

MARCH/APRIL 1999

CONSERVATIONIST

IOWA

DEPARTMENT OF NATURAL RESOURCES



DIRECTOR'S MESSAGE

Whose job is this?

It is with great pride and work ethic that many employees of the Iowa DNR feel *they* are responsible for the protection and conservation of Iowa's resources. As the new director for this department, I intend to shift that feeling.

Our 1,000 DNR employees cannot do the job. We can aid, encourage, enforce, inform, demonstrate and educate, but we cannot do all that must be done to assure a healthy future for the state's natural resources. We simply cannot do it... *alone*. The nearly three million people, like you, who live here must shoulder that responsibility. Our job in the DNR is to *help you* take better care of *your* environment.

Environmental responsibility for every Iowan. That is now the leading goal for this department. When we are successful, together we will have created a sustainable and prosperous future that will endure. I know that Iowans care, but we may have to awaken a few. And I have faith that, in working together, we can solve our environmental problems.

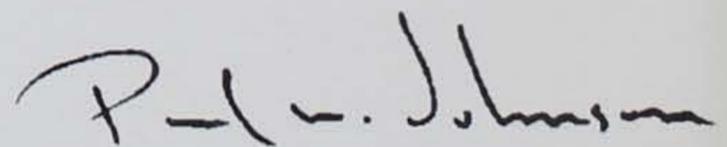
In the coming months and years, you will see new, stronger and more productive alliances between this department, all levels of government, organizations of citizens, and individuals toward this purpose. Most of the systems are in place to make this work. We will use good science and we will work with more Iowans to improve our stewardship of water, air, land and wildlife. This is *our* *homeplace*, but we are here for such a short while. The true measure of our success is the *long term*; the *long term* will guide the resource decisions we

make, today. My intention is to involve Iowans to help us succeed.

Here are a few of our challenges that can be successfully met, working together:

- Efficient agriculture and cleaner waters
- Productive industry and cleaner air
- Healthy communities and more open spaces
- Outdoor recreation an envy of the nation
- Environmental science in every school
- More wild land
- All Iowans accepting their environmental responsibility

We have much to be proud of in this state. This department has many successful environmental and conservation programs that can be improved with the understanding and participation of more and more Iowans. We have come a long way with the support of those who participate in outdoor recreation and who are active in environmental matters. But we need to be joined by *all* Iowans to secure our homeplace for future generations.



Paul W. Johnson

IOWA CONSERVATIONIST

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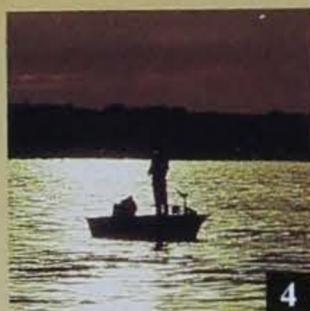
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COVERS

FRONT — Hen Wood Duck by Lowell Washburn
BACK — Pine Lake by Ken Formanek



4



38



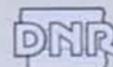
40

FEATURES

- 4 1999 Fishing Forecast
- 18 The Minnehaha Creek Watershed Project
by Kevin Baskins
- 24 Improving Your Image
by Lowell Washburn
- 34 An Eye On Air Quality
by Brian Button
- 38 McGregor's 19th Century Refrigerators
by Robert M. McKay
- 40 Iowa Wood Ducks Offer Unique Spring Ritual
by Lowell Washburn
- 44 Crank It Up
by Van Sterner
- 47 Iowa 1999-2000 Hunting Seasons and Bag Limits
- 48 1999-2000 Proposed Migratory Game Bird Seasons and Bag Limits

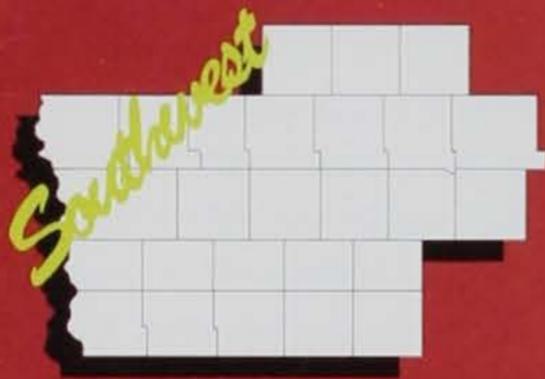
DEPARTMENTS

- 50 Parks Profile
- 53 Practical Conservationist
- 55 Classroom Corner
- 57 Conservation Update
- 62 Warden's Diary
- 63 Parting Glance



1999

FISHING FORECAST



by Joe Schwartz,
regional fisheries supervisor

I look for 1999 to be another excellent fishing season in southwest Iowa. May is usually the top time for fishing the small reservoirs, which provide the majority of fishing in this part of the state. For the most part, our fishing centers on four species: largemouth bass, bluegill, crappie and channel catfish. We have good fishing for other species like walleye and white bass in some lakes and reservoirs, but the big four are everywhere.

Most people think of **catfish** as warm-weather fish, but some really good fishing occurs right after ice-out. The best baits are winter-killed fish found along the shoreline or shad purchased from a bait store.

Crappies start biting in mid-April and are going strong by May. Small jigs and minnows are the best baits.

Good **bass** fishing usually starts about the time crappies do, although it is often earlier in farm ponds where water warms more quickly. Crank baits and plastic worms are favorite bass catchers. **Bluegill** fishing picks up significantly in mid-May as the crappie bite declines. Fastest fishing for bluegill occurs when they are spawning, typically around Memorial Day in this part of the state. Worms are the best bait for bluegill, but small jigs or other live bait also work well.

Summer heat moves fish to deeper water where they often are more difficult to catch. Drift fishing for bluegills and crappies, fishing deeper structure for bass and bottom fishing for catfish are all effective in mid-summer. The cooler temperature of autumn

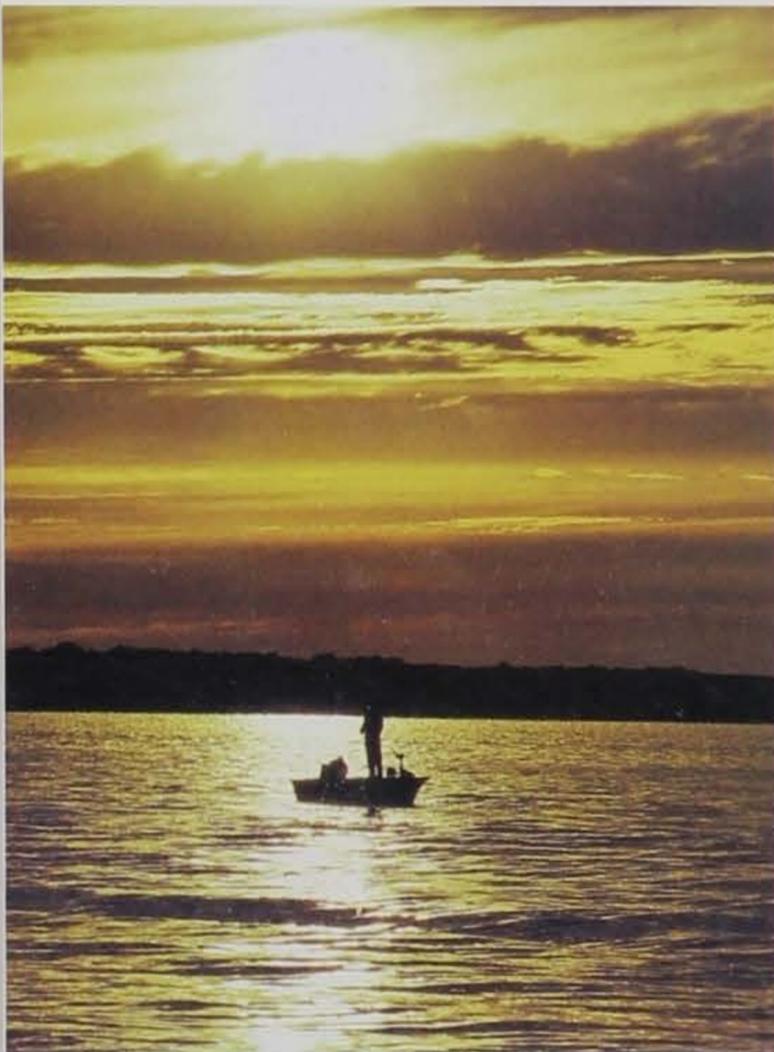
make for more pleasant fishing and better catches.

Several unique fisheries have been established in southwest Iowa in recent years. They are a little different than the usual bass, bluegill and catfish fisheries.

In 1995, we stocked **wipers** (a white bass and striped bass hybrid) in Big Creek. One plastic bag containing 50,000 fry has been stocked each year, but these fish have survived and grown rapidly. Big Creek wipers range in size from 8 to 18 inches. The best fishing tactic seems to be trolling jigs with twister tails or jig and minnow combinations. Troll about the same speed you would for walleye, but fish the lure up in the water column.

Lake Manawa is another intensively fished body of water. Located in Council Bluffs, it's an old oxbow of the Missouri River. This shallow, fertile lake is home to many of the diverse fish species found in the river, but crappie, catfish and **yellow bass** make up the majority of fish caught. In 1993, the DNR started stocking **saugeye** fry in Manawa, and a respectable fishery has been established. Today, surveys show 15-inch fish are common. Last year anglers reported catching 6- to 8-pounders at a surprising rate. Trolling typical walleye baits is the preferred method to catch saugeye. The west side of the lake and south near the canal point are the most productive.

The following tables give the best places to fish in southwest Iowa this year. If you are interested in a good trip, consider one of those listed. You will be glad you did.



Ken Formanek

BLUEGILL

LAKE OR STREAM (county)

Ahquabi (Warren)
Anita (Cass)
Badger Creek (Madison)
Beaver (Dallas)
Big Creek (Polk)
Hickory Grove (Story)
Hooper (Warren)
Icaria (Adams)
Little River (Decatur)
Meadow (Adair)
Nine Eagles (Decatur)
Nodaway (Adair)
Three Mile (Union)

Twelve Mile (Union)
Viking (Montgomery)

COMMENTS

Tremendous redear sunfish population. Tough to catch.
Consistently large fish. Try the structure.
Good for large numbers of 7- to 8-inch fish.
Good for 6 1/2- to 8 1/2-inch fish.
Large numbers of 6- to 7-inch fish. Try the tree reefs.
7- to 9-inch fish.
Redear good. Bluegill 6 1/2- to 8-inch.
Nice looking 7- to 8-inch fish.
7- to 8-inch fish are common. Good bluegill fishing.
Good 6- to 8-inch fish. Redear are dandies.
Try marked fish reefs. Good redear are present. Little fishing pressure.
Good before vegetation becomes established.
New lake. Tremendous population of 7- to 8-inch fish with some up to 9 inches. Redear up to 10 inches
Fish 8 to 9 inches are common. Try around flooded trees.
8-inchers common. Best in spring and early summer.

CRAPPIE

Ahquabi (Warren)
Anita (Cass)
Badger Creek (Madison)
Big Creek (Polk)
DeSoto Bend (Harrison)
Don Williams (Boone)
Easter (Polk)
Green Valley (Union)
Greenfield (Adair)
Icaria (Adams)
Littlefield (Audubon)
Little River (Decatur)
Manawa (Pottawattamie)
Mariposa (Jasper)
Meadow (Adair)
Orient (Adair)
Prairie Rose (Shelby)
Red Rock (Marion)
Rock Creek (Jasper)
Saylorville (Polk)
Slip Bluff (Decatur)
Three Mile (Union)
Twelve Mile (Union)
Viking (Montgomery)
West Lake Osceola (Clarke)

Nice 9-inch-plus fish.
First crappie lake to start in the spring. Nice fish 8 1/2 to 10 1/2 inches.
Nice 8- to 9-inch fish.
Most fish will be 7 to 10 inches. Fish the new structure or the jetties.
1997 was their best crappie year ever. Should be good crappie in 1998.
Nice 8- to 10-inch fish.
7- to 9-inch common, few fish up to 11 inches. High density of crappie.
7 1/2- to 8 1/2-inch fish common, with some up to 12 inches.
Mostly small fish.
Try fishing riprapped areas. Lots of 7 1/2- to 8 1/2-inch fish.
Lots of 8 to 10 inchers last fall. Should be good this spring. Try face of dam.
Try around flooded trees. Lots of 8 to 9 inch fish. Some 12 inchers.
Good early fishing in lagoons.
Lots of 7- to 8-inch crappies.
Strong year class of 8- to 9-inch fish and few big ones.
Always turbid water, but still good crappie fishing, 8 to 9 inches.
Fish are 8 to 11 inches. Good all summer but best in spring.
Big fish. Fish when water is clear, try feeder stream embayments.
7- to 8 1/2-inch fish in bays, around points.
8 to 11 inch for most part, fish around Marina and Mile Long Bridge areas.
8- to 9-inch fish. Few people fish this lake.
Tremendous numbers of 8- to 9-inchers with fair numbers of 11- to 13-inch.
8- to 10-inch and good numbers.
Mostly small fish this year.
Impressive numbers of 9- to 10 1/2-inch fish with some up to 12.

LARGEMOUTH BASS

Ahquabi (Warren)
Anita (Cass)
Badger Creek (Dallas)
Beaver (Dallas)
Big Creek (Polk)
Don Williams (Boone)
Easter (Polk)
Farm Ponds
Green Valley (Union)

Excellent catch and release fishing. 18-inch length limit on bass.
Perennial favorite. Bass up to 6 pounds. Fish the structure.
Lots of 12- to 15-inch bass with an occasional lunker.
Good catch and release fishery for less than 15 inches.
Try new structure. Face of dam, new silt dikes and jetties.
Most fish are 13- to 17-inches, some lunker size fish.
Up to 5 pounds. Mostly 10- to 14-inches.
Many private ponds in southwest Iowa have good bass.
A 22-inch length limit here. Any keeper will be a real trophy.

LARGEMOUTH BASS (continued)

LAKE OR STREAM (county)

Hooper (Warren)
Little River (Decatur)

Mariposa (Jasper)
Meadow (Adair)
Nine Eagles (Decatur)
Prairie Rose (Shelby)
Red Rock (Marion)
Saylorville (Polk)
Three Fires (Taylor)
Three Mile (Union)

Twelve Mile (Union)
Viking (Montgomery)
West Lake Osceola (Clarke)

COMMENTS

Excellent catch and release fishery. 18-inch length limit on bass.
Great fishing. Fish submerged brush and trees. Good numbers of 2- to 3 1/2-pounders.
Good catch and release fishery.
Good bass lake for fish up to 5 pounds.
Good numbers of small fish, an occasional large fish.
Fish the stake beds and brush piles.
Best from mid-May to mid-July.
Lots of small bass. Fish face of dam, Big Creek outlet or any rocky area.
Good for bass up to 5 pounds if the water is clear. Lake tends to be muddy.
Tremendous fishing for 11- to 14-inch fish with good numbers of 15 to 19-inch fish. The new hotspot.
Excellent for 12- to 18-inch fish. Our most popular tournament lake.
Good population of 12- to 15-inch fish. Fish the new structure.
Good summer time bass fishing.

WALLEYE/SAUGEYE

Big Creek (Polk)
Des Moines River (Polk and Boone)
DeSoto (Harrison)
Icaria (Adams)
Little River (Decatur)
Manawa (Pottawattamie)
Saylorville (Polk)
Three Mile (Union)
Twelve Mile (Union)

16- to 22-inch fish. Looking good for 1999.
Fish below Corps dams, low head dams and gravel riffles.
Best in spring. Fair numbers of 14- to 17-inch fish.
Fish are up to 10 pounds.
Average fish are 14 to 18 inches. Excellent population.
Was good in 1997, looks good for 1998. Mostly 14- to 16-inch fish.
Fish sandy points, old river channel.
New lake. Try the flooded road beds and humps for 15- to 24-inch fish.
Fish man-made reefs. Fish are 13 to 18 inches and up to 6 pounds. Best walleye lake for numbers in southwest Iowa.

BULLHEADS

Beaver Lake (Dallas)
Little River (Decatur)
Manawa (Pottawattamie)
Rock Creek (Jasper)
Springbrook (Guthrie)
Three Mile (Union)

10-inch plus, numbers down.
Nice fish, big catches. 10- to 13-inches.
Nice size fish. Average 1 pound.
Fish are definitely keepers but not as many as in the past.
Medium-sized, but lots of them.
Nice fish. Lots of 10- to 13-inch fish.

CHANNEL CATFISH

Ahquabi (Warren)
Big Creek (Polk)
Cedar (Madison)
Easter (Polk)
Fogle (Ringgold)
Green Valley (Union)
Icaria (Adams)
Little River (Decatur)
Littlefield (Audubon)
Manawa (Pottawattamie)
Meadow (Adair)
Mormon Trail (Adair)
Nine Eagles (Decatur)
Nodaway (Adair)
Orient (Adair)
Red Rock (Marion)

Nice fish, 19 to 23 inches.
Really nice fish, lots of them and not many catfish anglers.
4- to 6-pounders, but you will have to sort through abundant small ones.
Excellent for fish 12 to 20 inches.
Great numbers of 1- to 2-pound fish.
Good numbers of 14- to 18-inch fish, with some up to 5 pounds.
All sizes up to 5 pounds. May have to sort out smaller fish.
Fish small bays in mid-summer. Many 3- to 10-pounders.
Fish north shore on strong south wind.
Good numbers, most 2 to 6 pounds. Up to 12 pounds.
Fish are 2 to 6 pounds.
Good numbers.
1- to 4-pound cats are abundant and underutilized by anglers.
Best early. Summer vegetation makes fishing tough.
Stocked every year. Fish the camping area or on strong south wind.
12 to 20 inches. Best from Mile Long Bridge and towards dam.

CHANNEL CATFISH (continued)

LAKE OR STREAM (county)

Rock Creek (Jasper)
Saylorville (Polk)
Summit Lake (Union)
Rivers in southwest Iowa
Three Mile (Union)
Twelve Mile (Union)
Viking (Montgomery)
West Lake Osceola (Clarke)

COMMENTS

Shallow, fertile lake with good catfish of all sizes.
Excellent channel fishing. Lots of 2- to 4-pound fish.
1- to 3-pounders common. New boat ramp makes for good access.
Catfish are abundant in all of our rivers.
Good numbers of 1- to 3-pound fish.
Cats 2 to 4 pounds common, good early on cut shad.
All sizes to 6 pounds. A few big ones.
2- to 4-pounders with a few 12 pounders.

YELLOW BASS

Carter Lake (Pottawattamie)
Icaria (Adams)
Manawa (Pottawattamie)
Twelve Mile (Union)
Viking (Montgomery)

Lots of small fish.
6- to 9-inch. Hard hitters, good eating, lots of fish.
Lots of small fish, but an occasional pounder.
Moderate numbers of 7- to 9-inch fish.
Moderate amount of 8- to 9-inch fish.

MUSKIE

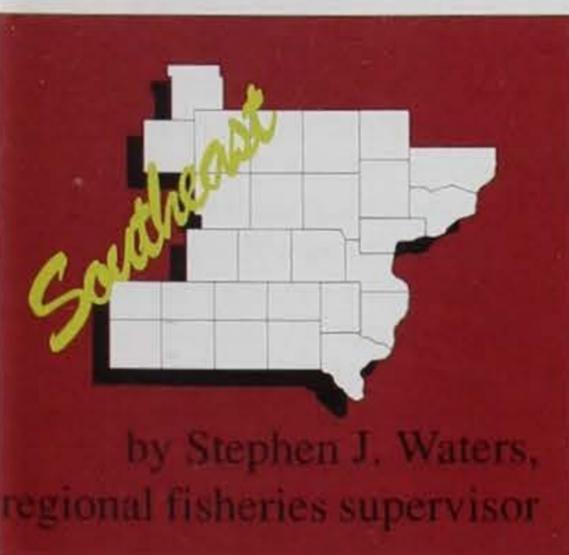
Three Mile (Union)

Newest southwest Iowa musky lake. Fish to 34 inches and growing rapidly.

WHITE BASS/WIPERS

Red Rock (Marion)
Saylorville (Polk)
Big Creek (Polk)

Fish mid-summer, off of dam towards beach or up towards marina.
Good in reservoir and below dam. White bass are 8 to 13 inches.
8- to 18-inch fish.



Fisheries biologists' surveys and angling reports indicate a great year of fishing for 1999. Several of the lakes with redeveloping fisheries (Hawthorn, Keomah and Wapello) are back big-time. Plus many more water bodies are ready for an Iowa time-honored tradition -- fishing.

I suggest gathering up the family and fishing equipment soon after ice-out and beginning a great fishing season by chasing Iowa's most popular game fish -- the **channel catfish**. Early catfishing was made for the family, because the fishing is easy and fast.

Ron Johnson



When water temperatures reach about 50 to 55 degrees, catfish go on a feeding spree — eating fish that have died during the winter. Fish your bait (cut baits are best) in the shallower (2 to 6 feet), warmer portion of a lake or river with the wind blowing across or toward you. The best areas for early spring catfish angling are lakes Rathbun, Coralville, Darling, Kent, Macbride, the Mississippi River and all inland rivers.

The Mississippi's "Mr. Whiskers" can be caught in nearly all parts of the river using a variety of baits, but best bets are above and below wingdams and riprapped heads of islands where there is a current. Stumpfields and riprapped shorelines are hotspots during the prespawn and spawning periods.

The "Great River's" **walleye** and **sauger** angling is what legends are made of. The lock-and-dam habitat produces great catches in late winter, early spring and late fall. Jigging sonars or jig-and-minnow combinations are highly effective. Wingdam fishing during summer and early fall will also produce stimulating action. Try backtrolling crankbaits or three-way night crawler rigs on the upstream side of the wingdams. Keep in mind, there is a 15-inch minimum size limit on walleye in the Mississippi River.

The Mississippi River also produces excellent catches of **white bass**, **drum**, **carp**, **crappie**, **bluegill** and **largemouth bass**. White bass frequent similar habitats of walleye and sauger, and serve as a great bonus fish. Look for crappie, bluegill and largemouth bass in the river's backwaters near



Ron Johnson

stumpfields, brush and vegetation. Remember, there is a 14-inch length limit on largemouth bass.

Interest in **flathead catfish** seems to have reached a new high in southeast Iowa due primarily to great fishing for these "big ones." Bank pole, or rod and reel, using green sunfish, bullheads or bluegill for bait, is the preferred technique. Fish deep holes in summer and fall, and around bridge pilings in interior rivers and in side channels, eddy areas, and below locks and dams on the Mississippi River. At Rathbun Lake concentrate on riprap in the Bridgeview area in late spring to early summer.

Traditional baits and techniques are highly successful for **bluegill** and **crappie**, but trying new angling techniques can produce surprising results. Ice fishing flies, waxworms and small bobbers can often out-produce the traditional bluegill baits. And, what could be more fun than flyfishing for big bluegill with small surface poppers during the morning and evening hours of summer?

Try drift-fishing for bluegills and

crappies during the summer when they have moved away from shore and are suspended about 8 to 12 feet below the surface. Lower your baits to this level, and let the wind or trolling motor push you around the lake. Mark where you catch fish and return for a similar drift pattern. New techniques, bait and equipment can revitalize one's interest in angling and enhance your fishing.

Bass size limits benefit all anglers. These important predators help manage panfish populations, ultimately increasing the average size of bass and panfish. Give size limits a chance.

Southern Iowa is blessed with several excellent bass-bluegill lakes. But perhaps the best systems are the farm ponds. Ponds are an excellent spots to start the new fishing season. Because of their size, they are the first systems to warm up, meaning a lot of early action. Also, they are the best fishing holes to catch lunker bass and bluegill. But remember, these mini-lakes for the most part are located on private property and require the owners' permission for angling opportunities.

SAUGEYE

LAKE OR STREAM (county)

Iowa River (Johnson)
Coralville (Johnson)

Sugema (Van Buren)
Union Grove (Tama)

BLUEGILL

Mississippi River
Pool 16

COMMENTS

Exceptional fishery; lots of 2- to 4-pound fish with 10-pound fish available. Best in early spring and late fall around I-380 bridge; good numbers of 2- to 3-pound fish.

Fair numbers of 14- to 20-inch fish.

High numbers of 14- to 18-inch fish with some up to 6 pounds

Andalusia backwaters, Credit Island Slough, Wyoming Island Slough.

BLUEGILL (continued)

LAKE OR STREAM (county)

Pool 17

Pool 18

Pool 19

Farm Ponds

Pleasant Creek (Linn)

Geode (Henry)

Hannen (Benton)

Hawthorn (Mahaska)

Iowa (Iowa)

Kent (Johnson)

Keomah (Mahaska)

Wapello (Davis)

White Oak (Mahaska)

Diamond (Poweshiek)

Red Haw (Lucas)

Union Grove (Tama)

Sugema (Van Buren)

COMMENTS

Big Timber, Cleveland Slough, Hidden Acres, Bogus Island, Blanchard Slough, Eagle Fill.

Huron Island, Burnt Pocket, Johnson Slough, Dasher Chute.

Burlington Island, Turkey Chute, Blackhawk Bottoms, Lead Island Chute, Niota weedbeds, Rabbit Island riprap, Devils Creek weedbed and Gray's Bay.

Exceptional angling - best chance for a trophy.

Good quality, many 7- to 9-inch fish available.

Average harvest size 7 to 8-plus inches. Trophy fish available.

Good numbers, 6 to 8 inches, with 10 inch fish reported.

Good numbers of 6- to 8-inch fish.

Good numbers of 6- to 8-inch fish.

All sizes, easy shoreline access.

Good numbers of 6- to 8-inch fish.

Excellent numbers of 8-inch-and-larger fish, look to artificial habitat.

Good numbers of 7- to 8-inch fish.

Average harvest size 6 to 8 inches.

Good numbers of 6- to 8-inch fish. New structure in lake.

Low numbers, but quality fish over 9 inches.

Tremendous numbers of 7- to 8-inch fish; a bluegill anglers dream.

CRAPPIE

Rathbun (Appanoose)

Mississippi River

Coralville (Johnson)

Odessa (Louisa)

Geode (Henry)

Iowa (Iowa)

Darling (Washington)

Hawthorn (Mahaska)

Bob White (Wayne)

Miami (Monroe)

Diamond (Poweshiek)

Macbride (Johnson)

Sugema (Van Buren)

Pleasant Creek (Linn)

Superb crappie lake. Average size 9 to 12 inches, some trophies.

Same comments as in bluegill section.

Excellent numbers of 8- to 12-inch fish, 13 to 15 inches common.

Average harvest size 8 to 10 inches.

Average harvest size 8 to 10 inches.

Good numbers from 8 to 10 inches.

Average harvest size 8 to 11 inches; trophy fish available.

Excellent numbers of 8- to 11-inch fish available.

Excellent numbers of 7- to 9-inch fish available.

Excellent numbers of 8-inch fish; 11-inch fish available.

High numbers of 9- to 11-inch fish.

Excellent for 8- to 10-inch fish, 11- to 13-inch fish common.

Fair angling; 9- to 10-inch fish most common.

Good in spring for 9- to 11-inch fish.

WHITE BASS

Mississippi River

Rathbun (Appanoose)

Coralville (Johnson)

Macbride (Johnson)

Des Moines River (Wapello)

Pleasant Creek (Linn Co.)

Seek locks and dams and wingdams.

Excellent numbers of 10- to 15-inch fish.

Lots of 12- to 14-inch fish. Best in late summer on shad colored crankbaits.

Good numbers of 10- to 14-inch fish.

Hot action below the Ottumwa hydropower dam.

Excellent for summer topwater action.

LARGEMOUTH BASS

Mississippi River

Farm ponds

Miami (Monroe)

Pleasant Creek (Linn)

Iowa (Iowa)

Geode (Henry)

Macbride (Johnson)

Sugema (Van Buren)

Same comments as bluegill section.

Best chance for a trophy. Great fishing.

Excellent numbers, various sizes.

18-inch size limit. Excellent catch-and-release with fish up to 8 pounds.

Good numbers, various sizes.

Good catch-and-release fishery. Some trophy fish.

Good numbers of 2- to 4-pounders; fish in all size ranges.

18-inch size limit. Excellent catch-and-release for 11- to 17-inch fish.

LARGEMOUTH BASS (continued)

LAKE OR STREAM (county)

Diamond (Poweshiek)
Wapello (Davis)
Hawthorn (Mahaska)
Keomah (Mahaska)

COMMENTS

Good numbers of 2- to 4-pound fish with trophy sizes present. No-kill regulation; lots of 10- to 15-inch fish. Good numbers of 12- to 16-inch for catch-and-release angling. Excellent numbers of 11- to 18-inch fish available.

