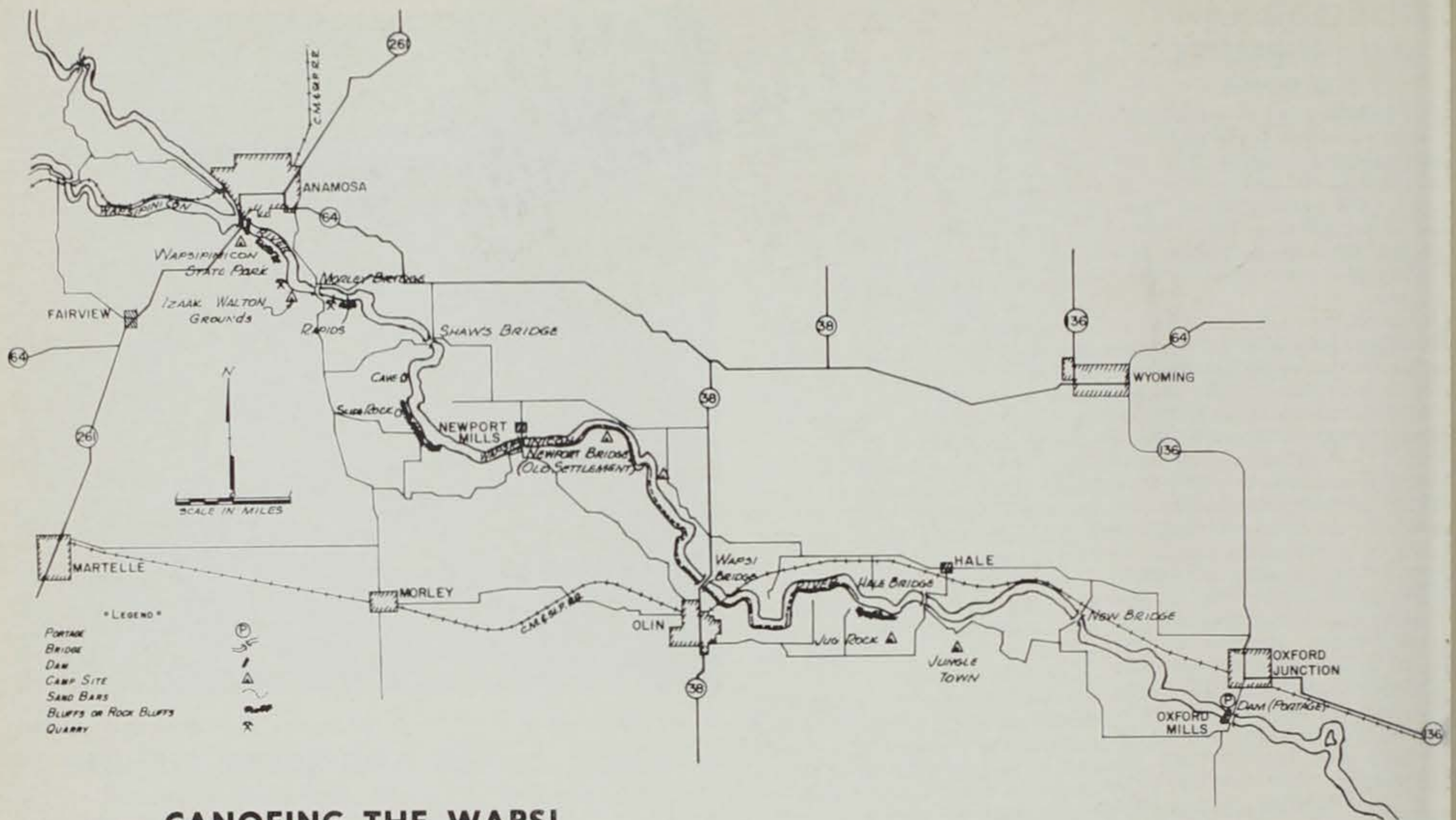
Beavers never stop growing nor reach "maximum growth." Life span in the wild is about 12 years. Captives have lived 19 years.

Racing pigeons have averaged 93-95 miles per hour over an 80-mile course.

For warm feet, natural wool is still the best material for socks.

entire area will always remain closed to hunting and trapping activities, though.

Whether or not the residents of Linn will ever reap any benefits from their inviolate preserves is up to them. If their school administrators, college instructors and outdoor groups utilize the potentials of the areas for supervised conservation education, their value is immeasurable in dollars and cents.