CHANNEL CATFISH

Mississippi
Inland Rivers
Corydon (Wayne)
Rathbun (Appanoose)
Coralville (Johnson)

Otter Creek (Tama)

Kent (Johnson)

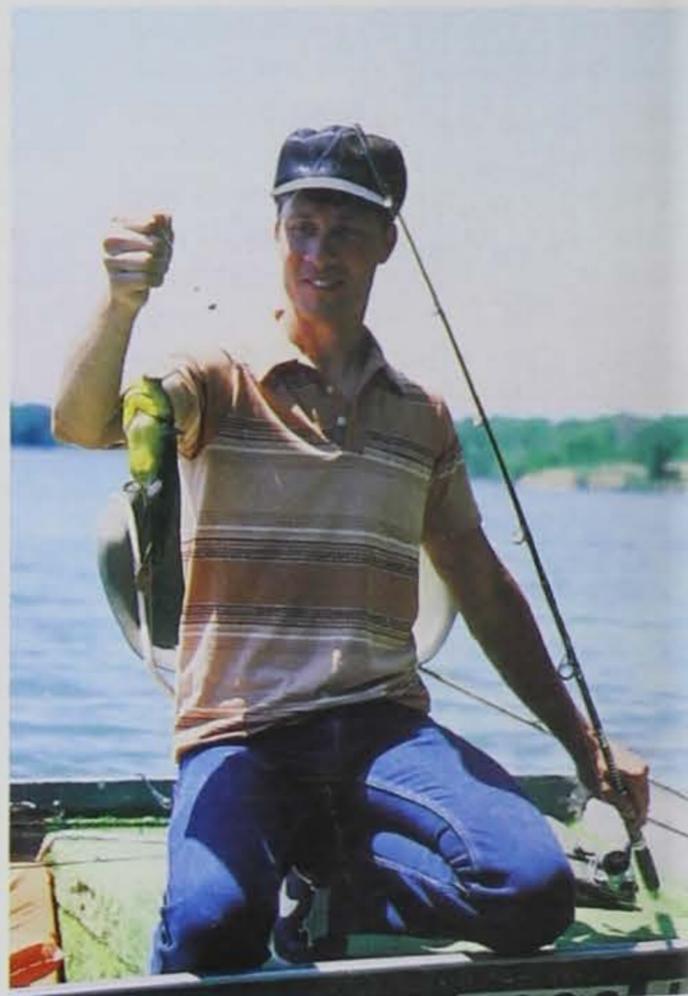
Miami (Monroe)
Macbride (Johnson)
Darling (Washington)

Geode (Henry)

Iowa Lake (Iowa)

Keomah (Mahaska)

All pools excellent.
Good to excellent.
Good numbers with a variety of sizes. Fish up to 29 inches collected in surveys. Exceptional fishery, all sizes. Post ice-out period excellent. Exceptional fishery, all sizes. Post ice-out period excellent. Lots of 2- to 3-pounders. Excellent fishery, 12 to 16 inches average. Good for a variety of sizes. Excellent for all sizes. Good for a variety of sizes. Good for a variety of sizes. Good numbers of 2- to 3-pound fish. Good for a variety of sizes.



Ron Johnson

BULLHEAD

Wapello (Davis)

Keomah (Mahaska)

Macbride (Johnson)

Otter Creek (Tama)

10- to 14-inch fish available.
10- to 12-inch fish available.
Best east of causeway in May.
Lots of 10- to 12-inch fish.

FLATHEAD CATFISH

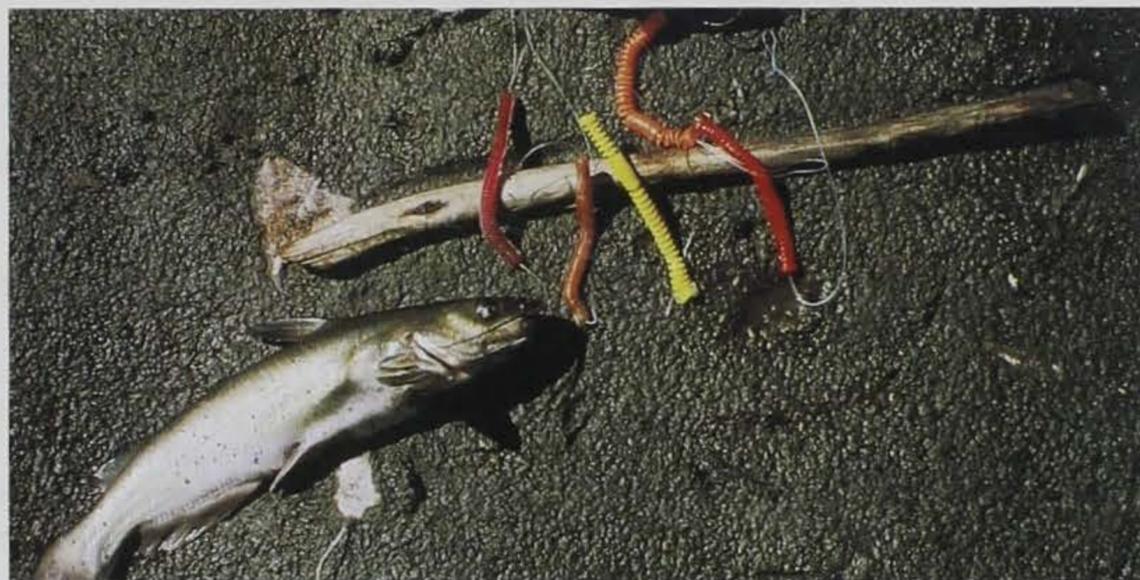
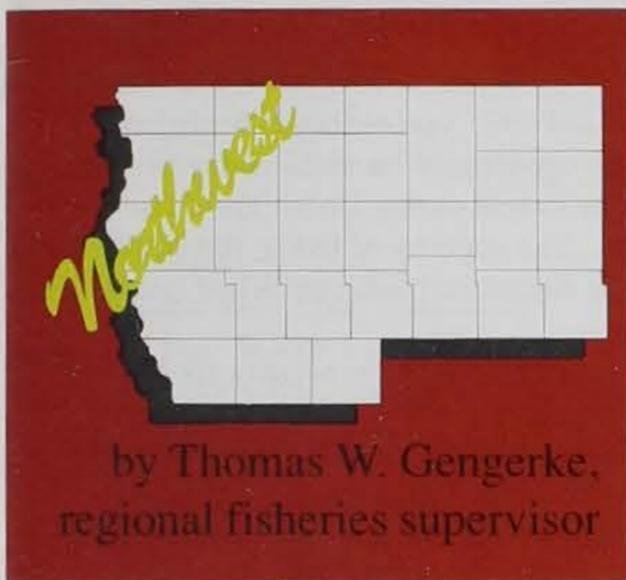
Mississippi
Skunk, lower Iowa, Des Moines,
Wapsipinicon and Cedar rivers
Coralville (Johnson)
Rathbun (Appanoose)

Best below locks and dams, wingdams and side channels. Big fish in deep holes during summer and around bridge pilings. Good numbers of 10- to 30-pound fish. Good numbers of 10- to 30-pound fish. Fair numbers of 2- to 20-pound fish available. Concentrate on rip-rap in the Bridgeview area in late spring or early summer.

WALLEYE

Mississippi
Rathbun (Appanoose)
Macbride (Johnson)
Des Moines River (Wapello)
Coralville (Johnson)

Seek locks and dams, and wingdams. Excellent for sauger, too. Excellent fishery! Large numbers of 15- to 21-inch fish available. Good numbers of 13- to 15-inch fish with trophy sizes available. Quality angling below the Ottumwa hydropower dam; trophy fish available. Good in spring and late fall in upper end and around I-380 bridge.



When anglers think of fishing in northwest and north-central Iowa the first fish that comes to mind is probably not the **channel catfish**. However, summer and catfish fishing go hand in hand, and rivers and streams represent your best opportunity. In fact, our large- to moderate-sized streams are particularly underused. They support excellent self-sustaining populations. River catfish typically average 1 to 2 pounds, however, larger fish more than 10 pounds are not uncommon.

Knowledgeable anglers look for brush piles and deep pools during the summer. Because catfish eat both plant and animal materials, many different types of baits will work. Prepared baits, chicken livers and crayfish are extremely popular. Riffle areas can be productive in the evening. Fish often move from the adjoining pools to the riffles to feed at this time of day.

WALLEYE

LAKE OR STREAM (county)

Storm Lake (Buena Vista)

North Twin (Calhoun)

Five Island (Palo Alto)

Ingham (Emmet)

Black Hawk (Sac)

Silver (Dickinson)

Where are the best areas to find riverine channel catfish in our part of the state? Try the East and West forks of the Des Moines River in Kossuth and Humboldt counties. The area from Estherville north to the Iowa-Minnesota border, the Little Sioux River from Buena Vista County to the Woodbury-Monona County line and the reach of the Little Sioux just north of Spencer are all excellent. The abundant habitat in these river reaches contribute to consecutive strong year-classes as well as providing the angler with many, easily accessible locations to fish.

As you move downstream on the Des Moines in Webster County, the river becomes wider and anglers should search out the deepest pools, particularly those on outside bends. A bonus in this section is the **flathead catfish**. Each year, flatheads in the 20- to 40-pound size class are caught from these

locations. Anglers pursuing flatheads frequently use green sunfish, chubs and goldfish for bait.

The North Raccoon River in Sac, Calhoun and Carroll counties offers the angler a variety of habitats and plenty of catfish. Anglers should not overlook the rock rubble fishing riffles or cutbanks along this river reach. Many of the fish are 1 to 5 pounds or larger.

Specific locations on the Big Sioux River include the reach from Gitche Manitou to the Klondike Dam in Lyon County, the area from the Rock/Sioux access to Oak Grove Park in Sioux County and the Plymouth County accesses located at Big Sioux Park and Millsite.

Channel Catfish! A good fight! Excellent table fare! Lots of em! Go with the flow. Fish our rivers and enjoy a great outdoor adventure.

COMMENTS

1998 was a very good year for Storm Lake walleye. With good recruitment and survival of smaller fish, anglers have found plenty of larger fish. May and June are still the best months to fish, but trolling in late summer has also been productive. Twisters and live bait rigs are proven producers. Walleye fishing was very good during 1998. Limits of fish in the 15- to 22-inch range were taken by trolling crank baits during July. We expect similar results for 1999 anglers. Don't overlook early spring (April) using twisters. The 1995 year class will continue to produce dividends for the angler in 1999. The majority of fish should be 15- to 20-inches.

The fast growing 1995 walleye year class will produce excellent opportunities during 1999. Average size should approach 18 inches.

This lake has been a fairly consistent producer over the past few years and should be an excellent choice for 1999. The majority of legal fish will be 15 to 18 inches.

The strong 1995 year class will be the major contributor to the 1999 fishery. This lake consistently produces larger fish.

WALLEYE (continued)

LAKE OR STREAM (county)

Spirit (Dickinson)

East Okoboji (Dickinson)

West Okoboji (Dickinson)

Clear Lake (Cerro Gordo)

Iowa River (Hardin)

Cornelia (Wright)

Little Spirit (Dickinson)

COMMENTS

14-inch fish will come from 1994 and 1995 year classes. The majority of fish will be sublegal, providing the opportunity for catch and release. Some larger fish (20 inches) will be caught during 1999. These fish were recruited from the 1991 year class. The majority of fish in the creel will come from the 1994 and 1995 year classes and some catch and release will be necessary.

The fall of 1998 produced some excellent fishing, especially for larger fish. 1999 should be a good year for walleye anglers.

Fall surveys highlighted good numbers of 14- to 16-inch fish as well as 20- to 24-inch fish. Spring fishing will yield lots of fish around 12 inches.

2-inch fingerling stockings from Alden to the county line have survived well and are providing good opportunities for 1- to 2-pound fish.

1998 surveys showed good numbers of 1- to 2-pound fish.

Numbers are increasing. Dominant size range is 14 to 16 inches.

YELLOW PERCH

Cornelia (Wright)

Rice (Winnebago)

Spirit (Dickinson)

West Okoboji (Dickinson)

East Okoboji (Dickinson)

Little Swan (Dickinson)

Little Spirit (Dickinson)

Large population. Variety of sizes. Fish up to 10 inches.

Lots of small fish. Fair number of keepers. Typically good in fall and winter.

Excellent population of 4- and 5-year-old fish available.

Fishing will improve in 1999, with better numbers of 4- to 6-year-old fish.

Good for fish up to 10 inches during the early spring period.

Good numbers of 9- to 11-inch fish are available.

Numbers are increasing. Average size 9 to 10 inches.

BLACK BULLHEAD

Rice (Winnebago)

Cornelia (Wright)

High (Emmet)

Lost Island (Palo Alto)

Excellent number of 1/2- to 3/4-pound fish. Bite begins shortly after ice-out. Consistently good. Most fish are over 1/2-pound. Fish the north shore and jetty near the ramp.

Relatively lightly fished. Quality fishing available.

Large number of fish available.

CHANNEL CATFISH

Snyder Bend (Woodbury)

Storm Lake (Buena Vista)

Little Sioux River (Buena Vista)

Clear Lake (Cerro Gordo)

Iowa River (Hardin)

Des Moines River

(Kossuth and Humboldt)

Boone River (Hamilton)

Lake Pahoja (Lyon)

Big Sioux River

(Lyon, Sioux and Plymouth)

East Okoboji (Dickinson)

Mill Creek Lake (O'Brien)

Excellent population of 2- to 5-pounders, with some 10 to 15. Early ice-out anglers should try shad entrails for immediate action.

Fishing has been tremendous and will continue that way into the next century. Keep it simple - use nightcrawlers, chicken liver and stink baits.

Drifting cut bait or dead chubs in the heat of the summer is excellent.

Rivers are consistent producers. With over 20 public access sites in seven counties, getting to the "fishing holes" is easy. A variety of baits - cut baits, live bait, stink bait and liver - produce for river anglers.

Good opportunity for shore anglers. Variety of sizes up to 10 pounds.

1998 surveys showed an abundance of fish in the 1- to 3-pound range.

Excellent habitat. Fish snags, holes and pools below riffles.

Catfish are king below Webster City. An occasional flathead also available.

Excellent numbers of 2- to 5-pound fish available.

Large numbers of fish available. Flathead fishing is improving.

Excellent population of 3- to 5-pound fish.

Large fish recruited from the cage program.

MUSKIE

LAKE OR STREAM (county)

Clear Lake (Cerro Gordo)
West Okoboji (Dickinson)

COMMENTS

30 to 34 inches were the dominant size observed during 1998 sampling. This lake has been the most consistent producer over the past few years.

BLUEGILL

Little Wall Lake (Hamilton)
Briggs Woods Lake (Hamilton)
Willow Creek Pond (Osceola)

West Okoboji (Dickinson)

Good numbers of quality size fish (7 to 9 inches). Fish May and June. Lots of 6- to 8-inch bluegill are available. Quality 6 to 8 inches and larger 8-inch-plus fish. Large population of 6- to 8-inch gills.

CRAPPIE

Crystal Lake (Hancock)

Lake Smith (Kossuth)

Beeds Lake (Franklin)
North Twin (Calhoun)
Swan Lake (Carroll)

Ingham Lake (Emmet)
Iowa Lake (Emmet)
Five Island (Palo Alto)
Silver Lake (Palo Alto)

Excellent numbers of 8- to 9-inch crappie. Fish the old road bed or around fallen trees near shore in May. 7- to 8-inch fish are abundant. Fish in the rocks on the dam during the spawn.

Excellent. Fish the rocks on the causeway, over sunken brush and stake beds. Lots of nice 8- to 10-inch fish. Try the south shore in May. Early spring and late fall are the best times and the covered fish house is the best place. Fish run 8 to 11 inches. Fish the submerged shallow water timber in spring. Fish run 9 to 11 inches. Good numbers of large fish. Fishing is improving. Good numbers of 8- to 10-inch fish. Crappies are approaching 10 inches.



Ron Johnson

NORTHERN PIKE

Crystal Lake (Hancock)
Little Swan (Dickinson)
Tuttle Lake (Emmet)
Trumbull Lake (Clay)

Good population of 2- to 4-pound pike, with a few fish over 10 pounds. Good numbers of 3- to 5-pound fish. A traditional favorite. Excellent opportunity for fish larger than 30 inches.

SMALLMOUTH BASS

Spirit Lake (Dickinson)
West Okoboji (Dickinson)
Iowa River (Hardin)

Excellent numbers. Stable population. Spring and early summer are the most productive periods. Fish submerged rocks and points. Good recruitment from 1994 and 1995 year classes. Potential for state record. Excellent habitat with quality fish from Alden to Eldora.

LARGEMOUTH BASS

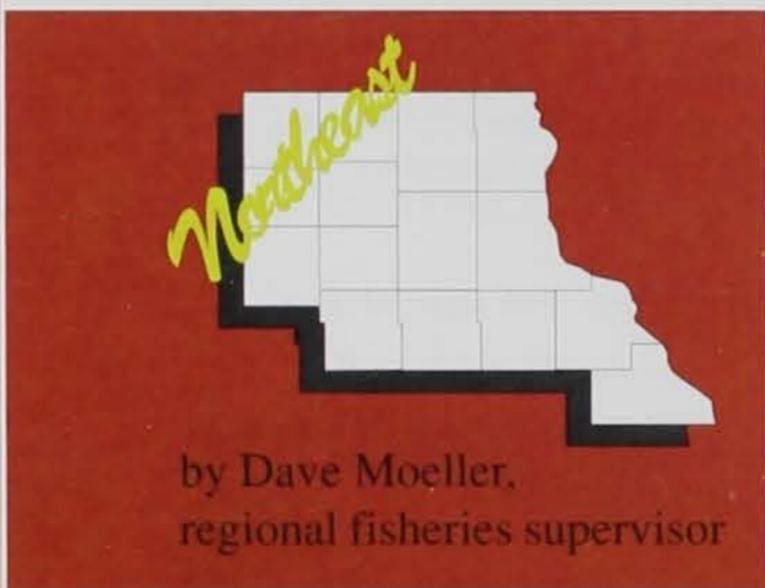
Lake Pahoja (Lyon)
Little Wall (Hamilton)
Upper and Lower Pine Lakes (Hardin)

Recent surveys indicate good numbers of fish larger than 15 inches. Anglers are encouraged to practice catch and release at this lake. Many 1- to 3-pound fish are available. Remember the 18-inch minimum length limit. Good population in both lakes. Surveys showed fish from 12 to 19 inches.

YELLOW BASS

Clear Lake (Cerro Gordo)

Excellent opportunity to catch 8- to 10-inch fish from mid-May to early June. Fish over rocky substrate in shallow water.



Northeast Iowans are blessed with a diversity of quality fishing waters ranging from the step-across trout streams to the 2-mile wide Mississippi River, and from small ponds and lakes to the large Mississippi backwaters.

This tremendous diversity produces a wide array of quality sport fish for anglers to pursue. Listed in the following tables are the areas where fisheries biologists expect angling for the major species to be very good this year. For most of us, the best time to go fishing is *any time we can*; however, if we can coincide our efforts with certain key periods and conditions, our success will be greatly enhanced. Let's also take a look at when we should concentrate our efforts for the major species.

The weeks just before and after the spawn (around 75 degrees) are the best for **bluegill** fishing. The males are aggressively guarding their nests and will attack small baits and lures entering their space. Mid-summer months are also productive, but in the deeper water areas with structure. During the lowest flow conditions in summer, the Mississippi River wing dams frequently produce lots of big gills. The first few weeks after ice-up is another peak time for some of the biggest gills of the year.

As soon as the ice goes out, **catfish** go on a feeding binge, eating fish that have died over the winter. Fishing with cut-bait or dead minnows is often excellent. Catfishing is frequently excellent on a rising river. The summer and early fall period of low and stable river flows is also a favored time for cats.

Like their cousin the bluegill, male **crappie** become very aggressive during the pre-spawn and spawning period (58-68 degrees), normally in May. The cooler fall months can also be very good. Again, like the bluegill, the early ice fishing period is an excellent time for crappie.

By far the most productive period for **largemouth bass** is the pre-spawn when the water temperature ranges from 55 to 62 degrees and the fish are actively feeding in shallow water. The fall months from mid-September to when the water cools to about 50

degrees are also good when the bass are shallow and foraging for the winter.

The hot months of July and August are often the best for **northern pike**. Big bobber fishing with a live chub in the deeper backwater areas is very effective. During these hot months, also seek out areas where cooler tributaries or a trout stream enters larger, pike-holding rivers. These cooler waters are a true magnet for northerns at this time.

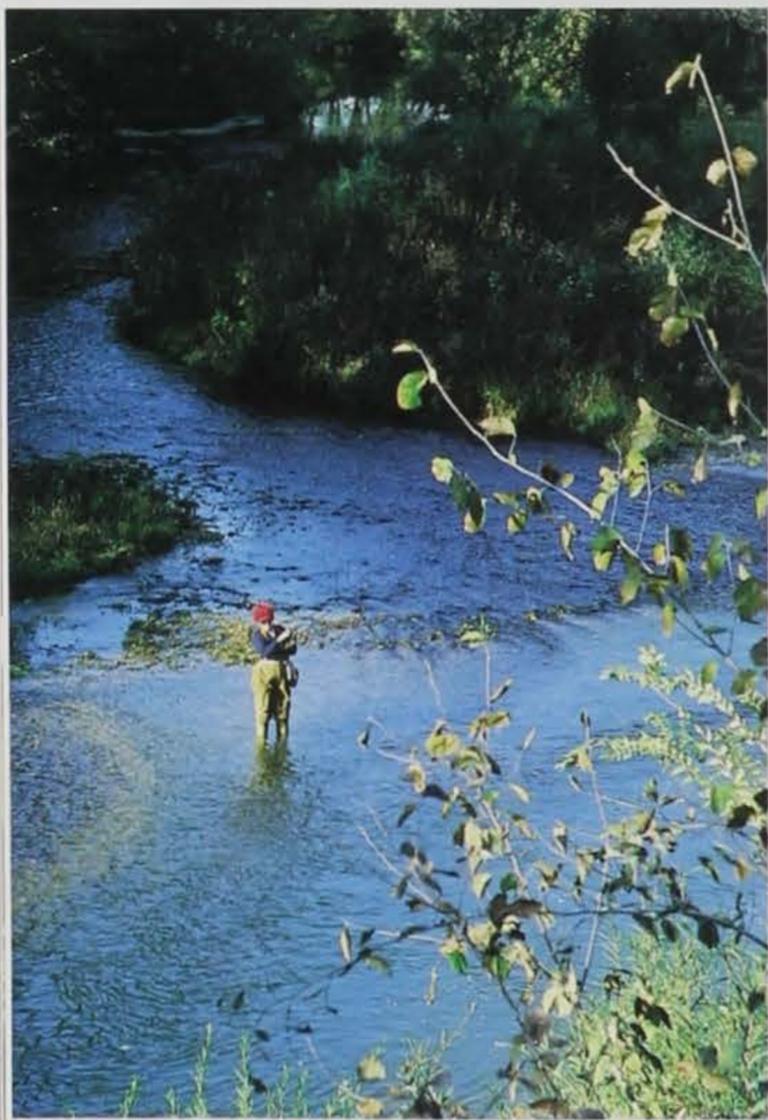
The tailwaters of the navigation dams are often loaded with **saugers** beginning in late fall (October), right through the winter months and on into the early spring (April). Fish on the bottom with jig-and-minnow, sonars or three-way rigs.

When the streams are clear enough, the pre-spawn period from 50 to 60 degrees is an excellent time for **small-mouth bass**. The clear and stable water conditions of summer and fall also result in good smallmouth angling, often with good action continuing right into November.

Trout streams are generally good throughout the April to November stocking season. The fall months are particularly good as angling pressure and streamside disturbance are reduced. An excellent time to fish the stream-reared trout populations (the put-and-grow streams and special regulation streams) is just after a moderate rain.

The pre-spawn period for **walleye** from just after ice-out to when the water temperature reaches about 48 degrees is an excellent time to fish below the navigation dams on the Mississippi River and the low-head dams on our larger, interior rivers. Late spring and summer often finds them on the wing dams and along riprap areas on the Mississippi when the river flow is not too strong. Late fall and winter on the "Big River" again finds walleye in the dam tailwater areas and on the interior rivers in the deepest pools.

Having been armed with the location of the best *fishin' holes* and the best times to pursue those species, the only thing left is the fun part -- the doing. I sincerely hope that your angling enjoyment in 1999 is surpassed only by the beauty of northeast Iowa.



Ron Johnson



Ross Harrison

BLUEGILL

LAKE OR STREAM (county)

Casey Lake (Tama)
Lake Delhi (Delaware)
Lake Hendricks (Howard)

Mississippi River
(Pools 9-15)
Sweet Marsh Segment B
Marten's Lake (Bremer)
Volga Lake (Fayette)

COMMENTS

Abundant 7- to 8-inchers. Fish shallow waters in May and June.
Fish up to 7 inches. Fish early spring and late fall to avoid heavy boat traffic.
6- to 8-inchers common. Fish near the abundant habitat structures and around the handicap-accessible fishing pier.
Expect an increase of more and bigger bluegills throughout the range, but most fish are less than 7 inches.
Abundant 6- to 7-inchers with some up to 8 inches. Concentrate along shorelines in May and June.
From 6 to 8 inches and found along old creek channels and along the dam.

CHANNEL CATFISH

Cedar River (Black Hawk,
Bremer, Chickasaw and Floyd)
Lake Delhi (Delaware)
Lake Meyer (Winneshiek)
Maquoketa River (Delaware,
Jones and Jackson)
Meyer Lake (Black Hawk)
Mississippi River
(Pools 9-15)

Shell Rock River (Butler)
South Prairie Lake (Black Hawk)
Turkey River (Clayton)

Upper Iowa River (Allamakee)

Volga Lake (Fayette)

Wapsipinicon River (Buchanan)

Abundant numbers from Charles City downstream and occasional flathead below Waterloo.
Good population of all sizes. Avoid mid-summer due to high boat traffic. Supplemental stocking has built up good numbers of quality-size cats.
Good populations from Manchester downstream to the Mississippi River. Abundant number of fish exceeding 5 pounds sampled in Jones County.
Good numbers of quality-sized catfish with occasional fish over 10 pounds. Population numbers and average size continue to increase every year. Many fish in the 2- to 4-pound size group are harvested, and bigger fish in the 5-pound-plus class are becoming more numerous.
Good numbers throughout county; try the shallow riffle areas in the fall. 1- to 2-pounders abundant in this lake located just south of Cedar Falls.
Best population from Elkader to Osterdock; hit the deep water just below the riffles, around snags and along rocky banks.
Best accessed by canoe from the lower dam northeast of Decorah to Highway 76 north of Waukon. Medium sized fish, but plentiful.
Many years of fingerling catfish stockings have established an excellent population. Some very large cats are occasionally taken.
Concentrate your effort downstream from Littleton; all sizes present.

CRAPPIE

Casey Lake (Tama)

Lake Delhi (Delaware)

George Wyth Lake (Black Hawk)
Mississippi River (Pools 9-15)

Sweet Marsh Segment B
Marten's Lake (Bremer)

Average-size fish in deep-water structure; concentrate on shallow areas during May spawning season.
Average size fish abundant. Concentrate fishing in spring and fall around fallen trees or woody structure.
Good number of 8- to 9-inchers. Handicap accessible fishing pier available. Lots of fish 8 to 9 inches with quite a few from 10 to 13. Move frequently until you locate an active school. Minnows and small jigs fished under a bobber around brush and woody structure produces the best catches.

Good numbers of 8- to 10-inchers.

FRESHWATER DRUM (Sheepshead)

Mississippi River (Pools 9-15)

Fishing for drum has been and is expected to continue to be excellent. Fish the current breaks on sandy shoals and wing dams using nightcrawlers.

LARGEMOUTH BASS

Casey Lake (Tama)

George Wyth Lake (Black Hawk)

18-inch minimum size limit has produced an excellent population with numerous 5-pound-plus bass. Fish along the dam and around structure. Concentrate on the sunken tree piles, pallet-bed structures, rocky areas and around the new jetties.

LARGEMOUTH BASS (continued)

LAKE OR STREAM (county)

Greenbelt Lake (Black Hawk)

Lake Delhi (Delaware)

Lake Meyer (Winneshiek)

Mississippi River

(Pools 9-15)

South Prairie Lake (Black Hawk)

Sweet Marsh Segment B

Marten's Lake (Bremer)

Volga Lake (Fayette)

NORTHERN PIKE

Cedar River (Black Hawk and Bremer)

Maquoketa River (Delaware)

Mississippi River

(Pools 9-13)

Sweet Marsh Segment B

Marten's Lake (Bremer)

Wapsipinicon River (Buchanan,

SAUGER

Mississippi River

(Pools 9 through 15)

SMALLMOUTH BASS

Cedar River (Bremer and Black Hawk)

Cedar River (Mitchell and Floyd)

Maquoketa River (Delaware)

Maquoketa River (Jones and Jackson)

Mississippi River (Pools 9 through 15)

COMMENTS

Good numbers of quality-size fish.

Good population along the rocky shorelines and woody structure.

Good numbers of quality-size bass; 18-inch fish not uncommon.

The "Big River" still supports the largest bass population in the state. Good numbers, but most are less than 5 pounds. Fish in the backwater lakes and running sloughs near woody structure. As water levels drop during the summer months, move out to the mouths of the backwater lakes or find slack water along the main channel border.

Abundant 12- to 15-inch bass; 18-inch minimum size limit.

High numbers of quality-size bass. Be sure to check your boat and trailer for presence of Eurasian water milfoil when leaving.

Good population of medium-size bass with some over the 15-inch length limit. Try along the riprap or near deeper snags along the west shore.

Fish the shallow backwaters.

Stocking have resulted in a quality pike fishery.

Most fish from 5 to 8 pounds with some up to 15. Fish large, live baitfish in the backwaters in summer and fall and near the mouths of coldwater tributary streams during the hot summer periods.

Good population augmented with fingerling stockings.

Best from Independence upstream. Excellent numbers of all sizes of pike.

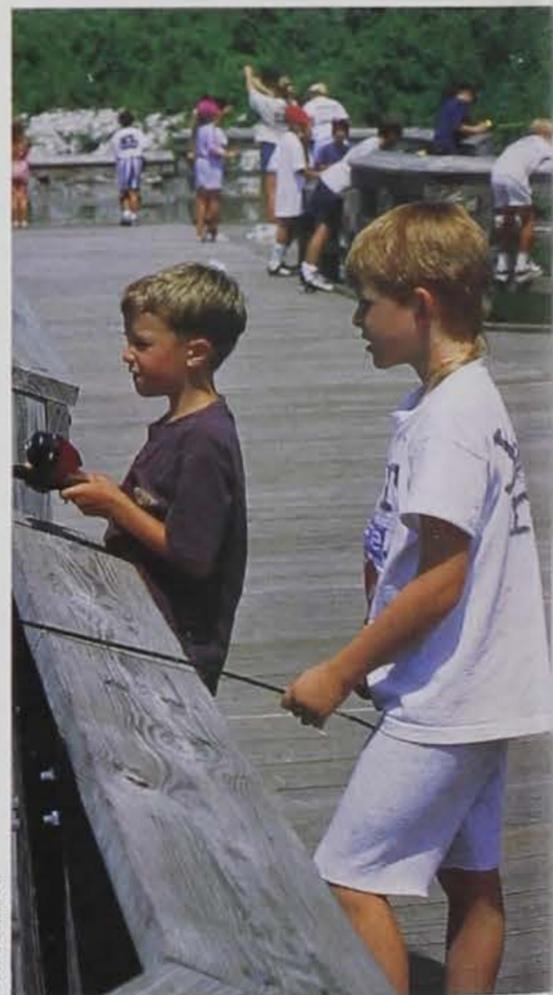
Tremendous numbers of 12- to 13-inch fish will provide excellent angling the next few years. Very good numbers of 14- to 17-inchers. Most are caught in the tailwaters of the navigation dams from late fall through the early spring months.

Best habitat and bass numbers are downstream from Waverly and Waterloo. Excellent habitat above and below the Mitchell Impoundment. Catch-and-release area from Otranto to St. Ansgar. Good below Charles City.

In the catch-and-release area below the Lake Delhi dam, the smallmouth population is at a record high level!

Great habitat and excellent numbers below Monticello and Canton. Many fish over 15 inches sampled in 1998.

Species responding to increased habitat. Fish rock structure in the current. Fair numbers in the 15- to 18-inch range. Many 10- to 12-inchers.



Ron Johnson

SMALLMOUTH BASS (continued)

LAKE OR STREAM (county)

Shell Rock River (Butler and Bremer)
Shell Rock River (Floyd)
Turkey River (Clayton)

Upper Iowa River (Allamakee,
Howard and Winneshiek)
Volga River (Fayette)
Wapsipinicon River (Buchanan)

COMMENTS

Good populations from Greene to the confluence with the Cedar River. Best accessed from canoe or by wading; medium size fish. Excellent habitat from above Eldorado down to Big Spring, and from Elkader to Garber. Best accessed by canoe. Best fishing early above Kendallville, later below Decorah. Catch-and-release area from Decorah to Upper Dam; numerous 12 to 18 inchers. Small, scenic river. Best from Fayette to Mederville. Best accessed by canoe. Littleton to Quasqueton has the best habitat. Good numbers of smallmouth up to 18 inches.

TROUT

Bankston Creek (Dubuque)
Bloody Run (Clayton)

Ensign Hollow (Clayton)

Fountain Springs (Delaware)

French Creek (Allamakee)

Maquoketa River (Clayton and Delaware)

Pine Creek (Allamakee and Winneshiek)

Sny Magill/North Cedar (Clayton)

South Pine (Winneshiek)

Spring Branch (Delaware)

Trout Run (Winneshiek)

Stocked twice a week with catchable rainbow, brown and brook trout. Stream stocked with browns and rainbows from April through October. Special brown trout segment on lower end with a 14-inch minimum length limit and artificial lure only restriction contains large browns. Abundant brown trout in the 12- to 17-inch range with some larger fish present. Rainbow population increasing due to fingerling stockings. Catch-and-release and artificial lure only. Stocked with catchable rainbow and brook trout twice per week April through August, once per week in September and October. Half-mile of additional stream purchased in late 1998. Wild brown trout catch-and-release area. High numbers with increasing numbers of large fish. All angling restricted to artificial lure only. Catchable brown and brook trout stocked as well as brown and rainbow trout fingerlings. Fish the abundant woody structure for large brown trout. Walk-in access to very remote and scenic stream. Stocked with browns twice monthly from April through November. Excellent drive-up or walk-in access on Sny Magill which is stocked from April through November with brown and rainbow trout. North Cedar is walk-in access and is stocked with browns once per month in the lower portion and with fingerling brooks once annually in the upper end. Very strong numbers of naturally reproducing, vividly colored brook trout. Catch-and-release and artificial lure only. Three fourths of a mile walk to get to stream. Fish over 15 inches present. Watershed project has resulted in the improvement of all eroding banks on the stream. Fourteen-inch size limit on brown, rainbow and brook trout and artificial lures only. A high-quality trout stream. Handicap parking and stream access. Stocked twice weekly with browns and rainbows from April through October.

WALLEYE

Cedar River (Bremer,

Maquoketa River (Delaware)

Mississippi River (Pools 9-15)

Shell Rock River (Butler)

Wapsipinicon River (Buchanan)

Fingerling stockings have resulted in good populations. Fish below dams in the early spring, and deeper pools and snags in summer and fall. Good population of 14- to 20-inch walleye below Manchester and the Lake Delhi dam. 1998 walleye angling was excellent. Two strong year classes will produce lots of fish in the 12- to 14- and 18- to 22-inch ranges. Key on tailwaters in pre-spawn period in March and April and again in late fall. Work the wing dams in post-spawn and summer/early fall periods using crawlers and crankbaits. Five years of fingerling stockings have resulted in abundant numbers of 16- to 20-inch fish. Excellent numbers from Littleton downstream. Abundant 14-18 inchers. Walleyes over 10 pounds caught every year.

Minnehaha Creek flows through fertile Grundy County farmland before reaching Grundy Center.



The Minnehaha Creek Watershed Project

Article and photos by
Kevin Baskins

... is a unique cooperative effort of urban and rural land interests. Together they seek to demonstrate innovative and transferable practices to educate the current population while enhancing the watershed for future generations.

"Minnie Creek, back in the 30s and early 40s, was an adventure into the wilderness for young boys. The creek was a place to explore and see all kinds of birds and animals. It was just fun to go because you felt like you were in a world of your own away from everyone else. The trees were our forest and the creek was a wide river to us. This was also a time before chemicals and pesticides. In those days, you could drink the water from the little springs and the field tile."

-- Leonard Ralston



The magic of Minnehaha Creek is contained in the voices, the words and the memories of the people who grew up along its banks. The Minnehaha has been a glorious -- if unsung -- teacher to generations of Grundy County youngsters. The lessons were simple, hands-on and lifelong from the days of their youth. The simple presence of a creek offered everything from building dams and catching frogs to watering livestock during chores.

The Minnehaha still offers those simple lessons. But to many, life is no longer as simple. The lessons are more complex.

Minnehaha Creek is ready again to provide some of those lessons. As a result, it is hoped the stream itself will benefit as much as its pupils.

The Minnehaha Creek Watershed Project is a concentrated effort to improve the stream. It is a joint venture of both urban and rural residents to protect the watershed, leaving something behind that's even better.

And once again, one of life's great lessons comes through people's contact with Minnehaha Creek. They are learning that the water used is a direct reflection of themselves. Through their example, they can teach the importance of protecting natural resources to the next generations. They are learning that individual actions can make things better.

The major focus of the Minnehaha Creek Watershed Project is on information and education. Through the efforts of the project, both urban and rural residents will gain an awareness of how everyday activities have an impact on water quality.

The project is a result of the Grundy County Soil and Water Conservation District commissioners wanting to address soil and water conservation on a watershed level. This puts a broader scope on conservation and emphasizes the concept that all aspects of nature are interdependent.

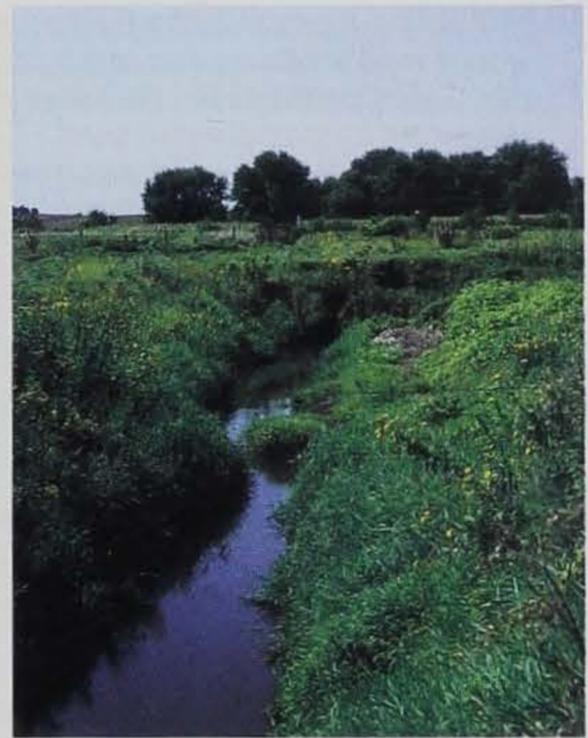
Minnehaha Creek drains approximately 7,000 acres. Cropland accounts for 6,000 acres while another 880 acres are in the city of Grundy Center.

The project offers a unique opportunity for urban and rural residents to learn more about each other since success is dependent on the cooperation from both populations. The primary source of stream contamination in Iowa is sediment, nutrient and chemical runoff from agricultural land and urban areas.

A total of \$273,460 has been appropriated to the Grundy County Soil and Water Conservation District for the project, including \$156,335 from Section 319 of the federal Clean Water Act and administered by the Iowa Department of Natural Resources. An additional \$117,125 will come from the Water Protection Fund administered by the Iowa Department of Agriculture and Land Stewardship.

But ultimately, the success of the project rests in the hands of local people. It is through their efforts that improvements to Minnehaha Creek and its watershed can be achieved.

Project coordinator Judie Krebsbach takes monthly water samples at several places along Minnehaha Creek.



Minnehaha Creek as it appeared more than 70 years ago (left) and how it appears today just south of the Grundy County Fairgrounds.

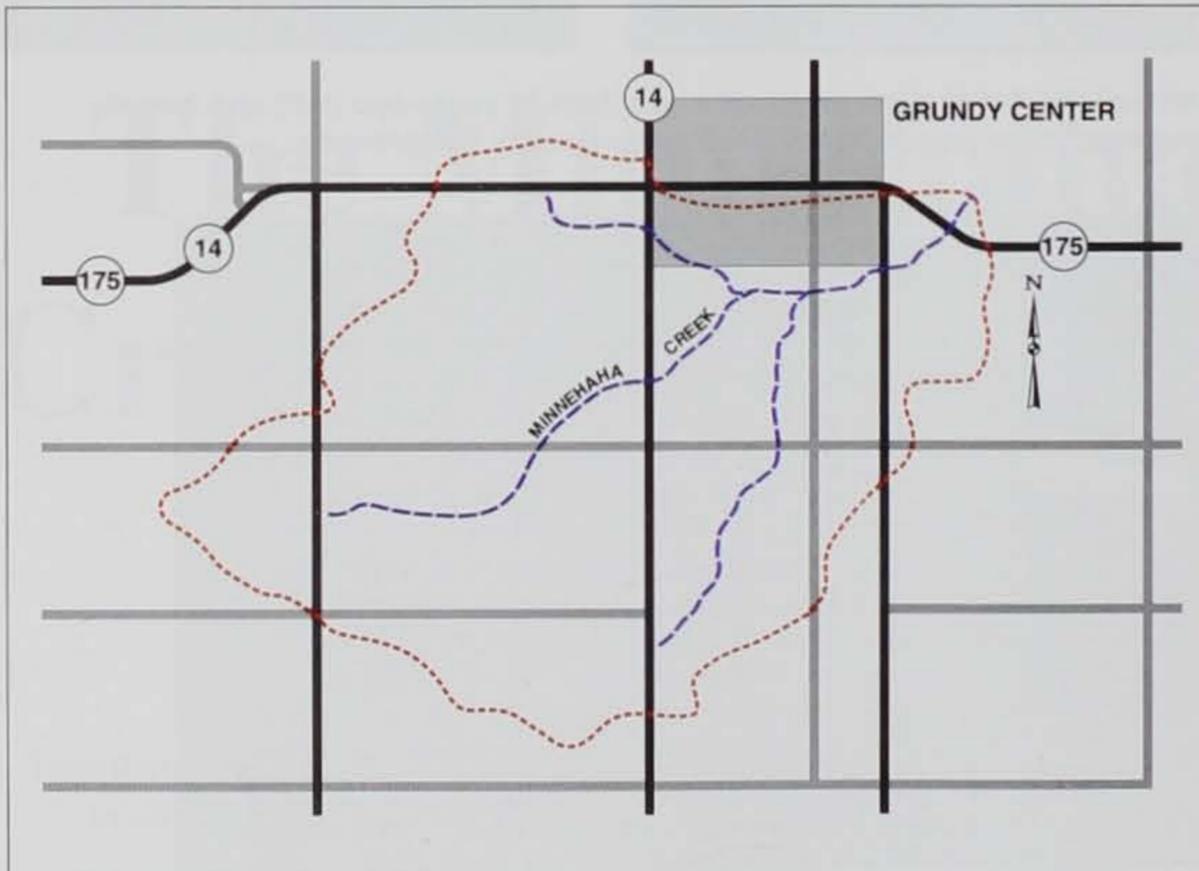


"Growing up in the southern part of Grundy Center made going to the Minnehaha Creek a favorite pastime. The creek ran through the property of Pete Wolthoff. There was a big slough that was great for hunting. My two older brothers, Bob and Russell, and myself helped put many a meal on the family table with game from this slough. Roast pheasant stuffed with sage dressing was served quite often and it made a person feel good that I had contributed to food on the table. Rabbit was another meal. In the summertime, we would dam up the creek so it was deep enough to swim in. We had to use sod from the banks to strengthen and hold the water in. I remember one time Pete yelled at us about tearing the sod. I don't know as I ever heard the word 'conservation' during my early years."

-- Amos Albright



Educating the public about city storm sewers is a major component of the project. Dumping yard waste and other contaminants such as used motor oil or paint into storm sewers can pollute streams like Minnehaha Creek. Not only does proper management of storm sewers make good sense environmentally, but also fiscally. Grass clippings and other yard waste from lawns dumped in the street require city workers to unclog the system after rain, costing taxpayers money.



Streambanks can be effectively stabilized to prevent erosion in both rural and urban settings.

Practices such as no-till farming used by local producers like Paul Harberts can produce dramatic improvements for water quality. Harberts said no-till not only reduces soil erosion, but also saves him time and money through reduced machinery and fuel costs without sacrificing yields.





Farmers, like Dale Grimmus, have assistance from Grundy County District Conservationist Marcia Roll to develop whole-farm resource management plans. One practice being emphasized is developing nutrient and pest management programs for cropland. By proper soil testing, nutrient application is evaluated so correct amounts are applied only when needed.



Grundy Center Community High School students plant native prairie as a buffer along a tributary of Minnehaha Creek.



Grundy County Engineer Gary Mauer looks over a road ditch southwest of Grundy Center where a roadside management program will soon be implemented. The program will incorporate a variety of practices that not only control weeds, but enhance the value of the roadside aesthetically, increase wildlife habitat and improve water quality by decreasing soil erosion.

Urban and Rural Working Together

Since nonpoint source pollution can be attributed to various land disturbances, specific methods have been developed to minimize both these disturbances and the runoff they generate. These methods are known as best management practices, or BMPs.

Synonymous with pollution prevention, BMPs use the land in the wisest possible ways -- whether it be for growing crops or grazing cattle, building streets or maintaining lawns. BMPs are exactly what the phrase implies -- coordinated, judicious timing (including some structures) as components within a total land management system.

The map at left shows the area of Minnehaha Creek watershed and some of the BMPs that will be used to improve water quality in the stream.



Town and Country Effort Underway

Over the years, Minnehaha Creek has been catching a lot more than the errant shots of golfers at the Town & Country Golf Club. It's also been taking a lot of sediment from streambank erosion.

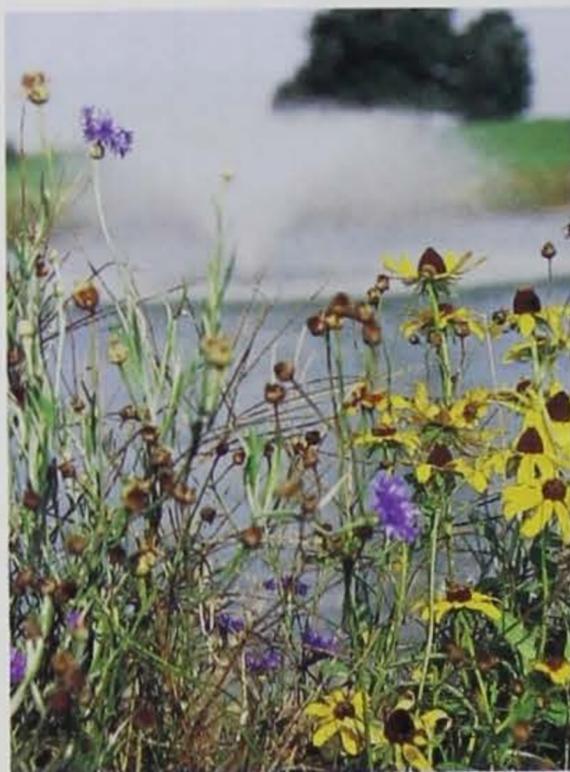
The members of the golf course have been among the first in the community to embrace the watershed project and some of their efforts can already be seen.

The golf course is an excellent example of how a natural approach can provide both beauty and function to a recreational area. Improvements such as the strategic planting of prairie flowers not only act as a filter for run-off into the stream, but also enhance the aesthetics of the course.

During the Minnehaha Creek Watershed Project, members of the golf club continue to be involved in stabilization of the streambank and other efforts to improve the watershed. Members of the club have also offered the use of labor and equipment for improvement projects.

But perhaps most importantly, Town & Country allows access to the golf course for educational tours. By its very nature and name, Town &

Country provides a superb venue to showcase a joint effort of urban and rural residents to improve their watershed.



Native plants provide a colorful buffer around the pond.

Vera Krull, a member of the Town & Country Golf Club, with a native prairie planting near the second tee. The golf course has been using prairie plantings in various locations to control run-off.

Understanding Storm Sewers

To many people, storm sewers would appear to be the perfect outside drain. Often times, the storm sewers become receptacles for yard waste and other potential contaminants such as used motor oil.



Public Works Director Jim Copeman removing yard waste debris from a storm sewer inlet.

"A lot of people simply have no concept that what they put down the storm sewers affects the water quality of streams," said Jim Copeman, public works director for Grundy Center.

One of the primary objectives of the Minnehaha Creek Watershed Project is to educate the residents of Grundy Center about how their actions can affect water quality.

Copeman said the message has already been driven home to some residents who witnessed a demonstration in the spring of 1998. By simply opening a fire hydrant, letting the water run through the storm sewer system and watching the outlet into Minnehaha Creek, people were able to see how much debris is carried into the stream from the urban area.

"The water ran clear at the outlet at the start, but pretty soon there was all kinds of dirt and leaves coming through. People could not believe the impact of the run-off from the storm sewers," Copeman said.

For many homeowners, the practice of blowing grass clippings and leaves into the street seems like a common-sense approach to disposal. The next rain, after all, will simply wash it all away down the storm sewers.

But Copeman said allowing the yard waste into storm sewers poses both environmental and economic problems.

"The decomposition of grass clippings and leaves take oxygen out of the water," Copeman said.

Too much debris also clogs the storm sewer system causing water to back up. It is the taxpayers of Grundy Center who eventually pay the price for clean ups, after virtually every rain.

"We can often times have two people cleaning the intakes on the street all day after a rain. At a cost of about \$70 an hour for the manpower and equipment, that's over \$500 a day to clean up after a rain," Copeman said.

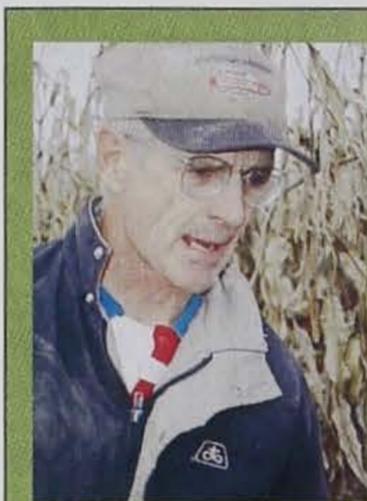
Preserving the Very Best

It's no secret that the soil in Grundy County is particularly valuable to agriculture. Statistics show that farm land in the county consistently commands the highest per-acre rental rates in Iowa and has traditionally ranked among the top five counties in the state for land values. Many of the top seed companies use the rich soil here for their seed production, including land within the Minnehaha Creek watershed, where 23 percent of the total area is considered to be highly erodible.

Soil erosion from cropland is the number one source of surface water contamination in the state of Iowa. Erosion not only fills our streams and lakes with sediment, but can also carry other contaminants such as fertilizers and pesticides which degrade water quality. Without the use of best management practices, the long-term potential is to have both poor water quality and lower cropland productivity.

And from the producer's standpoint, it just makes good sense.

"The Minnehaha Project offers an opportunity for the agricultural community to educate the urban sector that we



"I have always been interested in soil conservation. The Minnehaha Project interests me for two reasons. First, it involves the community, urban as well as agricultural community. Second, it gives me a chance to show my urban neighbors that farmers are interested in water quality and soil conservation. We are trying to protect the environment."

-- Dick Lynch

are concerned about water quality and soil erosion. There is no advantage economically to over-apply nutrients," according to Dale Grimmus, a local producer.

During the Minnehaha Creek Watershed Project, the demonstration of agricultural BMPs will be an important component of the effort. Some of the

agricultural practices that will be demonstrated are conservation tillage, riparian buffers, grass waterways, grazing management, cover crops, and nutrient and pest management and shallow-water wetlands.

"It will be interesting to see how different practices affect water quality," said David Strickler, a local producer.

"One practice of particular interest is the establishment of grass filter strips along the creek and noticing changes that occur," Strickler said.

The Minnehaha Creek Watershed Project provides a chance for farmers to not only learn more about how agriculture impacts water quality, but also offers an opportunity to secure funding to help in the implementation of conservation practices.

Kevin Baskins is a non-point source pollution information specialist for the department in Des Moines.



Some of the latest technological equipment available to farmers, such as global positioning, will be demonstrated during the project.

The Minnehaha Creek project is supported in part or in total by the Iowa Department of Agriculture and Land Stewardship's Division of Soil Conservation with funds from the Water Protection Fund or by the Iowa Department of Natural Resources through a grant from the U.S. Environmental Protection Agency. Technical assistance is provided by the U.S. Department of Agriculture's Natural Resources Conservation Service.

IMPROVING YOUR IMAGE

Article and photos by Lowell Washburn

The first and last hours of daylight will yield the richest colors (bottom right).
Whenever possible, use reflections, fog, rain or snow to create a mood.

During the past decade, wildlife photography has become one of America's fastest growing pastimes. The current selection and quality of photography equipment, film and processing options have never been better. It's unfortunate that so many outdoor photographers feel extreme disappointment instead of joy when they finally have the opportunity to view their finished work.

I still feel the same way. But over the years I have discovered a few techniques that have consistently helped me obtain better outdoor images. Like most things in life, the things that work best seem to fall under the general heading of Common Sense.



Most magazine articles set out to accomplish a specific objective. Most are designed to entertain, enlighten or inspire. The singular goal for this article is to enable you to produce strong outdoor images that are twice as good as what you're taking now. Let me know how it turns out.

LIGHT:

Light is the essence of photography. When you think about it, most photos are simply an attempt to capture and preserve on film an image that was conveyed to your brain — by light — during a split second of time. The amount and angle of that light will determine the richness of that image.

Whenever possible, I do the bulk of my shooting during the first and last hours of the day when low-angle, soft light brings out the richest of colors. To understand how dramatic this effect really is, try this experiment. Pick a subject in your backyard such as a birdbath, shrub or flower garden. Observe, or better yet photograph, the subject off and on throughout the day. You'll quickly become a believer in "low-sun photography." It's my guess that you'll also quit shooting

pictures during the middle of the day.

EXPOSURE:

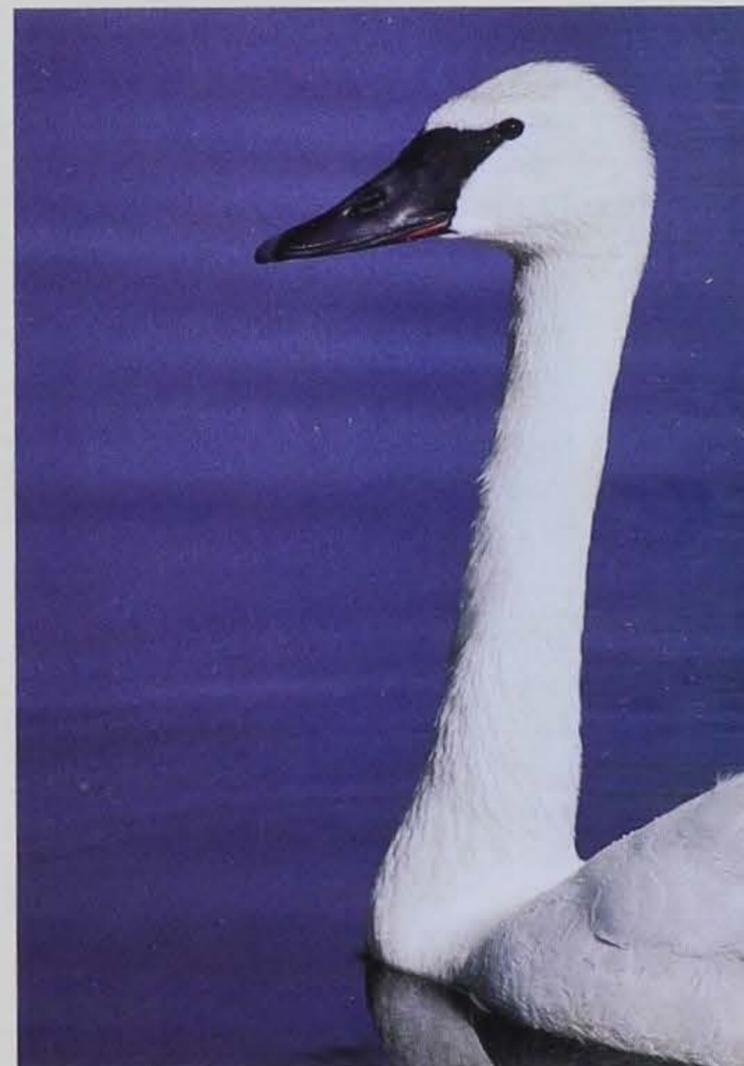
Having the perfect set of lighting conditions will mean little unless you can determine the correct exposure for taking the shot. Exposure is simply the amount of light that is allowed to reach the film once you trip the shutter. It is determined by a combination of shutter speed and by the size of the lens aperture or opening.

Most 35mm single lens reflex (SLR) cameras are equipped with a through-the-lens light metering system. These systems are designed to read "middle tone" light values that are an "18-percent reflectance" between whitest white and blackest black. In other words, your 35mm light meter will automatically try to turn every subject it sees into 18-percent gray — half way between white and black. For most subjects (such as deer, Canada geese or snapping turtles) neutral, middle tone values will render the correct exposure. But for snow geese, swans, and black Labs, it becomes an entirely different matter and your camera's meter reading can no longer be trusted. When metered as a gray tone, the swan will be underexposed on film, while the Lab will become overexposed.

Fortunately, there is a simple solution. To obtain perfect exposures of extremely light or extremely dark subjects, or of subjects surrounded by snow or water, simply pan to an area of middletone light and use it for your

meter reading. It really doesn't matter if the light value is obtained from a nearby boulder, a tree trunk or a friend's jacket. Just make sure that whatever you use consists of a

Extremely light subjects, such as this swan, or extremely dark subjects will "trick" mechanical light meters. Use nearby midtones to obtain correct light readings.



midrange tone and is located in the same light as the subject you wish to photograph.

Once the correct light value has been determined, I intentionally underexpose the photo by 1/2 stop. Under low-angle light conditions, this slight adjustment will greatly boost the "richness" of your photos and is one the best kept secrets of professional photography.

Many photographers, myself included, will often bracket their film to insure a perfect exposure. Bracketing is simply taking shots above and below what you have already determined to be the correct light value. There's no question bracketing serves as a good insurance policy, especially when shooting in tricky situations like bright snow scenes, sunsets or strong back-



Get on the same level as your subject, even if it means getting wet and muddy. This spring peeper on a jack-in-the-pulpit wouldn't have happened without getting eyeball-to-eyeball with the subject.



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lighting. But bracketing does have its pitfalls. As your subject continues to go about whatever it's doing, and as you continue to burn film — it is inevitable that one of your shots is going to be best. If that perfect shot happens to occur while you're bracketing in the wrong direction, the photo will be ruined.

COMPOSITION:

Composition is the backbone of serious photography. Composition is what separates artwork from snapshots, and is the ingredient that converts an ordinary picture into a powerful photographic image.