CANOEING THE WAPSI (Anamosa to Hale)

The Wapsipinicon River, called "White Potato River" by the Indians because of the white artichokes growing along its banks, offers exploration and intrigue to both the novice and the experienced canoeist.

From the entrance of Wapsipinicon State Park, just west of Anamosa, to an area called Jungle Town below the Hale Bridge, there is six hours of leisurely paddling involving 24 miles of this meandering river. Or the trip might be extended four miles to a take-out above the dam at Oxford Junction. It's quite a trip floating between the rough, overhanging limestone bluffs and heavily timbered hills.

At the launching area, just inside the entrance to Wapsipinicon State Park, the Wapsi offers a wide variety and some of the finest river fishing in Iowa. Channel catfish, flatheads, crappies and bullheads are commonly taken. Frequently, anglers are rewarded with largemouth bass, walleyes, northern pike and wary smallmouths.

Downstream, Dutch Creek, which meanders through the park, empties into the Wapsi. This, too, is an excellent place to fish.

Just below Dutch Creek the river rolls past a rock quarry. And rounding a bend—there looms Morley Bridge dead ahead. The sky along this stretch is filled with square-tailed cliff swallows that plaster their gourdlike mud nests against the cliffs and under bridges.

Beyond Morley Bridge there is a second rock quarry, more high

limestone bluffs and hundreds of swallows. Then the ear catches the sound of roaring water, and within minutes the canoe glides into white water.

A mile and a half downstream, under Shaw's Bridge, and, round a bend is the next point of interest. Carved in the bluffs is a cave draped with moss and vines. Gnarled trees hang suspended from the rock. A stop here to explore the cave and smaller caves in the vicinity is a must.

Bluffs continue to line the Wapsi almost to Newport Mills; then the terrain flattens and the river widens. Below Newport Bridge, a series of sand bars is encountered, but they shouldn't impede the canoeist's progress other than in low water times.

A series of holes in the bank on the river's left side indicates the presence of a second swallow species—bank swallows, characterized by a distinct dark band across their white breasts.

Six miles below Newport Bridge is Olin and the Wapsi Bridge which supports traffic on Highway 64. It's a half hour to take-out from this point.

For the last few miles of the canoe trip the Wapsi is again bordered by picturesque limestone bluffs. One of the largest, Jug Rock, is a disappointing reminder that Jungle Town and take-out is just ahead. For the canoeist, it's back to civilization and the congestion of car and truck traffic instead of the free wildlife traffic so common along the "White Potato."

READIN' RIVERS—

(Continued from page 49)

mud deposit will provide fishing and whether or not it will provide fish will have to be determined spot.

Third, it is imperative that you know various water depths. Certain fish—flathead catfish at one extreme—have deep water preferences. Other species—smallmouth bass as an example—prefer relatively shallow water. Other fish prefer inbetween depths or may range from the bottom to the top.

Along with being familiar with water depths, it is particularly important that you know areas where the bottom drops off abruptly. Just about every species of game fish feeds along drop-offs. Shallow waters contain and produce an abundance of fish foods. Foods produced in shallow waters drift with the current or because of wind action. By instinct, fish have learned to wait drop-off areas for food to float in. Fish these areas! They will produce fish, especially if you drift your bait over them.

Keep an accurate record of the spots you catch fish. Refer back to fact number two. Fish—or for that matter any other wild animal—occupy areas or given spots at a particular time, not by individual choice, but because natural forces dictate it. For instance, birds migrate because they have to, not because of desire. Similarly woodchucks live in dens instead of trees, squirrels in trees instead of dens in the ground, etc. In the fish world the same principles apply. Certain spots contain or attract specific fish. A fish caught is a clue to the location of an area attractive to fish. Re-fishing areas where you have caught fish in the past will put more fish on the stringer. As time goes by, experience will define the better areas. With a knowledge of the better areas your success will increase.

Finally, we suggest you examine the stomach contents of all fish you catch. Food items found in the digestive tract will tell you what fish feed on in this particular area. Fish get into the habit of eating what is available in the immediate area of their abode. Crayfish, minnows, grasshoppers, frogs, etc., they take whatever comes easy. Any of these items baited on a hook will be easier for a fish to take than the same animal in a healthy free swimming condition.

There are, of course, many other subjects that could be discussed that would help in the quest to put fish on the stringer, but the subject of KNOWING YOUR AREA is the most important. If you KNOW your area we will guarantee fish on the stringer.

One drop of tincture of iodine, mixed thoroughly with one quart of water will generally make it safe to drink within 30 minutes.

An elastic cord with metal hook on each end can be stretched between tent poles to make an expandable clothesline.