Composition is largely a matter of framing your subject. It is unfortunate that many people use a "cross-hairs" approach to photography. They find their target, dead center it in the lense, and trip the shutter. The result is the outdoor equivalent of a police station mug shot. And while such photos may be fine for making a positive ID, they offer little in the way of artwork.

A much more effective approach will allow your subject at least some room to move deeper into the photo's frame. It really doesn't matter whether or not your wildlife model is actually moving at the moment, just leave enough space for an *anticipated* direction of movement.

Composition is also a matter of perspective. Most photographers tend to tower above or shoot down on their subjects. In most cases, this is a mistake. Whenever possible, do whatever it takes to get on the same eye level as your wildlife subject. If you happen to be shooting amphibians, furbearers or shorebirds, obtaining the right perspective will usually mean getting wet and muddy. Don't worry though, the instant reward of improved photos will be well worth any short-term hardship.

Once you have achieved an eye-level position with your subject, always use its eyeball as your literal point of focus. All of the viewer's attention will be drawn there anyway; and if the eye isn't crisp, your photo isn't going to cut it.

Of course, there are those rare occasions when "towering over" your subject becomes the right thing to do. Here's an example. During an October



Putting your subject in the "crosshairs" is an ineffective composition (left). As in the case with the pelican (below), always leave room for your subject to move deeper into the photo, even if it means "cutting off" part of the animal.



bird hunt, I lost my peregrine falcon when she chased a hen mallard over the horizon. After a long search, I finally located the falcon feeding on the duck. But, when I attempted to photograph the scene at the peregrine's eye level, all I could see was what appeared to be a falcon standing on a pillow of loose feathers. By raising to my knees I was able to gain a more interesting perspective of the hawk and its meal. The afternoon light was fading fast, and I used a slight amount of fill flash to enhance the details. For me, the completed image offers a powerful statement regarding the age-old struggle between predator and prey. It also serves as a constant reminder the single most important aspect of composition lies in "telling a story." The most interesting photos are those that capture the subject while it's "doing something"

— a bird preening its feathers, a beaver gnawing a branch, a November buck checking a scrape. Even an egg can be interesting, especially if you catch it hatching.

Most 35mm photos are shot on a horizontal format. However, there are times when "getting vertical" is the only choice for obtaining a great shot. I'm always amazed at how many folks don't seem to realize they can turn their cameras sideways to obtain a completely different [vertical] perspective with which to frame their subject.

FINDING A SUBJECT:

Locating a workable model is by far the most difficult aspect of wildlife photography. Most birds and mammals seem to fear humans above all other predators. It's no coincidence your "sleeping" subject became alert and then



Action photos are always more interesting if you can depict the subject "doing something," such as this yellow Lab retrieving a pheasant, the beaver gnawing a willow branch (top) or the peregrine with its kill. Telling a story is the strongest aspect of composition. (Note: The peregrine shot is one example when shooting above the subject rather than at eye level worked better.)

disappeared at the same instant you begin maneuvering into position. To the animal, your body language had effectively conveyed the message you'd shifted from harmless stroller to prowling hunter. The subject instinctively knew it was being stalked, and wild animals don't know the difference between a Nikon F3 camera and a Remington Model 870 shotgun. To the wildlife community, you represent danger and that's all it takes to prevent you from getting a photo.

There are really only two good options for overcoming this dilemma. One is for the photographer to become completely invisible. The other is to

find wildlife that isn't alarmed to your presence.

Many city, state and national parklands offer an abundance of wildlife that has become at least partially desensitized to human activity. Species may vary from butterflies to bison, and all are intriguing in their own right. When approached slowly and deliberately, "park wildlife" provides excellent opportunities to view and photograph animals in their natural habitats. Avoiding eye contact during the stalk will go a long way toward increasing success.

When it comes to serious bird photography, there's no substitute for a good blind. Field blinds come in two styles — stationary and mobile. Stationary blinds are most often located at nesting sites or feeding stations. They can be as inexpensive as a discarded refrigerator box, or as elaborate as a designated corner of your home.

For stationary field work I use a simple, four corner blind consisting of fiberglass posts enclosed by canvas walls and ceiling. Regardless of the type of blind you choose, be sure the interior is as dark as possible. If the blind is dark on the inside, wildlife won't be able to

see you from the outside. If there is snow cover, I prefer to bait the blind area with shelled corn and sunflowers. If the winter is tough, you'll get shots of every pheasant, deer, turkey and songbird in the area. At 10 below, a portable heater will make your wait a lot more enjoyable.

For those who enjoy photographing waterfowl and other aquatic birdlife, nothing beats a floating blind. Most floating blinds are made to resemble muskrat houses and are highly mobile. Although I'm not aware of any commercially

made floating blinds, home construction is fairly basic. A U-shaped styrofoam platform gives the structure flotation, while 1-inch metal strapping provides the domed

framework. The completed structure is walled with poultry netting, and camouflaged with cattail stalks. While the blind is in use, the photographer sits submerged to the waist and navigates by tip-toeing along the marsh bottom. To wetland wildlife, the structure appears as just one more chunk of floating vegetation.

The effectiveness of a floating muskrat house cannot be overstated. The structure's low lens port will automatically put you at a bluebill's eye level while, at the same time, allowing you to become completely invisible. Once you get the hang of maneuvering one of these contraptions, you'll experience marsh life in a way you never dreamed possible. You'll be amazed as birds [sometimes hundreds of them] feed, preen, court, — even do battle — all within mere feet of your lens.

To take the blind even a step



Parks offer a wide variety of "desensitized" wildlife.

The floating muskrat house blind (below left) is the single most effective tool for photographing aquatic birds. This mallard brood (below) was shot from a floating blind.



farther, I like to carry a live-decoy (usually a hen mallard)

in a small cage attached to the outside of the blind next to the lens port. The best hens are both tame and vocal. They add an air of confidence to the blind, and also offer at least some measure of distraction while you work the camera. In many cases a good decoy will cause wild birds to swim in for a closer look. Don't be surprised if some actually get too close to photograph.

For land-based wildlife, your motor vehicle makes a very effective "rolling blind."

EQUIPMENT:

Virtually all of the 35mm SLR camera bodies currently on the market are capable of taking great outdoor photos. Personally, I have never used a telephoto lense larger than 300mm. I

have also used a number of zoom lenses with good results. One of my favorites is the moderately priced Nikon ED 80 to 200 zoom.

For smaller subjects such as butterflies, snails or flowers, I prefer to use something along the lines of a straight 55mm micro lens or small 35 to 80mm zoom with a macro feature.

When it comes to obtaining razor sharp detail, a sturdy tripod is a must. Buy the best you can afford. In my view, a good tripod is almost as important as your camera. Of course, there are many situations when you have to move fast and there's no time to set up and level a tripod. In those cases the top of a fence post, a tree trunk or your elbows will have to suffice. The best compensation for these inpromptu

Robin's nest taken in ambient light (top) and with fill flash.



For this shot, I laid prone in the water while my wife, Carol, held a strobe about 2-1/2 feet above, and a foot to the side of the singing toad. My son, Matt, illuminated the subject with a dim flashlight, otherwise I couldn't have focused in the pitch black. The team effort resulted in a perfect exposure.



supports is to use the fastest shutter speed your film will handle.

In addition to a tripod, it is also a good idea to carry some sort of flash unit. Even under good lighting conditions, the judicious use of a fill flash can soften shadows and enhance details. Don't be afraid to experiment.

As you may have already guessed, I'm not much of a gear and gadgets guy. A lot of amateur photographers are intimidated whenever they go to the field and encounter a "professional" who is carrying enough gear to give a pack mule a back ache. Don't be. All that usually means is that the "pro" has money and loves gadgets. My rule is to keep the equipment simple and concentrate on the important things like exposure and composition. The best photography equipment you'll ever use is not what's in front of your eye, but rather what's behind it.



FILM:

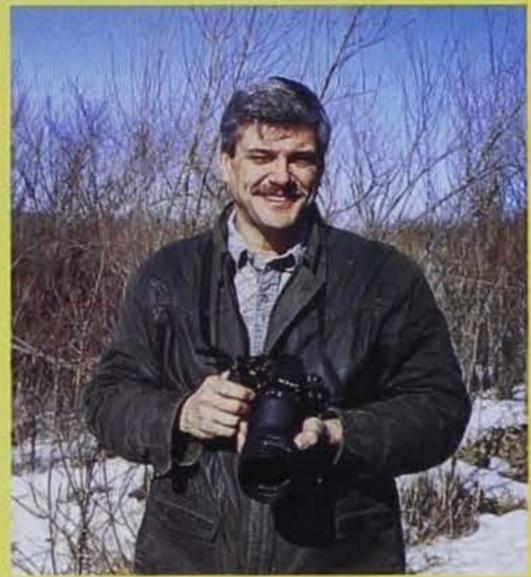
The vast selection of films currently available to 35mm photographers is unprecedented. All are good. All have their strong points — as well as their disadvantages.

Because print films are less sensitive to light, they are much more forgiving of exposure error than are slide films. But, although slide films may be more temperamental, they are also capable of producing a much higher grade of resolution. Professional grade slide films are the most hyper-sensitive of them all. Make one mistake of any kind and your photo has had it. However, when handled correctly, professional grade films are superior to all others.

Great photos can never happen until film is exposed. If superior images are your goal,



Don't be afraid to experiment, be creative, capitalize on a mood. Giant Canada geese (left) on subzero morning.



Lowell Washburn became hooked on outdoor photography when he shot his first bird photos in 1959. His articles and photographs have appeared in more than 40 magazines including Sports Afield, National Wildlife, Birder's World, and Outdoor Life. He joined the Iowa Conservationist in 1984.

don't be afraid to keep shooting until you run out of film or until your subject takes flight. It's been my experience that shooting from a blind will provide the greatest opportunities for multiple exposures. Don't make the mistake of moving on once you've obtained a few good shots. About the time you're ready to quit shooting is usually when the subject will really begin to preform.

PEOPLE sometimes ask me if I have what I consider to be my favorite or best photo. This question will leave most photographers scratching their heads, but for me the answer is simple.

My favorite photo was taken at Cerro Gordo County's Zirbel Slough in March 1989. The day was crisp and clear and the waterfowl migration was in full swing. From the confines of my floating muskrat house, I was shooting film like a banshee. I obtained several great shots that day, but it was the last

half hour of daylight that I'll always remember best.

Just before sunset, ducks began pouring into the slough from all points of the compass. There were thousands of them and the air came alive with the rush of wings and the quacks and whistles of a dozen species. Then it happened.

The low, late afternoon sunlight suddenly set the marsh on fire. Every cattail stalk, every muskrat lodge, and every duck suddenly began to glow with the warmest intensity of color I have ever witnessed.

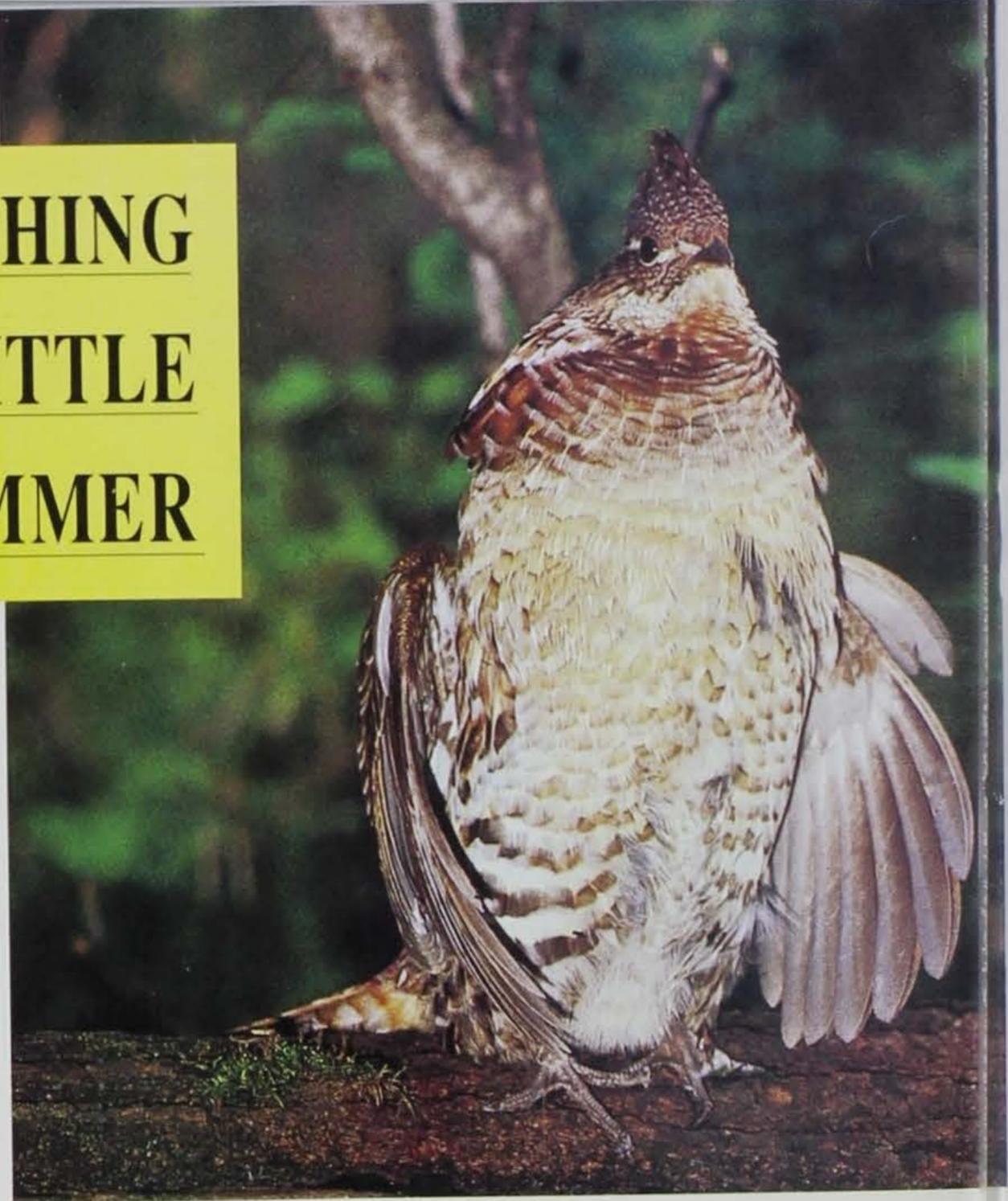
As circumstances would have it, I was down to my last 36-exposure roll of Ektachrome. The ducks were practically landing in my face, and I've never concentrated harder than when I rationed out those last 36 shots. All too quickly the roll was finished.

While continuing to enjoy the bird show, I began to stow equipment for the paddle home. My hands were getting

cold, and as I unloaded the camera body I fumbled the film. I panicked, and for a moment or two my left hand became a ping pong paddle as I frantically struggled to keep the cannister above water. Finally the inevitable happened. I don't think I'll ever forget the sight of that roll of film as it disappeared into the mirky depths of the waist deep water. Adding insult to injury, it occurred to me that there had been no reason for unloading the camera over water since I was out of film anyway.

I once heard a friend remark that "the very best photos are in our hearts and minds." For me that statement rings especially true. The very best photo I ever took is still lying at the bottom of Zirbel Slough, and it's a beauty.

PHOTOGRAPHING IOWA'S LITTLE DRUMMER



Some wildlife photos come easy. Most do not. A few come very hard. The photo accompanying this article is a good example of one that came very hard.

The assignment sounded simple enough. Go to the spring woodland, listen for a drumming ruffed grouse, locate his drumming log, set up a portable photo blind and start shooting away. If the endeavor proved successful, the photos would be used for a magazine layout the following year.

The first part of the mission went smooth as silk. After only an hour and a half of scouting, I had located four different males. The one I chose to work was drumming from atop a log located just 150 yards from the road. Although the log was surrounded by nearly impenetrable brush, a well-used deer trail led right to the spot. By quietly using this trail, I was able to approach within several yards before the

grouse detected my presence. The bird erupted from the log and beat a hasty, zigzag retreat through the timber.

Once the grouse was gone, I quickly made my way to the log. Nail-scratched bark and a couple of loose feathers clearly marked the precise spot where the bird had repeatedly stood to drum. Within minutes I had erected a four-corner, canvas blind exactly 13 feet from the spot. I positioned a tripod so the lens would be at grouse-eye level. Because the overhead canopy was rather dense, I attached a flash unit to the outside of the blind.

As I settled into my cramped quarters, there was nothing left to do but wait for the grouse to resume drumming. The results were soon in coming. I had only been in the blind for 24 minutes when the bird began to sound off. The only hitch was the grouse was nowhere near my location.

What had happened was obvious.

In addition to maintaining a principle log, many male grouse also choose two or three alternate drumming sites. These are used after a bird is disturbed at the main site. When the danger has passed, the grouse returns to its central location.

Because the drumming I was now hearing came from within 50 or 60 yards, I knew it had to be "my bird." No other male would be tolerated at such close range.

One thing was clear. If I were to get the photos, the alternate site would have to be temporarily deactivated. Leaving the blind, I began to sneak in the direction of the drumming. But this time there was no deer trail and I was forced to proceed on hands and knees. It was crucial I locate the exact spot, and as the sound of drumming became louder, I switched to a belly crawl. Finally, I was very close. Peeking above a thick clump of gooseberries, I

IOWA CONSERVATIONIST MAGAZINE

The following list includes the top 10 entries and released of each species taken in 1998. Current state records are in **bold** type. An (*) indicates a new record this year.

FISH AWARDS 1998



WEIGHT/LENGTH	DATE	ANGLER, HOMETOWN	LOCATION, COUNTY
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Bass, Largemouth (Minimum — 7lbs. or 22")

10lbs 12 oz.	5/84	Patricia Zaerr, Davenport	Lake Fisher, Davis
10lbs 3oz	8/12	Verlin Hill, Wellman	Farm Pond, Washington
9lbs	5/20	Hank Timmerman, Pacific Junction	Mile High, Mills
7lbs 12oz	10/31	Willard Dencklau, Humboldt	West Okoboji, Dickinson
7lbs 11oz	5/16	David Michael Rizzio Sr., Cedar Rapids	Pleasant Creek, Linn
7lbs 8oz	9/25	Michael Edward Darnold, Malvern	Pond, Mills
7lbs 7oz	8/28	Glenn Johlas, Charles City	Pond, Floyd
7lbs 6oz	10/6	Mike Schermer, Charles City	Rock Quarry, Floyd
7lbs 4oz	9/13	Jim D. Terry, Clarinda	Farm Pond, Page
7lbs 3oz	5/1	Daniel Lee Miller, Bridgewater	Pond, Adair
7lbs	4/17	Daryl Jans, Grundy Center	County Pond, Hardin
7lbs	8/30	Jeff Warren, Des Moines	Little River Lake, Decatur
7lbs		Les Martin, Oskaloosa	Farm Pond, Mahaska
7lbs	12/5	Steve Huedenpohl, Des Moines	Beaver Lake, Dallas

Released

25"	8/2	John Hooper, Indianola	Farm Pond, Warren
22"	4/19	Patrick A. Walker, Sioux City	Farm Pond, Woodbury
22"	5/01	Joshua Illingworth, Newton	Farm Pond, Jasper

Bass, Smallmouth (Minimum — 4lbs. or 20")

7lbs 12oz	9/90	Rick Gray, Dickinson	West Okoboji, Dickinson
5lbs 12oz	6/13	Eric Wright, Woodward	Spirit Lake, Dickinson
5lbs 4oz		Chad Brown, Central City	Wapsipinicon River, Linn
5lbs 1oz	5/10	Mike Onushak, Arnolds Park	West Okoboji, Dickinson
5lbs	9/4	Darrel L. Dean, Shell Rock	Cedar River, Bremer
4lbs 14oz	9/1	Bob Keaney, Des Moines	West Okoboji, Dickinson
4lbs 12oz	10/25	Marie Taylor, Sioux City	Big Spirit Lake, Dickinson
4lbs 12oz	4/14	Rocky Thompson, Spirit Lake	West Okoboji, Dickinson

4lbs 8oz
4lbs 8oz
4lbs 7oz

Released

20"
18.5"
21"
21"

4/10 Dan Thomas, Dows
9/4 Darrel Dean, Sloan
5/3 Craig Anderson, Milford

Rock Quarry, Franklin
Cedar River, Bremer
Spirit Lake, Dickinson

4/10 Alan Riemenschneider, Okoboji
6/3 Chris Williamson, Cedar Falls
6/26 John R. Oldham, Mason City
2/26 Mike Salzman, Granville

West Okoboji, Dickinson
Cedar River, Bremer
Big Spirit, Dickinson
West Okoboji, Dickinson

Bass, White (Minimum — 2.5 lbs.)

3lbs 14oz
3lbs 6oz
3lbs
2lbs 15oz
2lbs 14oz
2lbs 12oz

5/72 Bill Born, Milford
5/30 Scott Soyer, Antioch
11/3 Barry Andersen, Arnolds Park
12/24 Bill Ferns, Spirit Lake
12/24 Del Gonder, Spirit Lake
11/1 Michael Fischer, Manchester

West Okoboji, Dickinson
West Okoboji, Dickinson
East Okoboji, Dickinson
East Okoboji, Dickinson
East Okoboji, Dickinson
Mississippi River, Clayton

Bass, Wiper (Minimum — 4 lbs.)

18lbs 15oz
16lbs 14oz
14lbs 14oz
13lbs 12oz
13lbs 4oz
6lbs 4oz

9/97 Don Ostergaard, Des Moines
8/8 Greg Beckett, Polk City
10/25 Ron Pilcher, Ankeny
11/4 Brian Mount, Des Moines
5/5 Russell R. Kasal, Chelsea
9/3 Ron Holladay, Cedar Rapids

DSM River, Polk
Saylorville, Polk
Des Moines River, Polk
Des Moines River, Polk
Poweshiek
Coralville, Johnson

Bass, Yellow (Minimum — .75 lbs.)

11lbs 9oz
11lbs 4oz
11lbs 2oz
11lbs 1oz
11lbs
15oz
14oz
13oz
13oz
13oz

4/91 Bill Campbell, Council Bluffs
8/17 Mace Barnes, Olds
5/14 Riley Perdue, Red Oak
4/9 Terry E. Irwin, Lake View
5/9 Royce Bandy, Manchester
4/4 Jim Rodman, Lake View
David Snyder, Lake View
4/30 Dennis Wendel, Waterloo
5/1 James P. Wilson, Waterloo
5/5 Jim Wilson, Waterloo

Lake Manawa, Pottawattamie
Lake Geode, Henry
Rock Quarry, Montgomery
Arrowhead, Sac
Maquoketa River, Delaware
Black Hawk, Sac
Lake Arrow Head, Sac
East Lake, Black Hawk
East Lake, Black Hawk
East Lake, Black Hawk

Bluegill (Minimum — 1 lb.)

3lbs 2oz
2lbs 8oz
2lbs 5oz
1lbs 14oz
1lbs 10oz
1lbs 7oz
1lbs 6oz
1lbs 6oz
1lbs 5oz

7/86 Phil Algreen, Earlham
7/3 Steve Walker, Red Oak
5/24 Derek Herman, Greene
6/1 Paul Tuttle, Norwalk
6/20 Thomas V. Kelly, Davenport
1/23 Larry L. Harvey, Perry
6/17 Bryan Austin, Smethport, PA
5/17 Mark J. Larson, Forest City
6/18 Keith Cacek, Ruthven

Farm Pond, Madison
Pond, Montgomery
Crabb Apple Creek, Butler
Farm Pond, Madison
Farm Pond, Muscatine
Farm Pond, Greene
Farm Pond, Des Moines
Farm Pond, Audubon
Stolley Pit, Clay

11lbs 5oz	5/2	Jack Machacek, Central City	Farm Pond, Jones
11lbs 4oz	6/26	Tom Harmm, Council Bluffs	Farm Pond, Harrison
11lbs 4oz	1/26	Jerry Jensen, Ida Grove	Farm Pond, Woodbury

Bowfin/Dogfish (Minimum — 5 lbs.)

11lbs 9oz	5/94	Bill Gretten, Blue Grass	Mississippi River, Clayton
9lbs 8oz	6/4	Kenneth C. Husemann, Stockton	Lake Odessa, Louisa
5lbs 8oz	6/6	Gary L. Huffman, Washington	Cone Lake, Muscatine
5lbs 8oz		Steve Soper, Olin	Wapsipinicon River, Jones
5lbs 1oz	6/13	Chris Bermel, Muscatine	Lake Odessa, Louisa

Buffalo (Minimum — 20 lbs.)

56lbs	5/96	Terry Gann, McClelland	Manawa, Pottawattamie
40lbs	9/13	Josh Phelps, Spencer	Lost Island, Palo Alto
31lbs	5/13	Mick Raper, Marathon	Storm Lake, Buena Vista

Bullhead (Minimum — 2.5 lbs.)

5lbs 8oz	1/89	Micheal Hurd, Ellsworth	Farm Pond, Hamilton
3lbs 8oz	6/13	Lucy L. Govig, Clarinda	Windmill Lake, Taylor
2lbs 12oz	5/16	Michael M. Thammavong, Cedar Falls	Big Woods Lake, Black Hawk
2lbs 8oz	9/4	Marvin D. Gilleland, Ellston	Sun Valley Lake, Ringgold

Catfish, blue (Minimum — 20 lbs. or 35")

62lbs	9/95	Darrell Carter, Jefferson	Big Sioux River, Plymouth
59lbs	5/23	Rick West Jr., Honey Creek	Missouri River, Harrison
48lbs	6/25	Brent Allen Jack, Glenwood	Farm Pond, Fremont

Catfish, flathead (Minimum — 20 lbs. or 35")

81lbs	6/58	Joe Baze, Chariton	Lake Ellis, Lucas
56lbs	2/17	Bob McGregor, Lone Tree	Iowa River, Johnson
49lbs	6/12	Matthew Eugene Jordan, Marengo	Iowa River, Iowa
43lbs	8/29	Pat Lutz, Panora	Missouri River, Harrison
42lbs 9oz	10/31	Charles Ruff, Dubuque	Mississippi River, Dubuque
40lbs 2oz	2/16	Steve Rembe, Sioux City	Big Sioux, Woodbury
39lbs 13oz	8/19	Brad Christensen, LeClaire	Mississippi River, Scott
35lbs	3/5	Ronald D. Humbert, Columbus City	Mississippi River, Louisa
34lbs	8/31	Gordon Allen, Council Bluffs	Missouri River, Mills
33lbs 8oz	9/5	Samuel Leroy Reichart, Council Bluffs	Icaria, Taylor
31lbs	10/20	Doug Lewis, Council Bluffs	Missouri River, Fremont
31lbs	8/2	Perry Soule, Missouri Valley	Desoto Bend, Harrison

Released

40"	3/6	Mike T. Monteleone, Newton	Red Rock Dam, Marion
36"	5/31	William O. Sass, Waterloo	Cedar River, Black Hawk
36"	5/5	Matt Lovelace, Coralville	Iowa River, Johnson

Catfish, channel (Minimum — 15 lbs. or 30")

36lbs 8oz	8/93	Ron Godwin, Earlham	Mid. Raccoon River, Dallas
22lbs 8oz	8/21	Clifford Lawson, Dundee	Pleasant Creek, Linn
19lbs 4oz	7/11	James Nickol, Dyersville	Private Pond, Delaware
18lbs 12oz	8/24	Devin Lawson, Manchester	Pleasant Creek, Linn
18lbs 9oz	7/30	Nick Moore, Linn Grove	Little Sioux River, Buena Vista
18lbs	7/6	Dee Machacek, Central City	Farm Pond, Jones
17lbs 8oz	6/2	Daniel Smith, Gladbrook	Wolf Creek, Tama
17lbs 8oz	7/20	Terri Lawson, Richmond	Pleasant Creek, Linn
17lbs 8oz	8/27	Tim Lawson, Manchester	Pleasant Creek, Linn
17lbs	8/2	Mike & Carol Schweitzer, Marion	Pleasant Creek Lake, Linn
17lbs	8/20	Robert Hutchinson, Manchester	Pleasant Creek Lake, Linn
Released			
32"	06/20/98	Riley Perdue, Red Oak	Rock Quarry, Montgomery
31"	05/16/98	John N. Larsen, Nashua	Little Cedar River, Chickasaw

Crappie (Minimum — 2 lbs.)

4lbs 9oz	5/81	Ted Trowbridge, Marshalltown	Green Castle Lake, Marshall
3lbs 10oz	8/14	Dick Glaspie, Essex	Farm Pond, Page
3lbs 2oz	5/29	Leona Jacobs, Clarksville	12 Mile Lake, Union
3lbs	5/15	Dan C. Crow, Cedar Rapids	Lake Mac Bride, Johnson
3lbs	5/26	John R. Oldham, Mason City	Big Spirit, Dickinson
2lbs 13oz	5/4	Darrell Hunt, Kinsley	Little Spirit
2lbs 13oz	5/4	Herb J. Handel, Hancock	Cold Springs, Cass
2lbs 12oz	5/4	Denise Zirkelbach, Knoxville	Lake Red Rock, Marion
2lbs 12oz	6/25	Dennis Dougherty, Marengo	Farm Pond, Wapello
2lbs 11oz	5/23	Kevin Scuffham, Storm Lake	Buena Vista
2lbs 10oz	5/25	Monte Lee Timmerman, Pacific Junction	Mile High, Mills

Freshwater Drum (Minimum — 15 lbs.)

46lbs	10/62	R.F. Farran, Clarion	Spirit Lake, Dickinson
19lbs	3/5	Matthew S. Lovelace, Coralville	Mississippi River, Jackson
18lbs	5/13	Donald J. Bailey, Alburnett	Mississippi River, Allamakee

Gar, Longnose (Minimum — 6 lbs.)

17lbs 8oz	9/92	Kevin Riley, Cedar Rapids	Mississippi River, Clayton
12lbs	5/21	Jeff Phillips, Eldon	Des Moines River, Wapello
11lbs 2oz	6/16	Brien Jones, Davenport	Mississippi River, Scott

Gar, Shortnose (Minimum — 2 lbs.)

4lbs 7oz	2/96	Mark Lindeman, Dysart	DSM River, Marion
2lbs 9oz	8/19	Larry D. Petersen, Atlantic	Quarry, Cass

Goldeneye/Mooneye (Minimum — 1.25 lbs.)

2lbs 4oz	6/92	Mark Ikle, Farmington	DSM River, VanBuren
1lbs 11oz	9/19	Robert Kerksieck, Ames	Skunk River, Story

Muskellunge (Minimum — 15 lbs. or 40")

45lbs 9oz	9/95	Jerry Curry, Mitchellville
38lbs 11oz	11/27	Dick Christoffer, Spirit Lake
30lbs 11oz	1/23	Don Johnson Jr., Spirit Lake
22lbs 8oz	11/27	Frank Phelps, Spencer
20lbs 10oz	1/21	Rick Baungart, Okoboji
18lbs 3oz	12/12	Larry D. Bendlin, Spencer
17lbs 6oz	6/27	Dave Degen, Lehigh
17lbs	5/21	James Moses, Marion
16lbs 5oz	7/21	Steve Smith, Urbandale
15lbs 14oz	1/18	Jack Longmore, Spirit Lake
15lbs	11/23/98	Lory Swanson, Hartley

Spirit Lake, Dickinson
 West Okoboji, Dickinson
 West Okoboji, Dickinson
 West Okoboji, Dickinson
 West Okoboji, Dickinson
 Spirit Lake, Dickinson
 West Okoboji, Dickinson
 West Okoboji, Dickinson
 West Okoboji, Dickinson
 West Okoboji, Dickinson

Northern Pike (Minimum — 10 lbs. or 34")

25lbs 5oz	2/77	Allen Forsberg, Albert City
17lbs 8oz	10/12	Gary E. Venz, Manly
17lbs	7/3	Travis John Andersen, Palmer
16lbs 8oz	7/3	Gary Reed, Council Bluffs
16lbs 3oz	7/3	Denny Patterson, Council Bluffs
14lbs 14oz	6/7	Tom Thompson, Mallard
14lbs 8oz	12/28	Rodney Lammers, Colesburg
13lbs 10oz	1/17	Chad Nelson, Milford
13lbs 8oz	1/8	Greg Hanson, Milford
13lbs 8oz	3/28	James E. Kiefer, Mason City
13lbs 5oz	12/26	Wesley S. Tischer, Milford

West Okoboji, Dickinson
 Shell Rock, Worth
 North Twin Lake, Calhoun
 Blue Lake, Monona
 Blue Lake, Monona
 Lost Island, Palo Alto
 Mississippi River
 West Okoboji, Dickinson
 Farm Pond, Dickinson
 Shell Rock River, Worth
 West Lake Okoboji, Dickinson

Released

38"	3/7	Douglas A. Blunt, Charles City
37"	7/12	Terry Rierson, Estherville
36.5"	8/2	Ted Love, Council Bluffs
35"	3/13	Mike Monteleone, Newton
35"	7/1	Barb A. Oldham, Mason City
33.5"	1/29	Rocky Thompson, Spirit Lake

Shell Rock River, Butler
 Lost Island, Palo Alto
 Blue Lake, Monona
 Red Rock Dam, Marion
 Big Spirit, Dickinson
 West Okoboji, Dickinson

Paddlefish (Minimum — 25 lbs.)

107lbs	3/81	Robert Pranschke, Onawa
35lbs	1/31	Douglas Tieden, Albia

Missouri River, Monona
 Chariton River, Appanoose

Perch, Yellow (Minimum — 1 lbs.)

2lbs 3oz	3/94	Daniel Borchardt, Mason City
1lbs 13oz	12/27	Chris Cacek, Ruthven
1lbs 12oz	2/7	Eric E. Anderson, Esterville
1lbs 10oz	12/30	Cork Rozeboom, Sanborn
1lbs 10oz	2/15	David Frerichs, Dickens
1lbs 9oz	2/17	Rod Douma, Sanborn
1lbs 9oz	2/14	Derrick Marra, Sanborn
1lbs 9oz	2/7	Donald L. Rogers, Fort Dodge
1lbs 9oz	12/30	Howard Johnson II, Ruthven
1lbs 9oz	1/2	Jeremy Ruehle, Ruthven
1lbs 8.5oz	2/3	Kevin Kulow, Graettinger

Morse Lake, Wright
 Trumball, Clay
 High Lake, Emmet
 Silver Lake, Palo Alto
 Trumball, Clay
 High Lake, Emmet
 High Lake, Emmet
 High Lake, Emmet
 Virgin Lake, Palo Alto
 Trumball, Clay
 High Lake, Emmet

Sauger (Minimum — 2.5 lbs. or 18")

6lbs 8oz	10/76	Mrs. W. Buser, Sloan	Missouri River, Woodbury
4lbs 1oz	12/4	Robert Henkel, Dubuque	Mississippi River, Dubuque
4lbs	3/23	Bob Unga Sr., Manchester	Mississippi River, Clayton
3lbs 14oz	1/31	Raymond E. Franklin, Marion	Mississippi River, Clayton
3lbs 8oz	12/12	Bob Valleroy, Davenport	Mississippi River, Wapello
3lbs 8oz	11/25	Clifton Lyle Kauffman, Strawberry Point	Mississippi River, Clayton
3lbs 8oz	11/07	Jason Gallup, Charles City	Mississippi River, Allamakee
3lbs 7oz	3/18	Francis K. Carlson, Cedar Rapids	Mississippi River, Clayton
3lbs 6oz	3/23	Alan Bronner, Cresco	Mississippi River, Allamakee
3lbs 5oz	11/27	Jamie Schrobilgen, Dubuque	Mississippi River, Jackson
3lbs 5oz	9/16	Jeffery Leroy Johnson, Sioux City	Missouri River, Woodbury
Released 19"	07/10/98	Kyle Brenner, Moline	Mississippi River, Scott

Saugeye (Minimum — 6 lbs. or 25")

9lbs 2oz	4/96	Mike McGilligan, Webster City	Des Moines River, Polk
7lbs 12oz	7/17	Ted R. Limke, Primghar	Little Sioux River, Linn
7lbs 7oz	12/14	Randy Gereau, Iowa City	Iowa River, Johnson
6lbs	1/30	Randall C. Youngstrom, Sioux City	Sioux River, Woodbury

Sucker (Minimum — 4 lbs.)

15lbs 1oz	9/83	Glen E. Dittman, Onawa	Missouri River, Monona
6lbs	3/23	Douglas L. Peet, Cedar Rapids	Cedar River, Linn

Sunfish (Minimum — 1 lbs.)

11lbs 14oz	6/97	Russ Farrell, Prairie City	Farm Pond, Union
11lbs 11oz	9/22	Vernon Hundley, Hennepin	Lake Wapello, Davis
11lbs 8oz	6/7	Janet Strunk, Farmington	Farm Pond, Van Buren
11lbs 4oz	6/6	Casey Tunnell, Essex	Farm Pond, Page
11lbs 3oz	9/30	Elizabeth E. Stradtman, Berwick	Badger Creek Lake, Madison

Trout, Brook (Minimum — 1.5 lbs. or 15")

7lbs	7/96	David Kovarik, Marion	Fountain Springs, Delaware
5lbs 11oz	6/19	Dana Dowd, New Hampton	Trout Run Creek, Winneshiek
5lbs	6/11	Kerry Magner, Waukon	Yellow River, Allamakee
4lbs 1oz	10/11	Tom Klimeh, Spillville	Trout Run, Winneshiek
3lbs 8oz	7/10	Minnie Gulick, Allison	Trout Run, Winneshiek
3lbs 12oz	6/16	Kurt Smith, Virginia Beach, VA	Wexford Stream, Allamakee
3lbs	7/11	Randy A. Mahoney, Dyersville	Maquoketa River, Delaware
2lbs 3oz	5/15	Kori Jorgensen, Donahue	Upper Iowa River
2lbs 14oz	4/6	Corey Meyer, Calmer	Trout Run, Winneshiek
2lbs	6/16	Bill Schmelzer, Cedar Rapids	Fountain Springs, Delaware
2lbs	8/5	Troy Stephen McCumber, Nashua	Grannis Creek, Fayette

Trout, Brown (Minimum — 3 lbs. or 18")

15lbs 6oz	6/95	Gerold Lewis, Gladbrook
14lbs 3oz	12/20	Adam Schumacher, Dubuque
13lbs 10oz	6/1	Clare Mincks, Decorah
13lbs	5/29	Randall L. Voshell, Ankeny
10lbs 7oz	7/18	Rob Griffith, Des Moines
9lbs 8oz		Nick Decker, Evansdale
8lbs 14oz		Gilbert H. Nesler, Dyersville
8lbs 6oz	5/16	Clint Kaune, Oelwien
8lbs 3oz	5/26	Thomas Z. Watkins, Waterloo
8lbs 2oz	6/19	Ivan Melcher
8lbs	6/4	Nicole Bazyn, Elkader

North Prairie Lake, Blackhawk

Heritage Pond, Dubuque
Trout Run, Winneshiek
Trout Run, Winneshiek
Little Paint Creek, Allamakee
Wexford Creek, Allamakee
Bankston Park Creek, Dubuque
Joy Springs, Clayton
Joy Springs, Clayton
Yellow River, Allamakee
Buck Creek, Clayton

Trout, Rainbow (Minimum — 3 lbs. or 18")

19lbs 8oz	7/84	Jack Renner, Waterloo
16lbs	2/4	Evertt Halweg, Decorah
14lbs 8oz	8/20	Curt Saland, Waterloo
14lbs 8oz	7/9	Tim Marshall, Southside
12lbs 8oz	5/21	John L. Derifield, Waterloo
11lbs 10oz	6/4	Mike Amundson, Waterloo
11lbs 4oz	7/30	Gary W. Pierce, Lake Mills
11lbs	5/19	Clare Mincks, Decorah
10lbs 14oz	6/6	Timothy W. Buhr, Maynard
10lbs 12oz		Scott Jeffrey, Ames
10lbs 11oz	9/4	Bryan Schmitz, Cedar Rapids

French Creek, Allamakee

Trout Run, Winneshiek
Glovers, Fayette
Trout Run, Winneshiek
Trout Run, Winneshiek
Glover's Creek, Fayette
Clear, Allamakee
Trout Run, Winneshiek
North Mink Creek, Fayette
Trout Run Creek, Winneshiek
Dalton Lake, Jackson

Walleye (Minimum — 8 lbs. or 28")

14lbs 8oz	9/86	Gloria Eoriatti, Ankeny
12lbs	4/6	Hans Schroeder, Maquoketa
11lbs 6oz	7/31	Lewis Terlisner Sr., Clinton
11lbs 3oz	2/26	Donald J. Bailey, Alburnett
11lbs 1oz	10/30	Mike Dryden, Carroll
11lbs	2/19	Mike Norcross, Manly
10lbs 15oz	12/17	Danny D Ford Jr., Oskaloosa
10lbs 14oz	11/8	David W. Williams, Tipton
10lbs 13oz	12/26	Donald L. Johnson Jr.
10lbs 12oz	3/25	Michael Azinger, Cedar Rapids
10lbs 9oz	9/5	Rodney Silver, Dumont

Des Moines River, Polk

Mississippi River, Jackson
Mississippi River, Allamakee
Mississippi River
Lost Island, Palo Alto
Clear Lake, Cerro Gordo
Des Moines River, Wapello
Mississippi River, Allamakee
West Okoboji, Dickinson
Mississippi River, Allamakee
Clear Lake, Cerro Gordo

Released

30"		David Rutherford, Bellevue
29.5"	2/26	Chuck Ungs, New Hampton
28.5"	3/24	John C. Kepler, Cedar Rapids
27"	5/12	Scott Stone, Dickens
28"	2/3	Steven L. Baumgartel, Cedar Rapids
28"	5/20	Bob Hansen, Cedar Falls

Lake Icaria, Adams

Mississippi River, Clayton
Mississippi River, Clayton
Lost Island, Palo Alto
Mississippi River, Jackson
Mississippi River, Allamakee

White Amur (Minimum — 25 lbs.)

*61lbs 8oz	5/98	Tyler Warner, Greenfield	Lake Greenfield, Adair
60lbs	9/27	Shannon Davis, Burlington	Farm Pond, Des Moines
53lbs 8oz	6/22	Vaughn Wassink, Hull	Gravel Pit, Sioux
46lbs 8oz	7/5	Gordon Allen, Council Bluffs	Pony Creek, Mills
45lbs 8oz	6/20	Cody Mulvihill, Nevada	Hickory Grove, Story
30lbs 4oz	4/20	Ryan Wassink, Hull	Lake Pahoja, Lyon



FISH AWARDS 1999

•If you catch a fish eligible for submission for a big fish award, please fill out this entry blank. For many of the predator species, you may release the fish and still receive the big fish award by meeting the listed length limitations. One witness must attest to the weight of the fish to the nearest ounce on scales legal for trade, or to the length, which is measured from the tip of the snout to the tip of the tail (total length). If there is some doubt in species identification, the angler should contact the nearest DNR personnel in the area for verification.

—**New all-time record fish must be examined and verified by DNR personnel.**

•The entry blank should be filled out and mailed with a photo or color slide of the angler and fish to: Fish Records, Iowa Department of Natural Resources, Wallace State Office Building, Des Moines, IA 50319-0034. Photo will be returned to angler. Large fish will be recognized for each year as well as all-time records over a period of years. An angling award certificate and shoulder patch will be sent to the angler for each qualifying entry. The top 10 record fish and released of each species are listed each year in the *Iowa Conservationist*.

ENTRY BLANK FOR IOWA RECORD FISH (One entry per species, per year. Please print.)

Name _____

Street/RFD _____

City _____ State _____ Zip _____

Species _____

Date _____

Name of lake/stream _____

County Where Caught _____

Total Length _____

Weight _____

Bait or lure used, etc. _____

Was this fish released (circle one)? Yes No

Witness

Name _____

City _____ State _____ Zip _____

(Entries of fish caught during the current year must be sent to the Iowa Department of Natural Resources by January 15 of the following year.)



During the course of the morning, this process was repeated time and again until I'd had about all the crawling I could stand. I was convinced this male held the Guinness record for alternate drumming sites. By noon, the grouse had quit drumming and I headed for the road. All I had to show for my efforts, so far, were several scattered brush piles, some dirty clothes and two thorns inbedded in my right hand.

When I arrived at daylight the next morning, I could hear the grouse drumming from what could only be its principle log. The blind had been accepted.

I approached to within 30 feet before the bird towered from the log and disappeared into the red-orange sunrise. Camera and strobe were soon in place, and I settled in to see what the morning would bring. I wondered whether or not there were more alternate drumming sites.

Something brushed the leaves, and I anxiously peered through the porthole. It was a white-tailed doe — passing so close all I could see was hair. After that I saw a chipmunk, and then a group of warblers. A turkey gobbled less than 20 yards to the right, but I couldn't see the bird through the brush.

I went back to staring at the log, and then suddenly there he was — a magnificent, red-phase, ruffed grouse cock. At a mere 13 feet, every minute detail of his elegant form was apparent. Like fine porcelain, the grouse seemed too perfect to be real.

But real he was, and the bird lost no time in getting down to the business at hand. I watched as the grouse elevated his crest, leaned back against his half fanned tail and pumped his wings in four well-spaced beats. Each beat produced the unique, muffled sound that is the species' hallmark. From there, the tempo quickened until the wings became a blur too rapid for the eye to follow. The result was a long (4 to 5 seconds) hollow roll that produced a sound not unlike that of a distant drum.

The grouse continued to display at a rate of about one "drum roll" every 60 to 70 seconds. I remembered the camera but hated to end the show. If the sound of the shutter didn't spook the bird, the flash of the strobe surely would.

I finally decided to take the shot. Since I needed a "drumming grouse," the shutter needed to be released right in the middle of the drum roll.

A few seconds later the grouse stood on his tail, and began to crank up. As the drum roll approached crescendo, I pressed the shutter and the forest exploded in a burst of light. I expected the grouse to explode too, but amazingly, he didn't. Instead the bird finished the roll, and then instantly assumed what could only be described as an avian look of terror. The grouse appeared to shrink to half its former size as every feather was pulled tight against the body.

As the grouse stood at attention, it became obvious the bird was having great difficulty in processing the available information. What had it seen? Silent lightning perhaps? Since the flash was so close, I wondered if the bird was now seeing "spots before his eyes?"

I guess I'll never really know what was going on in that grouse's bird brain. But I do know back in the blind I was processing some information of my own. I had just learned what woodland goshawks have probably known for centuries. Once the legendary drum roll has begun, nothing can make the grouse stop until the display is complete.

Armed with this new and useful bit of knowledge, I began to burn film in earnest. Each time the grouse would drum, I'd pop the strobe. With each successive flash, the bird became less and less alarmed until it ignored it all together. During the next three mornings, I observed as the grouse completed nearly 300 displays of drumming. Drumming always began before dawn, peaked by 8 a.m., and usually ended by 10 a.m. The activities resulted in attracting at least one or two females each morning.

As for myself, I had collected nearly 400 photos of grouse and grouse drumming. For me, the only remaining task was to remove the piles of sticks from all those alternate drumming sites.

-- LW

spotted the grouse at the same instant he spotted me. The bird rose with a "whirrrr" and was gone.

This log had no tell-tale nail scratches. No loose feathers. If I had flushed the bird from a distance, there would have been no way of determining the correct log. I quickly buried the log in a stack of loose branches and returned to the blind.

Within 20 minutes, the grouse was loudly drumming again. The only hitch was the bird was nowhere near my blind.

Leaving the blind on hands and knees, I headed out in search of the second alternate log. Fifty minutes later, I returned to my quarters. Mission accomplished.

For a half hour I stared through the blind's porthole at the nail scratched log. Nothing. Suddenly from 40 yards to the rear, I could hear the grouse crank up. He was drumming from a third alternate site.

AN EYE ON AIR QUALITY

Article by Brian Button
Photos by Ken Formanek

Photos taken of common particulate matter with an electron microscope. The top image is an iron combustion sphere -- possibly fly ash from steel works or metal working industry. The second image is a soot cluster -- most often associated with diesel combustion and likely from a motor vehicle. The particles are seen against a network of teflon fibers which comprise the teflon filter used in the particulate sampling.

Late last fall, I spent a week marching up into the desert high country at Big Bend National Park in the tip of Texas. I had eagerly awaited one hike, in particular, the climb up 7,825-foot Emory Peak, the tallest in the park.

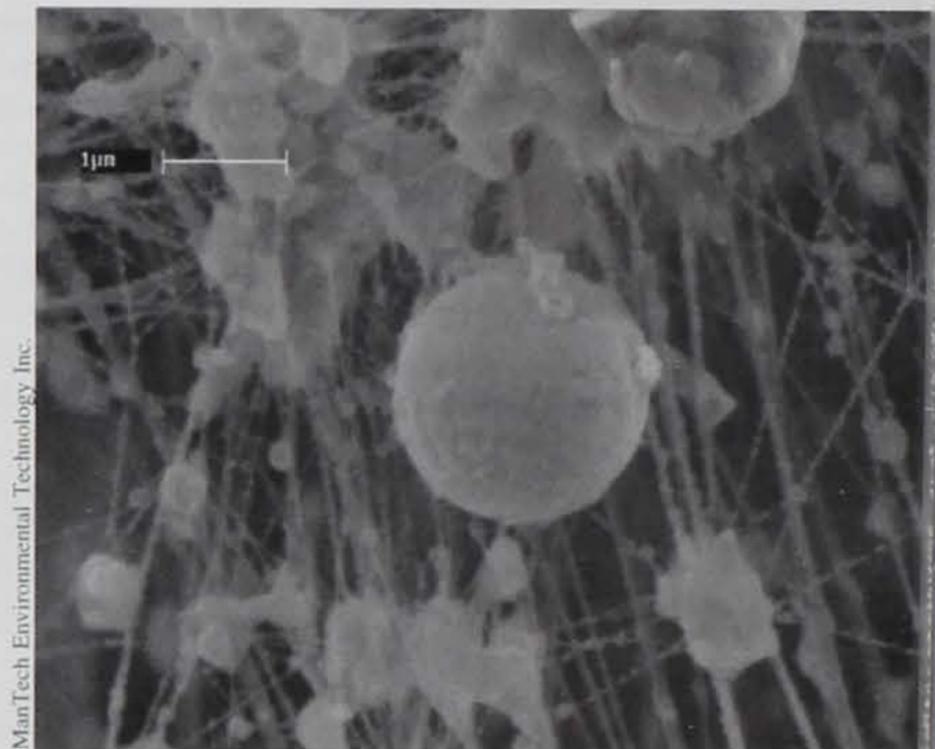
My dusty boots, the leather ringed with salt from days of sweat, finally rested at the summit of the mountain. The view from the top, however, was spoiled by hazy skies polluted from Mexico, El Paso and elsewhere in the Southwest. Pollution not only ruined the view, but made people wonder if they should even be exercising.

A few days later, a storm moved in. I knew the next day would be better for sight-seeing and photography, as fresh, clean air would blow in to improve the visibility. Hunkered down in my tent, the storm came at night. Fifty-eight m.p.h. winds blasted, ripped and roared at the tent for hours. By 3 a.m., the clouds lifted and silence returned to the darkness. Soon, coyote howls and the majestic full moon filled the sky above the desert floor. Clarity and pure air had returned and invigorated the desert landscape.

Although the impacts are less severe in Iowa, airborne particulates are

still a concern. Here and across the nation, a battle occurs to control particulates — tiny bits of airborne soot and ash that bombard our lungs with every breath. The objective is to keep good air clean and improve areas with bad air. It is what over 60 DNR staff work at every day.

Iowa is not immune. Last summer the skyline of Des Moines was hazy from particulates. Photos taken near the state's greatest landmark, the spot where the great glaciers ended and is now marked by the gilded dome of the capitol, tell an Iowa story as well. During several days, smoke from large



scale tree burning rose into the air. The burning was part of a disaster clean up after a powerful storm. Views on a clean-air day and a bad-air day show the effects of particulates. (See photos on page 37.)

Source of Particulate

Particulates are mainly a product of fuel combustion. Run your finger on the inside of a car tailpipe or a fireplace flue. That sooty residue is particulate matter — thousands of tons are emitted into Iowa's air everyday. Most are emitted from tailpipes, smokestacks and from chemical fumes, odors and vapors. Some come from burning leaves, smoldering trash and from fireplaces. Some are emitted as acidic gasses that turn into sulfate and nitrate particles in the air.

Our cars emit particulates from tailpipes. (Iowans burned 1.5 billion gallons of gas in 1998.) And our tires, in constant abrasion with the road, give off particulates into the air too. Worn tread is in our air. Just clean the inside of your windshield with a white cloth — the resulting grime contains tire and other particles. Tire particles are so prevalent in Kansas City that meteorologists regularly report airborne levels during weather forecasts!

Some particulates originate from within Iowa. Some, however, are like buccaneers, riding currents of air carrying them hundreds and sometimes thousands of miles into our state. But wherever they come from, they rob us of scenic views and can carry attached molecules of toxic substances deep into our lungs. And they can mix in the air with other chemicals, react and form new compounds, just like an atmospheric witch's kettle.

Together, these particles caused approximately 15,000 premature deaths last year in the United States alone. More common were emergency room admissions for respiratory difficulty, illness and lost days at school and work. Persons with respiratory prob-

lems, children and the elderly are most at risk.

Particulates are not just a metropolitan concern. Even national, remote treasures such as the Grand Canyon, Acadia, Shenandoah and Big Bend national parks are impacted. When particles are in dense concentrations, they are seen as smoke. But when they disperse, they don't vanish, but form a haze that can spread over an entire region of the nation, scattering light and reducing visibility. Natural visibility in Shenandoah National Park is 60 to 100 miles. But due to particulate pollution, average views are now diminished to six to 10 miles.

Health Based Regulations

Back in the early years of air pollution control (around the late 1960s and early 1970s) a dustfall bucket was the method to measure particles in the air. The science was simple — measure the weight of dust which fell into the bucket. Of course, this was mostly the large, gritty particles that had few harmful effects — the stuff that went into the air from a nearby source, then quickly fell out of the sky.

Over the last 25 years, air pollution control advanced rapidly. In 1987, medical science learned that smaller, microscopic particles about 10 microns in diameter (10 times smaller than a human hair) posed a greater health threat.

In 1997, medical science advanced again. Years of study showed that even smaller particles, about 2.5 microns in diameter, posed yet a greater health threat. Finally, the real culprits of lung damage were exposed. These particles, called PM2.5, mainly come from combustion — burning of coal, oil, wood, gasoline, trash and leaves. Some particles are created secondarily in the atmosphere when chemicals react as well.

Because these particles are microscopic, they bypass human respiratory defenses like bronchial tubes, mucous



National Parks Service

These photos show particulate pollution in the Grand Canyon.

The top photo shows the clearest air, occurring 1 percent of the time (visual range is 242 miles). The middle air quality occurs 45 percent of the time (visual range is 99 miles). The bottom photo shows the most polluted air, occurring 1 percent of the time (visual range is 24.8 miles).



The DNR has placed 20 PM2.5 monitors around the state measuring the smallest of particulates.

and cilia hairs, and can become imbedded in the deepest, tiniest lung passages — the alveoli. These health concerns prompted Congress in 1997 to adopt new Clean Air Act standards for PM2.5. Ironically, it was signed into law on a Washington, D.C., day marred by high air-pollution levels.

Today the dustfall bucket has given way to highly engineered monitoring equipment which separates the larger, less harmful particles and captures only the small matter onto filter paper. Just about everywhere in the state, there are at least 60 micrograms of particulates in every 3-foot cube of air, but you can't see them. These levels are considered acceptable.

Particulates in Iowa

Particulate levels are somewhat higher on average in eastern Iowa due to a larger population, more vehicles and heavier and more prevalent manufacturing. But generally, Iowa's air quality is

good, although particulates continue to cause concerns.

In the 1970s, large particles were problematic in numerous areas, even small communities. In the 1980s and as recently as 1997, the DNR measured unacceptable particulate levels around the state. Davenport, Mason City and Buffalo have been the areas of most concern. There may be others as well.

Fortunately, the DNR's air quality bureau works to control and monitor particles among other air contaminants. And we have some new weapons in this on-going, daily fight. The DNR has aggressively sited new scientific equipment across Iowa to measure PM2.5 levels. The DNR has 20 PM2.5 monitors in operation as part of a network of roughly 300 monitors across the nation. In

Iowa, most were installed since January to meet federal deadlines, a tremendous challenge made possible with help from the University Hygienic Laboratory.

Future monitor data will indicate the quality of our air for the smallest of particles. This will better protect our health. Very early indications hint at some new concerns. If this holds true, emissions will be lowered to meet health standards.

Particulates are just one of several contaminants commonly emitted, monitored and regulated in the state.

The DNR helps Iowans control pollution, but this isn't just a DNR responsibility, everyone has a role. Clean air, as well as water and land, takes work from all Iowans, including our neighbors and our communities.

We all use the air and depend on it greatly. Yet we take it for granted, breathing the air automatically, continuously and without thought — even in our sleep.

What Can You Do?

Tune-ups. An annual tune-up not only reduces emissions, but helps prolong engine life. Out-of-tune engines consume more gasoline, so tune-ups can quickly pay for themselves. Emissions from a poorly tuned car can equal that of 25 properly tuned vehicles.

Burn Better. Upgrade older, inefficient fireplaces with newer wood stoves. New units have a secondary combustion chamber that burns up gasses that were wasted on older units. The increased efficiency means you get more heat from less wood and fewer emissions as well. Burn only dry, well-cured and properly split wood. Don't damper down the fireplace and let wood smolder all night. Consider gas fireplaces to burn even cleaner.

Dispose Properly. Burning leaves and trash is out-of-fashion. Burning in towns is unhealthy and a nuisance to neighbors. Rural burning also contributes to haze and elevated particulate



Compost, don't burn.



levels downwind. Leaf smoke is full of particulates and trash smoke contains many toxic chemicals. Consider composting, municipal waste disposal, recycling or other methods of disposal.

See Your City Council. State law allows local governments to pass local open-burning laws more stringent than the state's. In the last few years, more and more towns are banning leaf burning and burn barrels due to health concerns.

Save Money, Save Emissions. Every time you flip a switch, electricity is used. Help minimize power plant emissions and save money by using electricity wisely. Upgrade to more efficient appliances, use compact fluorescent lighting and shut off electrical devices when not in use. Replacing that old, inefficient refrigerator can pay for itself in a short time. Or vacuum coolant coils twice a year for better efficiency.

Get Audited. (Not as painful as it sounds.) If you think your home is a good candidate for an energy tune-up, call your local utility company. An energy audit is usually free and conducted by trained professionals. They can pinpoint costly wastes of energy and give loans, rebates and suggestions for cost-saving improvements. Many offer free hot-water heater jackets, efficient lights and other items.

Cool and Heat Inexpensively. Ceiling fans and floor fans use less electricity than air conditioning. That reduces utility emissions, saves your power bills and pads your wallet. Hose off air conditioning coils and shade exposed units from direct sunlight. Install automatic thermostats.



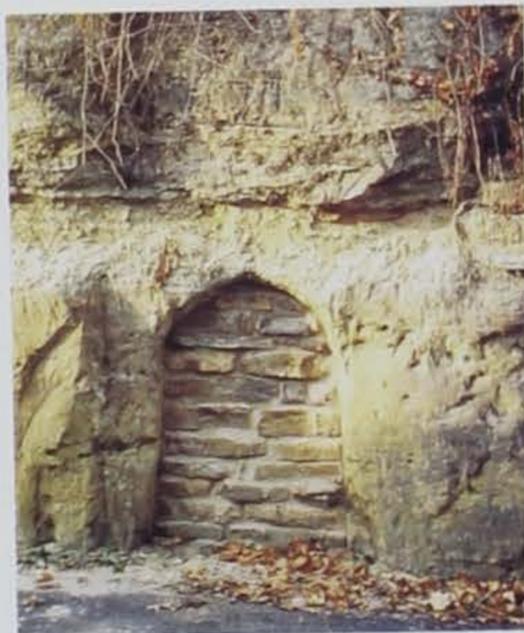
View of Des Moines from the state capitol on a clean-air day (top) and a bad-air day.



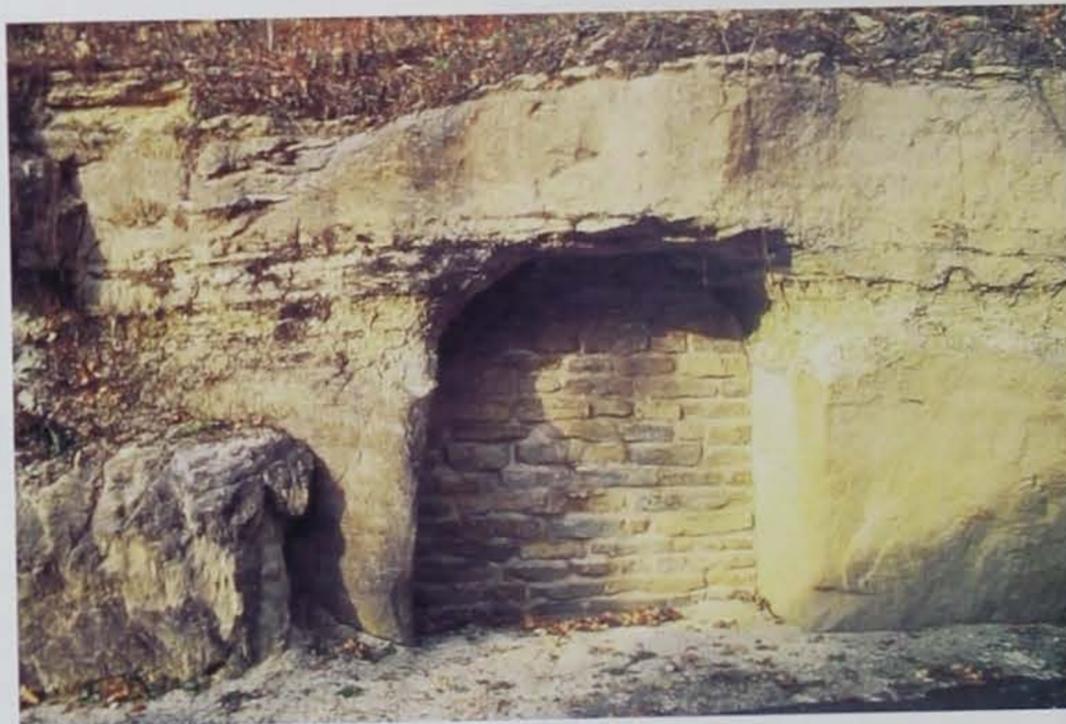
Despite all that is known about the impacts of air pollution, we naturally give water issues more attention. Unlike air, water is visible and more noticeable. But consider an Iowan drinks one to two liters of water daily. The same day we take in 15,000 liters of air and athletes can breathe 30,000 liters! We humans are creatures of the air, constantly submerged in a sea of air 52,800 feet deep.

Whether you like hiking, like me, bicycling with your family, or just strolling around the block, we all need clean air for good health. Please join us in protecting this valuable resource.

Brian Button is an air quality information specialist for the department in Des Moines.



Pat Lohmann



McGregor's 19th Century Refrigerators

Article and photos by
Robert M. McKay

The McGregor area of Clayton County in northeastern Iowa is known for its rugged bluffs along the scenic Mississippi Valley and its well-preserved 19th century architecture. In the days before refrigeration, the town's early residents made innovative use of the bedrock geology composing these bluffs.

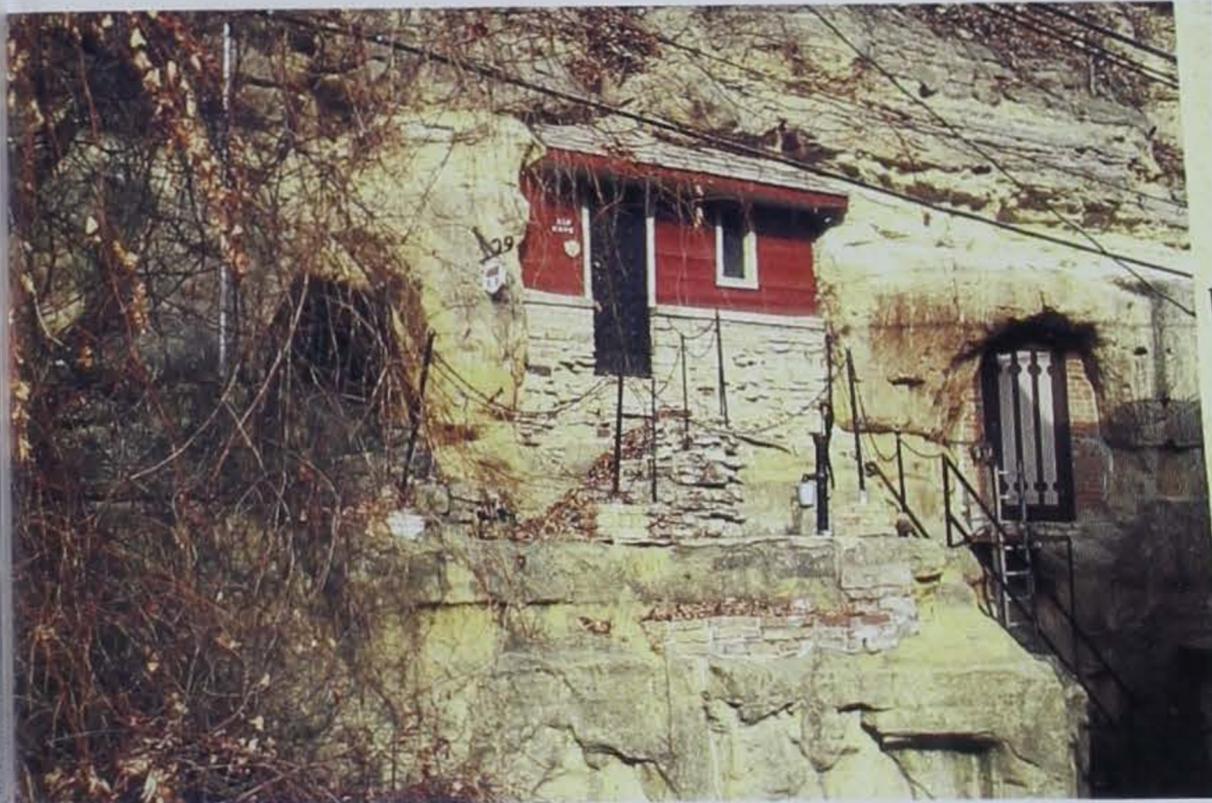
The 400-foot descent along the main highway into McGregor passes through numerous rock outcroppings of 450 to 550 million-year-old limestones and sandstones (Ordovician and Cambrian) to the town's flat valley floor. Of particular interest to residents during the steamboat era were two prominent sandstone layers that outcropped in the valley, rock units now referred to as the St. Peter and Jordan formations. Residents found that the unusually soft, uniform "sand rock" was easily excavated with hand tools, and that "caves" or "cellars" carved into these sandstones provided ideal space and cool temperatures for refrigeration and storage of river ice.

Most of the cellars were carved into the Jordan sandstone along the northern end of Main Street, where hotels, taverns and apartment buildings backed into small courtyards framed by the nearly vertical sandstone bluffs. The cellars varied in size and were entered via arched doorways (note photos). Smaller caves, typically

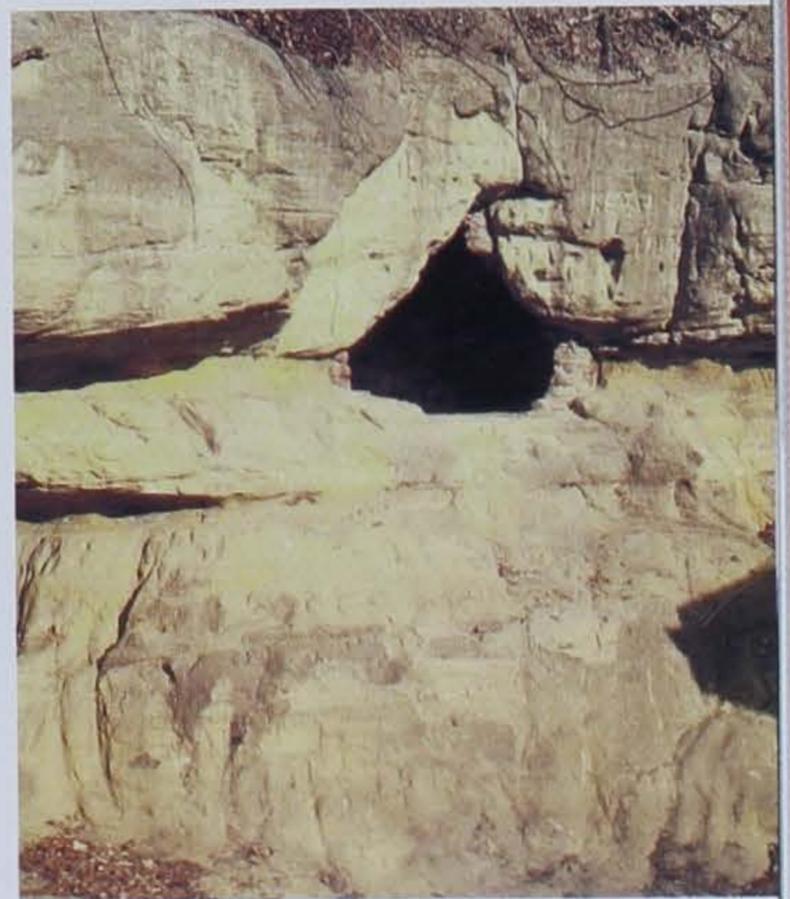
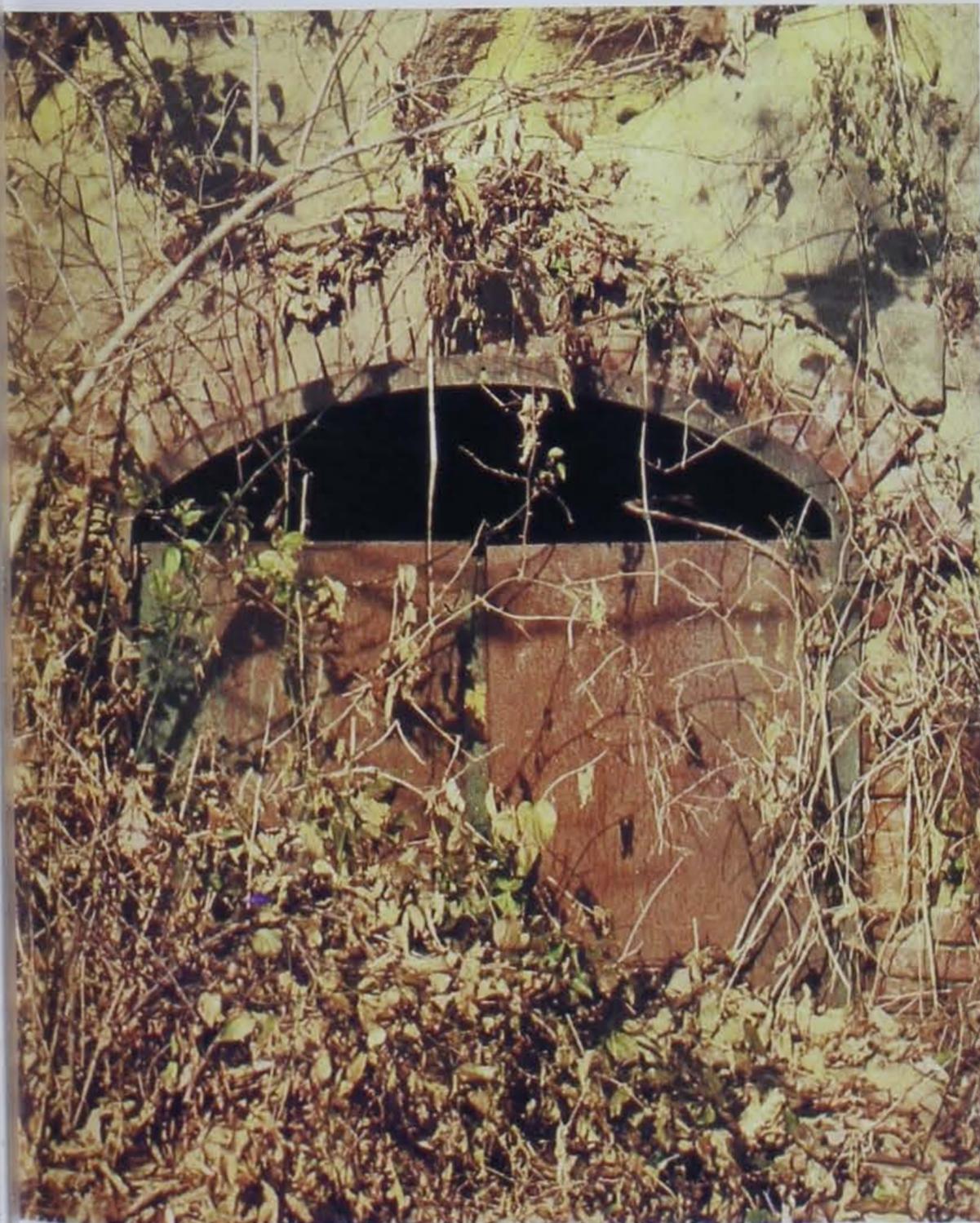
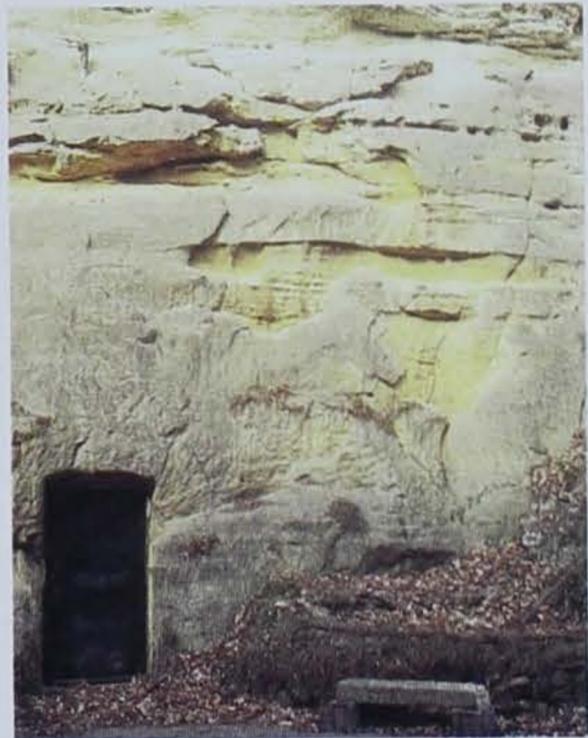
associated with taverns and apartments, were about 20 feet deep and housed items ranging from food to ammunition. One building even had two second-story caves (above right), with one connected to the balcony by a catwalk. Larger, multi-room caverns were excavated for business interests, especially breweries. For example, the once-flourishing J. L. Hagensick Brewery, built in 1845 between McGregor and Marquette, had four cellars cut into the Jordan sandstone (two shown, above) where most of its 10,000 barrels of annual production were cooled and aged.

Two miles south of town, the St. Peter sandstone was also used for cold storage. The present White Springs Supper Club was once site of the Klein Brewery, built in 1857. Three arched-ceiling caverns, 30 feet below ground level and each measuring 25 by 60 feet by 7 feet high, held casks of aging lager beer. The casks were slid down a steep stairway into the caverns, then floated in a spring-fed, water-filled trough to their storage locations. Most of these historic caverns are now inaccessible because of the deteriorating effects of time and weather. As one strolls through McGregor, however, several sandstone entryways remain visible, reminding us of the interesting and historic influence of local geology on the lives of the people who lived there.

Robert M. McKay is a geologist for the department in Iowa City.



These entryways were hewn into bluffs of Jordan sandstone at McGregor, Iowa, and opened into caves excavated for cold storage. In addition to brewery cellars (photos, far left) 20 tons of ice were once stored in the cave at bottom (former site of the popular "Mississippi House" hotel and tavern), and the brick-lined cave (bottom left) functioned as a cistern for water storage.



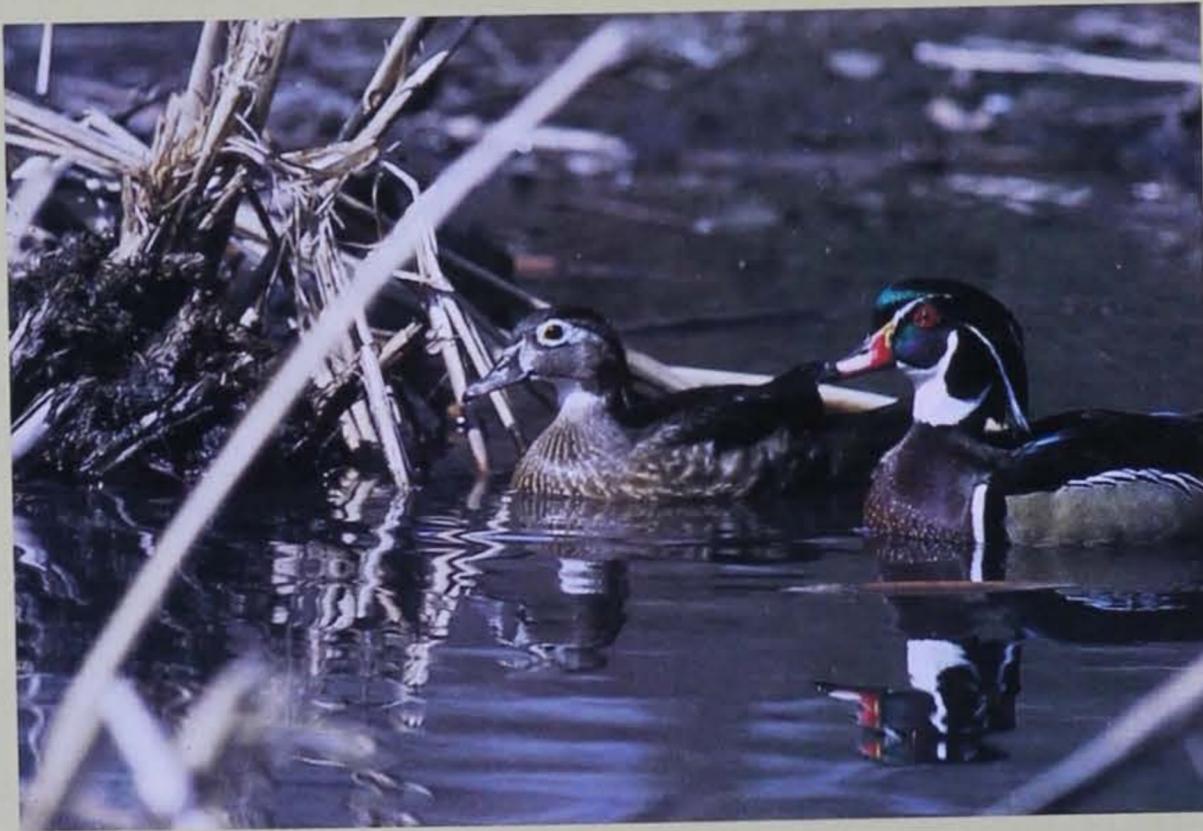
Pat Lohmann

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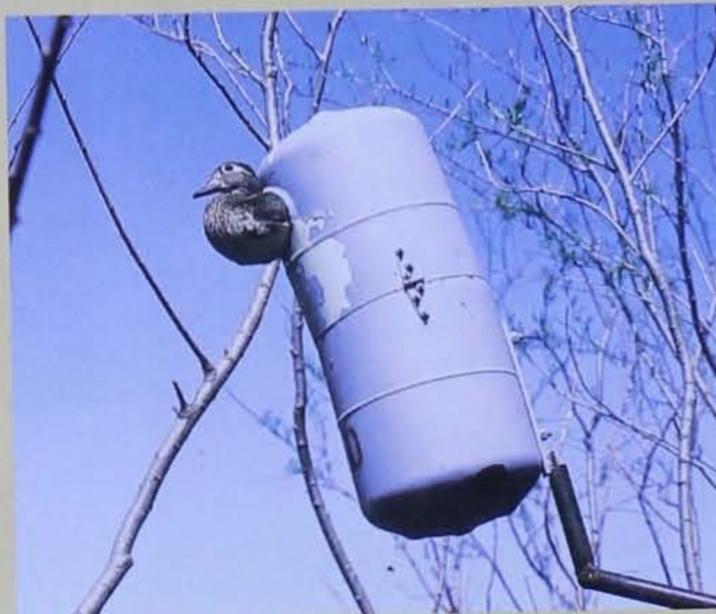
Wood Ducks

Offer Unique Spring Ritual

Article and photos by Lowell Washburn



To meet increasing protein demands during egg laying, females' diets shift from 50 percent seeds to 80 percent aquatic invertebrates (above). Drakes loaf while hens incubate eggs (far right). By the time a clutch hatches, the drake will have abandoned the hen. A wood duck prefers a cavity with the smallest possible opening and deep enough to keep eggs out of a predator's reach (right).



For many Iowans, the spring waterfowl migration represents one of the most thrilling events on the annual outdoor calendar.

For all waterfowl, spring is a season of renewal — a time to replace fall and winter losses. Consequently, most birds lose no time in getting down to the serious, species-sustaining business of reproduction.

Most ducks, such as mallards or blue-winged teal, will fashion their nests in the grassy uplands. But for the secretive and colorful wood duck, the strategy is uniquely different. For this species, the success or failure of the nesting season will depend on the use of natural tree cavities.

Most wood ducks establish pair bonds while still on the southern wintering areas. Females display a strong urge to return to the place of their birth and as they head north, the males follow. Depending on his mate, a drake hatched in South Carolina or Minnesota might end up nesting in Iowa. A drake hatched in Iowa might end up nesting in Wisconsin, Missouri or Louisiana — it all depends on where the hen is from.

As soon as they arrive on the spring breeding grounds, wood duck pairs began scouring nearby timbers for suitable nesting sites. Competition is fierce as hens vie for space with other wood ducks, raccoons, squirrels and owls. Individual females may explore dozens of cavities before choosing the one that is just right. But once the selection is made, the same hen is likely to return to the same cavity year after year.

Although nest sites may include a wide variety of tree species and may vary greatly in height, preferred locations do seem to have some similarities. When selecting a nest site most hens prefer cavities that are near or, better yet, over the water. They also prefer cavities that have the smallest entrance a female can possibly squeeze through, but yet deep enough to exclude the probing arms of raccoons. Of course, not every duck gets a mansion. In the end, most hens take whatever they can find.

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Wood ducks lay more eggs and renest more times than any other duck species (above). Females establish strong communication bonds with young before they hatch. While continually "peeping" to their mother, chicks leap from their cavity entrance to the ground and sometimes make long treks to the nearest body of water.

Female with brood of 21 ducklings — the result of a successful dump nest.



For the females of any duck species, the nesting season represents a time of extreme danger. This is particularly true with woodies. No other species has greater nest losses, or a greater loss of adult females. Consequently, no other duck lays more or proportionately heavier eggs; and no other species has a greater tendency to renest time and again until success is achieved.

If a partially completed nest is destroyed, or if the demand for nesting cavities exceeds the supply, even wood ducks may engage in an unusual activity known as dump nesting. Dump nesting occurs when two or more hens contribute to a single clutch of eggs. Most dump nests are eventually incubated by the cavity's original occupant. They often result in huge broods of 16 or more ducklings, and are extremely beneficial to population recruitment.

As soon as a successful nest starts to hatch, the female begins to communicate with her ducklings — well before they actually emerge from the egg. Once the clutch has hatched and dried, the female leaves the nest to visit the place where she will lead her offspring. Upon returning, the hen begins to softly call to her brood. The young respond, first by "peeping" back to their mother, and then by leaping toward the cavity entrance. As the first duckling appears in the entrance, it leaps unharmed to the ground. This triggers a noisy chain reaction as cheeping young begin bouncing toward the exit and leap from the nest two or three at a time.

I once had the opportunity to video the exodus of a nest containing 14 baby wood ducks. From the first duckling until the last, the entire event took a mere 2 1/2 minutes.

Once the brood is assembled on the ground, the hen quickly leads her young to what will be the first in a series of brood-rearing areas. The initial overland journey to water is one of the most dangerous times in the brood's life as predators, traffic and a myriad of other hazards take their toll. Although losses for some broods may be high, more experienced hens show an amazing ability to navigate their young over hostile terrain.

Over the years, I have had a number of wood ducks nest in the woodlot behind my home. While banding females, I once marked one of the nesting hens with a nontoxic spray paint. My goal was to discover where she led her brood after leaving my backyard.



When natural cavities are scarce, artificial nests can benefit local populations (above).

She eventually hatched her clutch on a Friday and on Saturday she called her 13 young from the nest. Two days later, I discovered the marked hen on Lekwa Marsh — one full mile from the nest site. She was still accompanied by 12 tiny ducklings. Not bad considering the hen had led her parade of fuzzballs across an open corn field, at least five backyards and through a half-mile strip of brushy woodland.



Crank It Up

Article by Van Sterner
Photos by Lowell Washburn

Often overlooked by walleye anglers, crank baits can put more fish in the boat when other methods fail.

There are no guaranteed methods for catching walleye. Most walleye anglers know the methods that produce successful fishing change from season to season and even day to day.

Summertime walleye fishing can be especially difficult. The jigs, slip bobbers, drifting and trolling live bait rigs will all be successful sometimes. Other times they won't. When the more traditional methods

fail, it may be time to add another weapon to your arsenal -- trolling crank baits. They can be fantastic for summertime walleye.

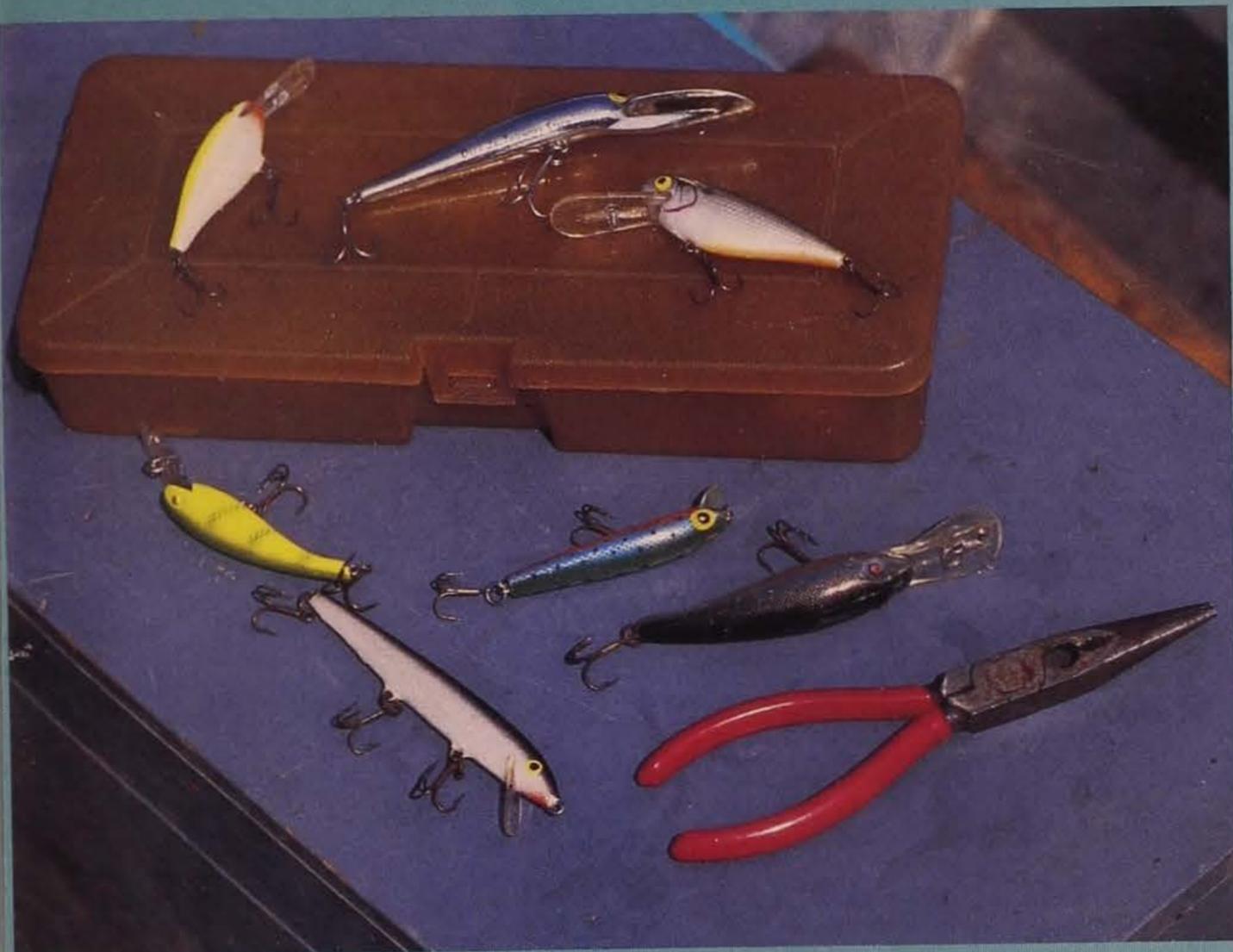
Crank baits are not new. Successful anglers have used them for generations on largemouth, smallmouth and northern pike, but many people overlook them when pursuing walleye. It is probably true live bait catches more fish, but crank baits can catch the tough ones.

The baits and tackle

Crank baits are constructed of hard plastic or wood and usually have two or three treble hooks. They come in many different sizes, styles and colors. The type most commonly used for walleye are the floating minnow-imitating lures which dive when retrieved or trolled. They are manufactured to dive at a variety of depths, which is controlled mainly by the size of the "lip" under the line attachment eye. A small lip



When walleye are scattered over a large area, which is often the case, cranks baits allow the angler to cover more water in a shorter amount of time than traditional methods like jigging or drifting live bait.



Crank baits come in a variety of sizes, shapes and colors. They are designed to run at different depths depending on the size of lip. The types most commonly used for walleye fishing are the floating minnows which dive when retrieved or trolled.

will produce a shallow dive and a long, large lip will produce a deeper dive. Small variations in depth can be controlled by trolling speed and the amount of line you let out.

The action or movement may also vary between different styles of plugs. The long, thin pencil-style lures tend to have a slow, longer, side-to-side action, while the short, thick plugs have a tight, quick action. The action of the lure is suppressed by a tight cinch knot tied directly to the line attachment eye. Always use a split ring or tie a loop style knot. This will allow for optimal action.

New lures may swim to one side or the other. It may be necessary to fine tune them. This can easily be accomplished by slightly bending the line attachment eyelet with a pair of needle-nose pliers (needle-nose pliers are also essential for removing treble hooks from a toothy mouth). Bend the eyelet

in the same direction you want the lure to travel. It may take several trials to correct the direction the lure swims.

Select the medium-size lures with a 3- to 6-inch body. Color can make a difference on certain days, so it's always good to have some bright and dark colors on hand.

Selecting the proper size rod and reel is much more important than choosing a style. Don't go any lighter than a medium rod with 10-pound test line. You may want to go a little heavier if you are trolling a lot of deep-diving lures. The lip on a diving

crank bait creates a drag or pull on the line that reduces the sensitivity of the lighter rods. Combine this with the line stretch typical of thin monofilament



Crank baits can produce results when all other methods fail.



Once walleyes are found, note the location and depth they were caught, then work the area hard.

and you have nothing left to feel a strike, let alone set the hook. The new braided lines are a good choice for just this reason -- they have no stretch.

The fishing

Walleye are often scattered over large areas. This is an ideal situation for trolling crank baits. Trolling allows you the benefit of covering a lot of water in a short amount of time. Large flats or long breaklines are ideal spots. You could also add sunken roadbeds and creek channels to the list.

Choosing a bait that will run at the desired depth is key to success. It is equally important for the boat to travel at a consistent speed to keep the lure at a constant depth. You need to keep an eye on your depth finder. The bait should occasionally hit bottom. This helps assure the crank bait maintains

the desired depth. If you are not feeling bottom, let out more line. If that doesn't work, switch to a deeper-diving lure. Try a couple of split shots placed a rods-length above a shallow-diving lure when you get into water too deep for standard lures. Make multiple passes at a variety of depths along the breakline. Take note of the location and depth when fish are encountered. Work the area and similar areas hard.

The outside edge of weed lines are another great spot. Submerged vegetation contains bait fish and shade. That's a pretty good combination for walleye. The vegetation adjacent to deep water will usually be more productive. Run the bait on the outside edge of the weedline staying as close as possible. You may be able to troll over the top of deeper weedbeds, but this can be frustrating. You will occasionally need

to clean the weeds from your lure.

One last word of advice. Some fish hook themselves on the strike, many will not. Set the hook on any indication of a bite. Too often it will just be the lure hitting bottom or tangling in a weed, but if you don't set the hook, you'll miss a lot of fish. You'll get hung up once in awhile, but just throw the boat in reverse and back up to the snag. It is usually retrievable. This type of fishing is tough on monofilament line, so retie often.

The next time you get the summertime walleye blues, try trolling crank baits. It might just put more fish in the boat.

Van Sterner is a natural resources technician for the DNR at the Clear Lake station

Iowa 1999-2000 Hunting Seasons and Bag Limits

SPECIES	SEASON	SHOOTING HOURS	BAG LIMITS	
			DAILY	POSSESSION
Youth Rooster Pheasant (age 15 or younger)*+	Oct. 23-24	8:00 a.m. to 4:30 p.m.	1	2
Rooster Pheasant	Oct. 30 - Jan. 10, 2000		3	12
Bobwhite Quail	Oct. 30 - Jan. 31, 2000		8	16
Gray Partridge	Oct. 9 - Jan. 31, 2000		8	16
Turkey (Gun)*	Oct. 11 - Nov. 30	One-half Hour Before Sunrise to Sunset	One Turkey Per License	One Turkey Per License
Turkey (Bow Only)*	Oct. 1 - Dec. 3 and Dec. 20 - Jan. 10, 2000	One-half Hour Before Sunrise to One-half Hour After Sunset		
Deer (Bow)	Oct. 1 - Dec. 3 and Dec. 20 - Jan. 10, 2000			
Deer (Muzzleloader)	Oct. 16 - Oct. 24* (early) or Dec. 20 - Jan. 10, 2000 (late)			
Deer -- Youth (age 12-15) and Severely Disabled	Sept. 18 - Oct. 3			
Deer (Special Bonus Late Season)	Jan. 11 - Jan. 17, 2000			
Deer (Shotgun)	Dec. 4 - Dec. 8 (first) or Dec. 11 - Dec. 19 (second)	Sunrise to Sunset	3	6
Ruffed Grouse	Oct. 2 - Jan. 31, 2000			
Rabbit (Cottontail)	Sept. 1 - Feb. 28, 2000			
Rabbit (Jack)	Oct. 30 - Dec. 1			
Squirrel (Fox and Gray)	Sept. 1 - Jan. 31, 2000	None	6	12
Groundhog	June. 15 - Oct. 31			
Crow	Oct. 15 - Nov. 30 and Jan. 14 - March 31, 2000			
Pigeon**	Oct. 1 - March 31, 2000	None (Open 8 a.m. First Day Only)	None	None
Raccoon and Opossum	Nov. 6 - Jan. 31, 2000			
Fox (Red and Gray)	Nov. 6 - Jan. 31, 2000			
Coyote	Continuous Open Season	None		

* Residents Only.

** Within 100 yards of buildings and bridges, pigeons may be taken year round.

+ See regulations for complete requirements

1999-2000 PROPOSED MIGRATORY GAME BIRD SEASONS AND BAG LIMITS

STATEWIDE		
Ducks, Mergansers and Coots	Sept. 18-22 Oct. 16 - Dec. 9	
Youth Waterfowl Hunting Day	Oct. 9	
Snow Geese	Oct. 2 - Dec. 27 Feb. 19 - March 10, 2000	
Woodcock	Oct. 2 - Nov. 15	
Snipe	Sept. 4 - Nov. 30	
Rail (Sora and Virginia)	Sept. 4 - Nov. 12	
NORTH ZONE		SOUTH ZONE
Special Canada Goose Season	Sept. 11-12 ¹	NO SEASON
Canada, White-fronted and Brant geese	Oct. 2 - Dec. 10	Oct. 2 - Oct. 10 Oct. 16 - Dec. 15

¹ In that portion of the north zone west of Iowa Highway 63, excluding the Big Marsh Wildlife Area (see map below).

Shooting Hours: 1/2 hour before sunrise to sunset.

Daily Bag and Possession Limits:

Ducks: Daily limit is 6, including no more than 4 mallards (of which no more than 2 may be female), 2 wood ducks, 2 redheads, 1 black duck, 1 pintail, and 1 canvasback. Possession limit is twice the daily bag limit.

Mergansers: Daily limit is 5, including no more than 1 hooded merganser. Possession limit is twice the daily bag limit.

Coots: Daily limit is 15; possession limit is 30.

Geese: Daily limit for Canada geese is 2 through Oct. 31 and one thereafter, except in the south zone where it is 2 from Dec. 1-15. For other geese, the daily limit is 2 white-fronted, 2 brant, and 20 snow geese. Possession limit is twice the daily bag limit, except for snow geese for which there is no possession limit.

Woodcock: Daily limit is 3; possession limit is 6.

Snipe: Daily limit is 8; possession limit is 16.

Rail (Sora and Virginia): Daily limit is 12; possession limit is 24.

Youth Waterfowl Hunting Day: Shooting hours and daily bag limits will conform to those set for the regular waterfowl seasons.



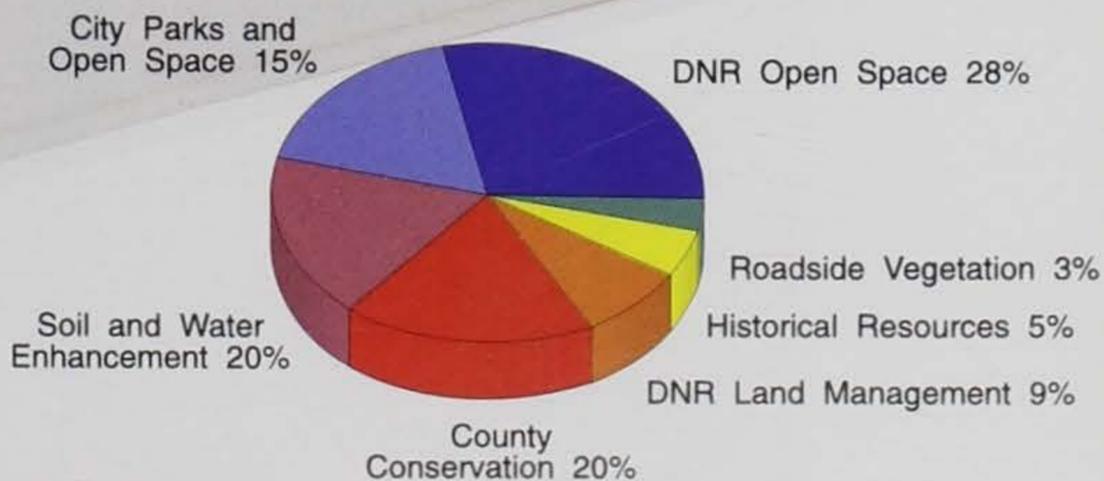
Waterfowl zone description. The state will be divided by a line beginning on the Nebraska-Iowa border at State Highway 175, east to State Highway 37, south-east to U.S. Highway 59, south to I-80 and along I-80 east to the Iowa-Illinois border. A portion of the north zone east of Iowa Highway 63 will be closed to Canada goose hunting Sept. 11-12.

► The money from natural resources license plates goes to the Resource Enhancement and Protection Fund—REAP. Created in 1989, REAP has received the highest national award for conservation programs. So far, it has generated \$70 million and rising. To buy a set of the \$35 plates, take your current plates and registration to your county treasurer and request the natural resource plates.

IT'S FOR THE BIRDS



REAP In Action



Parks Profile

The ideal setting for
picnicking, fishing, hiking
and family fun...

Ahquabi State Park

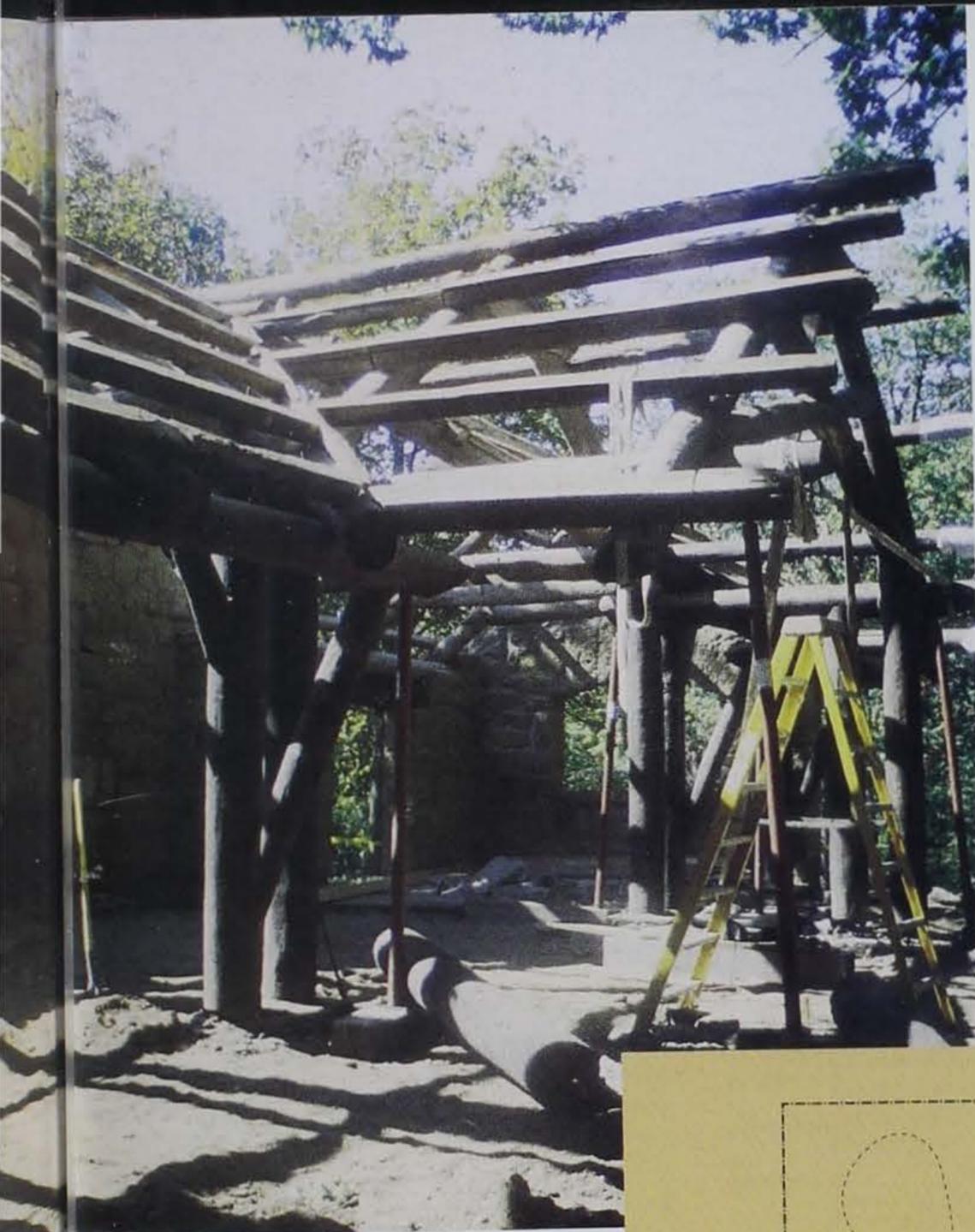
Article by Jim Lawson
Photos by Ken Formanek



Lake Ahquabi State Park, located five miles south of Indianola, was established by the general assembly of Iowa in 1931. The Board of Conservation, and the Fish and Game Commission developed plans for preservation and development of Iowa's natural resources, including the construction and development of several artificial lakes and parks.

Several sites in Warren County were considered for a new park. The present site of Lake Ahquabi was recommended by J. N. "Ding" Darling. In 1935, a contest was held to find a name for the new lake site. The winner was Mary Louise (Brownrigg) Hanrahan for her suggestion of the name "Ahquabi" -- a Sauk and Fox Indian word meaning "resting place." A monument in her honor was dedicated in May 1986.

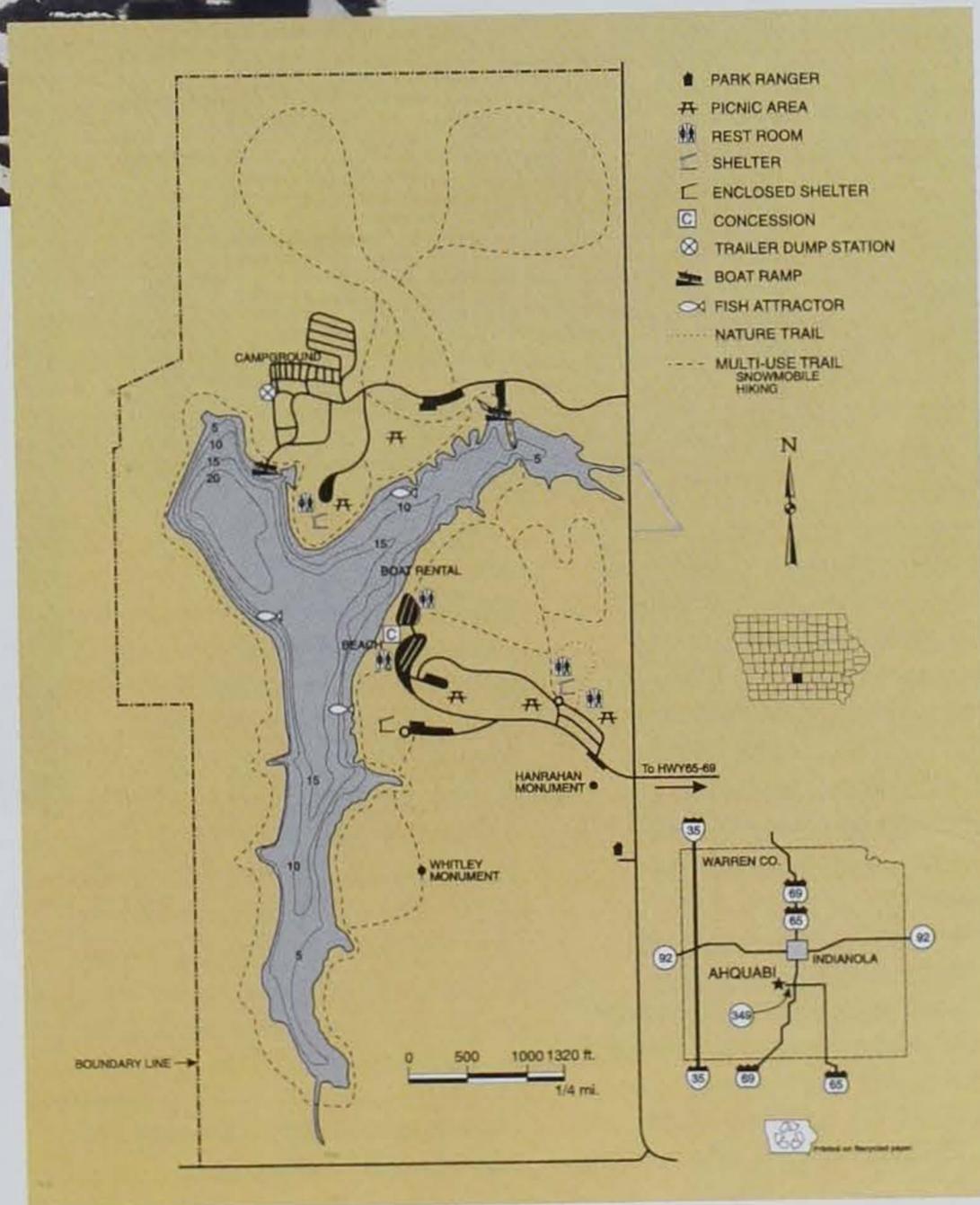
Most of the labor used to initially construct the park was provided by Company 769 of the Civilian Conserva-



The enclosed lodge, open picnic shelter and beach complex at Ahquabi are all on the National Register of Historic Places. Repairs and renovations have been made to the open picnic shelter.

tion Corp. The company arrived in Indianola in May 1934 and established a camp at the Warren County Fairgrounds. Their construction projects included facilities such as the enclosed lodge, an open picnic shelter and the beach complex which are still in use today. All of these facilities are on the National Register of Historic Places.

Since the initial construction of the area, there have been several major renovation projects. The lake was drained in 1965 for the first time since its construction to make repairs on the spillway. It was drained again in 1981 to improve the quality of the fish population. In 1989, the enclosed lodge was renovated to restore it to its original state. Another complete drawdown of the lake was done in 1993 to prepare for the most major renovation project in the park's history. This latest renovation included spillway repairs, replacement of the outlet structure, shoreline protection, a double



lane boat ramp and parking area, installation of an aeration system, underwater fish habitat and the construction of an enclosed fishing pier.

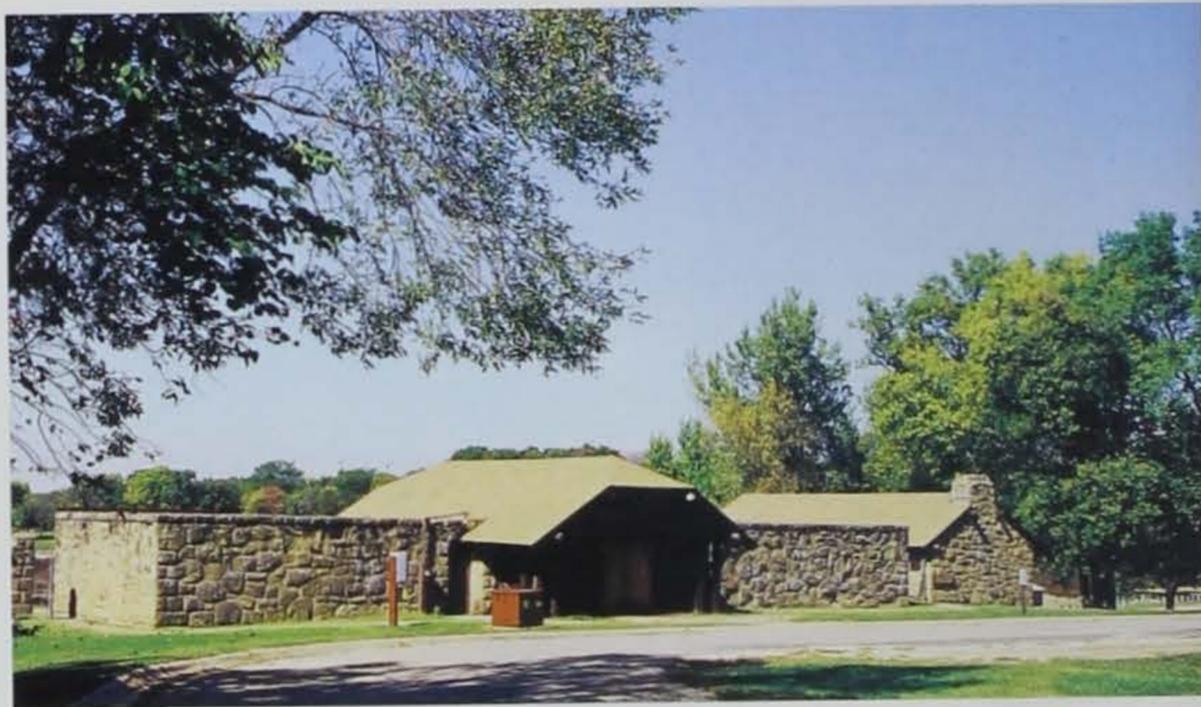
The project also included the removing 309,000 cubic yards of silt from the lake basin and constructing several impoundment's on adjacent properties to protect the lake from future siltation. The lake renovation project was completed in 1996. Repair work has been completed on an open picnic shelter, two latrines and continues at the beach complex, with an estimated completion date of May 1999. The original beach house is being converted to an open shelter which will be available for

family gatherings and company outings. Funding for restoration of the CCC structures is through the "Restore The Outdoors Program."

A wide variety of outdoor activities are available at Lake Ahquabi. It features a 130-acre artificial lake which offers excellent fishing. There is an unsupervised beach and a concession, complete with boat rental, snacks, pop, ice, firewood and bait. The park also has three open picnic shelters and an enclosed lodge, complete with kitchen facilities and modern rest rooms. The shelters and lodge may be reserved by contacting the park office. The campground has 161 sites, (85 electric) and offers two modern shower/rest room buildings. All campsites are available on a first-come, first-serve basis.

A scenic trail system connects many of the park's facilities and extends the entire perimeter of the lake. Trails provide opportunities for hiking, snowmobiling and cross-country skiing.

With all of it's amenities, Lake Ahquabi provides a variety of activities



sure to please every member of the family. It's an ideal setting for picnicking, fishing, hiking, family gatherings or just a quiet weekend spent relaxing in the sun. Lake Ahquabi State Park, officially dedicated on May 29, 1936, has served as a popular recreation site for more than 60 years.

Ahquabi offers 130 acres of excellent fishing. There is an unsupervised beach as well as three open picnic shelters and enclosed lodge. Trail opportunities include hiking, snowmobiling and cross-country skiing.

Jim Lawson is a park ranger at Lake Ahquabi State Park.

B BLUEBIRDS



Ty Smedes

The eastern bluebird is a colorful thrush of open forest edges. We often see the male, with his blue back and rusty throat and breast, perched on a telephone line or fence post. Only seven inches long, the bluebird is much smaller than its noisy blue and white woodland neighbor, the blue jay (12 inches). It is larger than the all blue, shrubland indigo bunting (five inches), and eats, behaves and nests differently from our western Iowa blue grosbeak (seven inches).

Cavities in scattered old oaks and elms, across the plains and along forest edges, were once home to the bluebird. Lacking the tools of woodpeckers and squirrels, the bluebird is a secondary tenant, waiting for these excavators to make (and then leave) suitable nest holes.

Today, of course, most of these are gone -- cut for fuel, farm ground or "sightliness." Deprived of nesting sites and hunting grounds of short grasses, the bluebird needs our help.

Habitat is most important to bluebirds, as to all our wildlife neighbors. Provide them open grassy areas to hunt beetles, grasshoppers and butterflies. Leave dead trees standing (if they don't endanger your house) for woodpeckers, and later bluebirds, to use for nesting. Plant windbreaks and shelterbelts that reduce your heating bills as they protect wintering birds from savage plains' winds. Also, plant some fruiting shrubs to beautify your landscape and feed birds during tight times.

Nest boxes provide bluebirds homes where feeding, but no nesting,

habitat is available. A bluebird box plan, as well as more information, is available from the DNR by writing the Iowa Wildlife Diversity Program, 1436 255th St., Boone, Iowa 50036. The plan provides a nest box safe from raccoons and summer heat. It was designed with the Iowa bluebird in mind and is based on bluebird nesting preferences as observed by many Iowa bluebird enthusiasts.

For those who have established bluebird nest boxes, you will find a 1999 Bluebird Report Form. Please take the opportunity to record you findings this summer and return the form, by Nov. 1, to Jaelyn Hill, 2946 Ubben, Ellsworth, Iowa 50075.

Bluebird Report Form 1999

NOTE: If you had boxes in more than one county, please submit a separate report for each count.
No group names, individual reports only.

Last Name	First Name	box location, county
Address	(Area Code)	Telephone
City	State	Zip Code



Ron Johnson

- _____ How many bluebird boxes did you monitor?
- _____ How many successful broods
(a single nesting with one or more bluebirds fledged)
- _____ How many blue bluebird eggs?
- _____ How many white bluebird eggs?
- _____ How many bluebirds hatched?
(This number cannot be greater than the number of eggs.)
- _____ How many bluebirds fledged?
(This number cannot be greater than the number of eggs.)
- _____ How many tree swallows hatched?
- _____ How many tree swallows fledged?
- _____ How many chickadees hatched?
- _____ How many chickadees fledged?
- _____ How many kestrel boxes did you monitor?
- _____ How many kestrel fledged?
- _____ How many purple martin compartments did you monitor?
- _____ How many purple martins fledged?

Muddy Waters

by Barb Gigar

Background

When people think of water quality problems, they tend to think of nitrates, pesticides, sewage and a host of other pollutants, but in Iowa, the greatest threat to our water quality is silt -- fine soil particles carried from the land in runoff water. Erosion (loss of soil) of the landscape increases the turbidity of our waters and robs Iowa of some 130 million tons of soil each year. Erosion is a natural process, but it can be greatly accelerated by human activities in the watershed (land which drains to a river or lake).

Turbidity is a measure of the "cloudiness" of the water caused by solids (mainly silt) and plankton (microscopic plants) suspended in the water. Turbidity often is measured with a device known as a Secchi disk. The Secchi depth decreases as the turbidity of the water increases.

Some turbidity is normal in a prairie stream or lake, but excess turbidity can cause several problems. It blocks the light needed by submersed aquatic plants and algae to grow and produce oxygen. Suspended solids can clog the gills of small aquatic animals such as insect larvae. Sight feeders such as bass are unable to locate prey in turbid waters. As suspended silt settles from the water it covers the bottom of the stream or lake (sedimentation) and can smother fish eggs. The depth of lakes and pools in rivers can be drastically reduced, eliminating fish habitat. Suspended soil particles may also carry nutrients, pesticides and other pollutants into the stream or lake causing even more problems for the aquatic ecosystem.

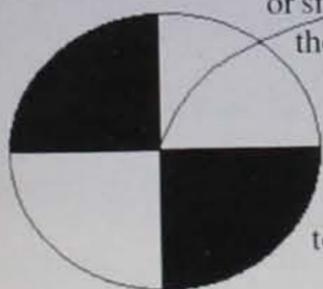
Total solids is a measure of all solid materials dissolved and suspended in the water. These can be measured if the water is too shallow to get a Secchi depth. Since turbidity increases with increased solids in the water, this measure is an indication of the turbidity of the water.

By measuring Secchi depth and/or total solids before and after a rainfall event, students can compare the changes in these measurements. Much of the erosion of Iowa's landscape occurs when water moves across the land after a rainfall or snow melt. The amount of erosion is determined by several factors: 1) the rainfall event - how much and how fast 2) the condition of the soil in the watershed - dry or saturated, exposed or covered and 3) human activities in the watershed -- houses, fields, roads, etc.

Procedure

Secchi disk instructions

Secchi disks can be purchased, or they can be constructed out of a flat, circular plastic lid, flattened pie plate or plywood. To construct a Secchi disk you will need a flat circle that is 20 cm in diameter. Draw perpendicular lines on the disk to divide it into four equal quarters. Paint two of the quarters white and two black so the colors alternate (see graphic). To attach the disk to a rope, make a hole in the center of the disk and insert a pen housing or a metal casing snugly in the hole. Draw a sturdy string



or small rope through the hole and tie a knot to secure it. To attach the disk to a handle, secure it with a wood screw through the bottom of the disk into end of the handle. (A washer on the bottom of the disk helps to prevent the screw from working through the disk.) Use a meter stick to mark the handle or rope in .1 meter increments. Tape can be placed on the marks to make them more permanent.

Age

Grades 6-12

Skills

observation, comparing similarities and differences, inference, interpretation, record keeping

Objectives

Students will be able to

1. measure the turbidity and/or total solids found in a water body before and after a rainfall event;
2. identify activities in the watershed which might contribute to these measurements;
3. relate the effects of turbidity on aquatic life and
4. provide suggestions for changes in watershed activities which might reduce these measurements.

Method

Students will measure turbidity and total solids in a body of water. They will then research activities in the watershed which might impact turbidity as well as the effects of turbidity and sedimentation on aquatic plants and animals.

Materials

clip boards
writing utensils
paper to record readings and other observations
camera or video (optional)

Secchi depth

Secchi disks (see instructions)

Total solids

Clean collecting jar with a lid (e.g. quart fruit jar)
Sensitive scale (laboratory scale)
Dry sample bottle
Drying oven (optional)

Classroom Corner

Evaluation

Students should be able to describe the relationship between watershed activities and turbidity in water bodies. They also should be able to describe the negative effects of turbidity and sedimentation on aquatic plants and animals.

Extensions

1. Have students develop a watershed map for your body of water. Note land use in the watershed. Note the presence of conservation practices to slow runoff and/or reduce soil erosion.

2. Have students brainstorm ways they might help improve their watershed. Look for ways to implement their ideas.

Resource Materials

Streamkeeper's Field Guide: Watershed Inventory and Stream Monitoring Methods, available from Adopt-A-Stream Foundation, 600 128th Street, SE, Everett, WA 98208

IOWATER Volunteer Water Quality Monitoring Manual, available only through training sessions from IOWATER, IDNR, 2473 160th Road, Guthrie Center, IA 50115

Barb Gigar coordinates the Aquatic Education, Project WILD and Project Learning Tree programs for the department.

General observations

Take students to a nearby water (stream, pond, lake or river). Working in groups of two:

1. Note the date, time and weather conditions (current and recent past) at your site.
2. Record the specific location of your site. Be as precise as possible. For example, record specific distances by road from the nearest town followed by precise measurements from the road if your site is a stream; record specific distances from landmarks if your site is a lake. (Optional -- photograph your sampling location from different directions and note the different perspectives on the photos.)
3. Note activities occurring on the land surrounding your water body. Record these.

Secchi depth

Being careful not to disturb the water (Wading into the water will stir bottom sediments and affect the Secchi reading.) Find a place in the shade and lower the Secchi disk into the water until it is no longer visible. Record the depth. Drop the disk a little lower, then pull it back toward the surface. Record the depth at which it is again visible. Average the two depths to get the Secchi depth. (If a shaded area is not available, try to shadow the water where you are taking the reading, since readings may vary in the sun versus the shade.)

Total Solids

1. Using a clean collecting jar with a lid, dip it into the water and allow the bottle to fill. Be careful not to disturb bottom sediments. Do not allow plants or debris to enter the bottle. Place the lid on the bottle and label it -- collection date, location and site.
2. Return to the lab and pour the water sample into a clean, dry sample bottle that has been previously weighed. Shake the sample before transferring it from one container to the next to re-suspend any materials that have settled to the bottom.
3. Record the weight of the empty sample bottle and the weight of the sample bottle containing the water.
4. Allow the water sample to evaporate. (The process can be hastened if the sample is placed in a drying oven.)
5. Weigh the dried sample.
6. To calculate total solids:
 - Subtract the weight of the dried sample and bottle from the weight of the bottle and water sample to find the weight of the water.
 $(\text{water sample and bottle}) - (\text{dried sample and bottle}) = \text{water}$
 - Subtract the weight of the empty bottle from the weight of the dried sample to find the weight of the total solids. $(\text{dried sample and bottle}) - (\text{empty bottle}) = \text{dried sample}$
 - Divide the weight of the dried sample by the weight of the water to find the percent weight of the total solids $(\text{dried sample}) / (\text{water}) = \% \text{ weight for total solids}$

Follow-up

Repeat the previous measurements after a rainfall. (Be sure to allow enough time after the event for runoff water to reach the stream or lake.) How do the readings compare to those taken before the rainfall? How might activities in the watershed affect the turbidity of runoff water entering your lake or stream? What might be done to decrease the turbidity of runoff from the watershed?

Have students research the effects of turbidity and sedimentation including aesthetic, economic and those on aquatic ecosystems, especially the plant and animal components. Resources to contact include your local Natural Resources Conservation Service and DNR fisheries field office. Discuss their findings.

PHEASANTS FOREVER DONATES \$100,000 TO DNR

Jim Wooley of Pheasants Forever surprised the Natural Resources Commission with a gift of \$100,000 at its monthly meeting Feb. 11.

The gift will be added to the Fish and Wildlife Trust Fund and will be used by the DNR to purchase land for fisheries and wildlife.

Wooley also updated NRC commissioners on the cooperative buffer strip initiative. An agreement was approved by the commission in March 1998 to supply \$50,000 of wildlife habitat stamp funds to initiate the program. The grant from the DNR challenged Pheasants Forever to provide matching funds and to increase the establishment of conservation buffer practices in a designated area. With the help of other partners, \$302,225 was dedicated to the program.

The project was initially offered to all chapters and soil and water conservation districts (SWCD) in a 50-county area in northern and east-central Iowa. The program currently involves Pheasants Forever chapters and SWCDs in 39 counties. Technical personnel funded by the program identify areas to establish practices, make landowner contacts in order to explain program benefits and encourage sign-ups of water quality and wildlife practices in the continuous Conservation Reserve Program (CRP).

Wooley said the program's goal of stimulating CRP buffer sign-up in order to provide both water quality and wildlife benefits is being met. As of Feb. 9, 2,828 contracts have been approved for 23,146 acres of continuous CRP practices through the program, according to a program report. By project completion, an expected 25,000 acres will be enrolled in the partnership.

The NRCS has awarded Pheasants Forever a \$100,000 grant to extend the program statewide. Pheasants Forever has also applied to the Environmental Protection Agency for additional funding.

New State Record White Amur

Tyler Warner of Greenfield set the new Iowa record for white amur with a 61-pound, 8-ounce fish caught May 1 in Adair County's Greenfield Reservoir. The fish measured 49 1/2 inches.

Warner's fish broke the old state record of 60 pounds, 48 inches, held by Shannon Davis of Burlington. Davis caught his fish from a farm pond in Des Moines in September 1998, four months after Warner's. However, Davis' fish was officially registered prior to Warner's.

White amurs, also known as "grass carp," are typically stocked in lakes and ponds to control aquatic vegetation growth. Despite their food preference, it is not uncommon for a white amur to take live bait, according to Martin Konrad, DNR fisheries biologist. Konrad said white amurs tend to gulp food in bulk, and mistakenly swallow baited hooks in the process.



TURKEY POPULATIONS SPREADING THANKS TO DNR TRAPPING, RESTOCKING PROGRAM

Wild turkey populations are growing across the nation thanks to Iowa's trap and release program.

Once extirpated from Iowa, wild turkey populations have increased across much of the state thanks to restocking efforts initiated in 1965. Numbers have reached a point where the DNR can trap turkeys for restocking in unpopulated areas of the state and nation without detrimenting existing populations.

Don Pfeiffer, DNR wildlife district supervisor for the southeast region, said 450 wild turkeys were trapped in January. Of the 450 turkeys captured, 249 hens, 37 toms and 11 jakes were sent to other states. Texas received 220 turkeys for restocking efforts near Houston. An additional 61 turkeys were relocated to eastern South Dakota. Oklahoma received 16 turkeys for release in the northeast part of the state.

Texas and Oklahoma will pay \$500 for each live turkey received. The money will be used by the DNR to purchase woodland habitat in Iowa. South Dakota traded sharptail grouse to be released in the Loess Hills of western Iowa.

Turkeys were also released in seven areas of Iowa where habitat exists but turkeys do not populate. An average of 10 hens and three males were released in Benton, Polk, Warren, Cerro Gordo, Adams and Washington counties.

Turkeys are captured in Iowa where large numbers exist or where flock size concerns landowners. The birds are baited with corn and captured by rocket-propelled nets. Iowa has provided turkeys to Michigan, Indiana, Kentucky, Texas, North Carolina, Illinois, South Dakota, Kansas, Louisiana, Washington and Ontario, Canada.

Conservation Update

Calls to Turn In Poachers Down Slightly From Last Year

Iowa's Turn In Poachers (TIP) program processed and investigated 313 calls in 1998, down slightly from 1997, according to Steve Dermand of the DNR's law enforcement bureau.

Of the calls, 37 were successfully investigated resulting in 95 citations. The 12 percent success rate is comparable to past years' success rates which have varied slightly, from approximately 9 to 12 percent. The 313 calls processed this year are down from 1997's total of 334.

DNR law enforcement and administrative support staff received and recorded 72 percent of the TIP calls. State radio dispatchers and operators processed the remaining 28 percent of the calls during weekends, holidays and after-hours. The calls were subsequently assigned to local state conservation officers for investigation. Last year, 45 percent of the total TIP calls were deer related.

In 1998, the Turn In Poachers private organization donated \$5,000 to the Iowa DNR law enforcement bureau undercover team. The donation was used to purchase law enforcement surveillance equipment relating to fish and wildlife cases. The TIP reward committee approved \$6,575 in

payments last year to informants in successful cases.

Since TIP's inception in 1985, 6,890 calls have been processed and investigated resulting in 1,587 citations.

1999 Youth Hunter Education Challenge Set For June 11-13

The 1999 Iowa Youth Hunter Education Challenge will be held June 11-13 at the Iowa 4-H Education and Natural Resources Center in Madrid.

Teams of five shooters will compete in eight events: hunter responsibility exam, hunter safety trail challenge, hunting/wildlife identification, orienteering and archery, muzzleloader, rifle and shotgun accuracy. All teams must be accompanied by an instructor, and all participants must be hunter education course graduates.

The hunter education challenge is open to those ages 12-19. The registration fee is \$45 per participant. For more information, contact Sonny Satre, DNR recreational safety coordinator, at (515) 281-8652, or Jim Pease, ISU Extension wildlife specialist, at (515) 294-7429.



I o w a

Pheasants Forever

chapters are working with farmers and landowners to establish wildlife habitat.

The goal of **Pheasants Forever** is to restore pheasant populations through quality habitat. PF is paying landowners to plant food plots, nesting cover, shelterbelts and other habitat for game and nongame wildlife.

Iowa currently has 98 chapters throughout the state looking to work with local farmers and landowners for the benefit of all upland and wetland wildlife.

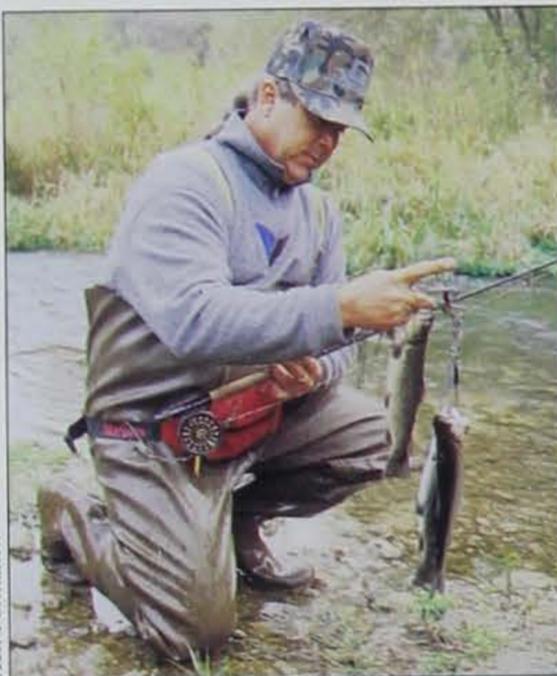
For help planting wildlife habitat or more information about **Pheasants Forever**, contact Jim Wooley (S. Iowa) at 515/774-2238 or Matt O'Connor (N. Iowa) at 319/926-2357, or write PF at 1205 Ilion Ave, Chariton, Iowa 50049.

National Fishing Week

FREE FISHING DAYS JUNE 4-6

During the week of June 5-13 the DNR will join other agencies and organizations in celebrating National Fishing Week. The theme is "Catch A Smile."

The DNR has set aside June 4, 5 and 6 as Free Fishing Days. During these days only, Iowa residents may fish and possess fish without a fishing license, and payment of the trout fee is not required to possess trout. All other fishing regulations apply.



Ken Formanek

Call 1-800-ASK-FISH For Fishing Information

Iowa anglers and anglers nationwide who want to know about fishing in Iowa have a toll-free line available, offering the most up-to-date information.

Callers can get everything from the current fishing report to the location of Iowa lakes and facilities available at each, including camping areas and boat ramps. A listing of license sellers, Iowa's fishing regulations and handicapped-accessible sites are as close as a phone call. The toll-free 1-800-ASK-FISH (275-3474) line is a complete source for anyone desiring information about fishing in Iowa.

The program is supported by Wallop-Breaux/Sport Fish Restoration Funds.

BOAT REGISTRATION RENEWALS DUE THIS YEAR

Iowa boat owners are reminded this is the year to renew boat registrations at their county recorder's offices. All boat registrations and assigned numbers expire at midnight April 30 in odd-numbered years.

With a few exceptions, all vessels operated on public waters must be registered. Those vessels excluded from registration requirements include traditional non-power and non-sail canoes and kayaks 13 feet or less in length, and inflatable non-power and non-sail craft 7 feet or less in length.

Registration fees vary from \$5 to \$28 depending on the type and size of the vessel. A \$1 writing fee per registration is charged in addition to the registration fee.

Boat owners with questions concerning specific regulations should contact their local conservation officer. Copies of the Iowa Boating Regulations brochure, which includes a table of the various boat registration fees, can be obtained at county recorder's offices; by writing the Iowa DNR, Wallace State Office Building, 900



Ron Johnson

E. Grand, Des Moines, Iowa 50319-0034; or by calling (515) 281-5145 or (515) 281-5918.

The Iowa DNR also offers an Iowa Boating Basics Home Study Course. The course covers everything from boating safety and operation to equipment and maintenance. Some insurance companies

will offer rate discounts for boaters who have successfully completed a boating education course. The course is available to those ages 12 and older.

Iowa Boating Basics Home Study Course packets can be obtained by calling the Iowa DNR at (515) 281-5145 or (515) 281-5918.

Two Iowa Schools Harness Wind Power

Students in two Iowa school districts are learning about renewable energy first-hand, and helping save their school districts money in the process.

Forest City and Akron-Westfield community school districts have each installed a 600 kw wind turbine. The projects have proven to be cost-effective ways to supplement electrical needs while creating an opportunity for students to study renewable energy.

Forest City Community School District (CSD) began its wind turbine project when Paul Smith, a former student at the school, presented a research paper on wind energy to the community's school board several years ago. The presentation gener-

ated interest in the current project, which uses a 50-meter-diameter Nordex Balcke-Duerr wind turbine.

The turbine is expected to provide 80 to 90 percent of the school's electrical needs and reap more than \$63,000 in annual savings. Dwight Pierson, superintendent of Forest City CSD, said the educational benefit of the district's project was one of its greatest selling points. "We will give our students first-hand experience in a technology that may be a big part of their energy future," he said.

Students at Akron-Westfield CSD were involved with its wind project from the beginning. Twenty students were chosen to assist in the analysis, schematic design, and construction documentation and administration of the turbine.

"We decided to look into wind because it is renewable, non-polluting and free," said Ron Wilmot, the school's technology coordinator. "People were a bit hesitant until the students provided information to the public on wind's energy efficiency, low maintenance and cost savings."

The Akron-Westfield turbine, designed by Vestas-American Wind Technology, is expected to save the district \$51,000 annually.

Both projects were funded in part by the DNR's Iowa Energy Bank and the Iowa Energy Center's Alternative Energy Revolving Loan Fund.

Two other Iowa school districts, Spirit Lake and Nevada, also own wind turbines to meet their electrical needs.

1999 Spring Toxic Cleanup Days

Residents in nine Iowa counties will be able to dispose of certain hazardous waste materials during Toxic Cleanup Days (TCD) scheduled this spring.

Toxic Cleanup Days will be held April 17 in Ida county; April 24 in Shelby County; May 8 in Adair, Des Moines and Hamilton counties; May 15 in Louisa and Howard counties; and May 22 in Appanoose and Dickinson counties.

Residents in those counties will have the opportunity to safely and responsibly dispose of certain hazardous materials that often are stored in basements and garages. Such hazardous materials as oil-based paint, flammable liquids, pesticides, and household cleaners will be accepted for proper disposal. Other household hazardous materials may be accepted. Tom

Anderson, environmental specialist with the DNR, said appointments are required to assure participant convenience. Persons planning to dispose of hazardous materials should check with their TCD coordinator for a complete list of accepted items and to schedule an appointment. Materials will be accepted from urban and rural households only.

TCDs are held periodically across the state to give residents an opportunity to properly dispose of waste materials that are hazardous or prohibited during normal trash collections. They are jointly sponsored and funded by the DNR and local agencies in the counties where the events are being held.

The DNR is currently looking at phasing out Toxic Cleanup Days in fa-

vor of regional collection centers, which would give residents increased opportunities to dispose of hazardous materials. "Toxic Cleanup Days are limited by when and where they are held," Anderson said. "By going to regional collection centers, which would have set business hours, residents could dispose of their hazardous materials when it is more convenient for them. In fact, most regional collection centers have mobile units that travel to each town in their service area to collect these hazardous materials, further increasing participant convenience."

Following is a list of spring Toxic Cleanup Days, including coordinator, sponsoring agency, address, phone number, date and location.

ADAIR COUNTY (May 8)

Dennis Reha
Adair County Sanitary Landfill
1645 Iowa Highway 25
Menlo, Iowa 50164
515-743-8343
Adair County Fairgrounds

APPANOOSE COUNTY (May 22)

Rodger Kaster
Rathbun Area Solid Waste
Commission
1209 South 18th St.
Centerville, Iowa 52544
515-437-7279
Appanoose County Fairgrounds

DES MOINES COUNTY (May 8)

Gina Hardin
Des Moines County Emergency
Management Agency
512 North Main
Burlington, Iowa 52601
319-753-8206
Des Moines County Fairgrounds

DICKINSON COUNTY (May 22)

John Walters
Dickinson CCB
1924 240th Street
Milford, Iowa 51351
712-338-4786
City of Milford Maintenance Building

HAMILTON COUNTY (May 8)

Kelly Wirtz
Hamilton County Solid
Waste Commission
Webster City Municipal Building
400 Second Street
Webster City, Iowa 50595
515-842-1632
Hamilton County Landfill

HOWARD COUNTY (May 15)

Craig Fencl,
Howard County recycling coordinator
Howard County Courthouse
137 North Elm Street
Cresco, Iowa 52136
319-547-4505
Howard County Fairgrounds

IDA COUNTY (April 17)

Richard Madsen, county sanitarian
Ida County Courthouse
401 Moorehead St.
Ida Grove, Iowa 51445
712-364-2533
Ida County Sanitary Landfill

LOUISA COUNTY (May 15)

Deb Krohn
Louisa CCB
P.O. Box 261
609 James L. Hodges Ave.
Wapello, Iowa 52653
319-523-8381
Louisa County Fairgrounds

SHELBY COUNTY (April 24)

Dan Ahart
Shelby County Area Solid Waste
Agency
1129 1200th St.
Harlan, Iowa 51537
712-755-5954
Shelby County Recycling Transfer
Station

Iowa Ducks Unlimited



Ducks Unlimited is an international, private, non-profit wetland conservation organization dedicated to conserving wetlands and upland habitat for waterfowl and the hundreds of other species of wildlife that require them to exist.

From Humble Beginnings . . .

Founded by a small group of conservation-minded individuals during the drought-ridden 1930s, DU's original focus was in the prairie pothole regions of Manitoba and Saskatchewan. These duck factories had all but dried up. DU began working on its wetland conservation goals where permanent wetlands were most needed in the Canadian provinces. Since those humble initial efforts in 1937, Ducks Unlimited has evolved to become the largest wetland conservation organization in the world.

In its 61-year history, DU has grown to a membership of more than 700,000 and has raised more than \$1 billion to conserve wetland habitat. DU is now credited with conserving more than 8.2 million acres of wetland habitat on the continent. Areas protected include nesting and brood-rearing habitat in Canada and the northern United States including Iowa, wintering habitat in the southern United States and Mexico, and migration habitat in between these regions.

Largest Wetland Initiative Ever . . .

Ducks Unlimited's most recent habitat fund-raising effort is Habitat 2000, Campaign for a Continent. The largest effort ever initiated for wetlands habitat, this project endeavors to raise \$600 million in six years to impact 60 million acres of habitat important to wetland-dependent species. More than half-way through the campaign, the fundraising is ahead of schedule.

Iowa DU 60th Anniversary . . .

In Iowa, DU is celebrating its 60th anniversary. With 137 chapters statewide holding more than 200 events, Iowa DU's grassroots effort was the best ever last year. More than 21,000 members strong, Iowa DU chapters raised \$1.66 million in 1998 "for the ducks." Our membership ranks 8th nationally in total members. DU Greenwings, targeting youths age 17 and under, also ranks 8th in the nation.

To date, DU has spent more than \$3 million in Iowa to restore and develop more than 30,000 acres of wildlife habitat in hundreds of projects across the state on public and private lands.

To reach Iowa DU contact:

IOWA DUCKS UNLIMITED SENIOR VOLUNTEER:

- Howard Paul, state chairman, 319 Oak Knoll Drive, Cherokee, Iowa 51012.

IOWA DUCKS UNLIMITED STAFF:

- Rock Bridges, senior regional director, P.O. Box 223, Lake Mills, Iowa 50450.
- Greig Jones, senior regional director, P.O. Box 71, Williamsburg, Iowa 52361.
- Tom Putnam, senior regional director, 222 Cedar Street, Boone, Iowa 50036.

INTERNET WEBSITES

Ducks Unlimited, Inc.
www.ducks.org

Iowa Ducks Unlimited
www.iaducks.com

Upcoming NRC and EPC Meetings

The dates and locations have been set for the following meetings of the Natural Resource Commission and Environmental Protection Commission of the Iowa Department of Natural Resources.

Agendas for these meetings are set approximately 10 days prior to the scheduled meeting date. For additional information, contact the Iowa Department of Natural Resources, Wallace State Office Building, Des Moines, Iowa 50319-0034.

Natural Resource Commission:

- March 11
Des Moines
- April
No meeting
- May 13
Wapello
- June 10
West Union
- July
No meeting
- August 12
Jefferson
- September 9
Cedar Rapids

Environmental Protection Commission:

- March 15
Des Moines
- April 19
Des Moines
- May 17
Des Moines
- June 21
Des Moines
- July 19
Des Moines
- August 16
Des Moines
- September 20
Des Moines

"The Hard Life of the Owl"

There is a lot of wildlife out there and I'm fascinated by all of it, but I have a fascination with two species in particular – owls and penguins. Yes, I realize that sounds a little ridiculous.

In Iowa, I see a lot of owls. Penguins, however, are another story. Not long ago I went to Omaha's Henry Doorly Zoo. I don't know how long I stood there watching the penguins at the aquarium. How can something that looks so uncoordinated and ungainly streak through the water so gracefully, then shoot straight out of the water and land on its feet? It's amazing. I can't figure it out, and honestly, I don't want to. That's what I like about wildlife. They hold the secrets and laugh at us while we try to figure it out. Many times, the joke's on us.

But back to owls. Imagine an animal capable of seeing something as small as a mole from hundreds of feet in the air, then swooping down to grab it. All in the dark! I'm fascinated for two reasons. First, I like their attitude. They never give up. Even when injured, they still keep fighting. Second, I enjoy the experiences I've had with them. Occasionally they leave me saying, "Now I've seen everything!"

Once, while I was stationed in Emmetsburg, I got a call of an owl caught in a trap. I followed the directions to the scene and walked into the ditch. Sure enough, there was a great horned owl caught in a leg-hold trap. The owl appeared dead and the trap was not tagged. Muttering my views regarding the heritage of whoever had set the trap and left bait out, causing such a beautiful bird to end up like this, I put the owl into the back seat of my 1980 Plymouth Volare. Ask any officer who has had a 1980 Plymouth Volare, and they will tell you it's a wonder it could even transport the added weight of the owl.

The owl didn't appear to have been dead long, and I considered asking the county conservation board if they could use it for educational purposes. The excitement began as I pulled into a parking space on the main drag in Emmetsburg.

You know what it feels like when you get the impression somebody is eyeing you from behind? I looked in the rear view mirror. Behind my shoulder all I could see were two yellow eyes, which appeared to be the size of dishes. A beak clicked at the back of my neck.

I squealed the brakes to a stop and bailed out of the car. Why so fast? If you have to ask, then you have never had an owl use its talons to put the Vulcan Death Grip on you.

The owl was alive, its leg was broken, but it was still alive! It stared at me with that if-I-can-catch-you-I'll-kill-you look in its eyes. I looked around and asked myself the most important

question. "Has anyone seen this yet?" Here I am standing out in the middle of the street, car door open, with an owl sitting on the back of my front seat. As calm as one could be under the circumstances, I reached into the car and retrieved the keys. Opening the trunk, I got out a burlap bag I carried for such emergencies, then opened the rear door. The FIGHT was on! It was all armpits, elbows, talons, beaks and wings as we wrestled – all on the main street of Emmetsburg. I finally got the owl into the bag. Sadly its injuries were such that the owl could not be released.

My second experience involved a call southeast of Webster City. I was having a cup of coffee with a deputy sheriff, a friend of mine who I play golf with and who always beats me. The radio crackled, and dispatch reported an owl had been hit with a pickup. Treating it as low-priority considering owls always lose in those cases, I finished my coffee while questioning my friend of his possible cheating at golf. Since he wasn't too busy, he decided to go along for the ride.

No one seemed to be home, so we went into the garage. There was the pickup. I looked around. No owl. I walked around the pickup, knelt down and looked into the grille. "Denny, you'd better take a look at this," I said to my partner.

From behind the grille, two yellow eyes were looking at us. Its beak was clicking. Have you ever noticed how flat an owl looks when its wings extend in low, gliding flight? The owl had hit the pickup head on in the small space between the grille and the bumper, went through, and was now imprisoned between the grille and the radiator. We looked at each other and burst out laughing. I'm sure the owl failed to see any humor.

I put on gloves and reached in at every opening I could find. I pulled on wings. I pulled on legs. No luck. It fit going in, but didn't fit coming out. We looked around and found a tool box. We removed the shroud and unbolted the radiator. Leaning it back, we were able to get the owl out. I took it outside and set it on the ground. It stood there for a minute or two then looked back at us with that thanks-for-the-help-I'll-let-you-both-live-today look. It proceeded to launch itself, brought its legs up like landing gear and gained altitude, flying out of view.

Denny and I looked at each other. Now we've seen everything? I doubt it. Not as long as there are owls around, or until I see a penguin in Iowa.

by Chuck Humeston

Parting Glance



Ron Johnson

“I think it’s time for a shave.”

