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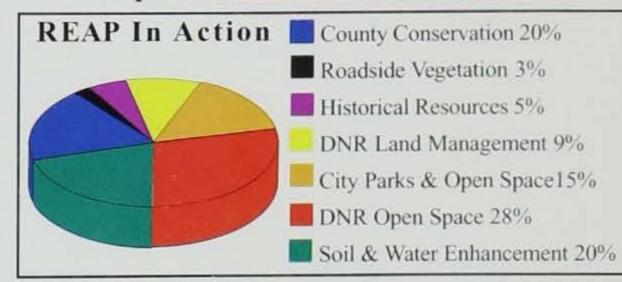
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COVERS

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September/October 1998 Volume 57, Number 5

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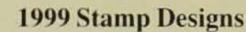
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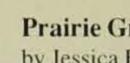
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Iowa Conservationist (ISSN 0021-0471) is published bimonthly by the Iowa Department of Natural Resources. Wallace State Office Building, Des Moines, Iowa 50319-0034. Periodicals postage paid in Rock Island, Illinois. Subscription rates: \$9.97 for one year, \$14.97 for two years and \$19.97 for three years. Prices subject to change without notice. Include mailing label for renewals and address changes. POSTMASTER: Send changes to the Iowa Conservationist, Department of Natural Resources, Wallace State Office Building, Des Moines, Iowa 50319-0034.

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COVERS

FRONT --- Snipe by Lowell Washburn BACK - Fall in Iowa state parks by Roger Hill



Modern Day Swans Return to Iowa by Lowell Washburn

Hunting the Mighty Muskie by Lowell Washburn

Marsh Quail by Lowell Washburn



Restoring Iowa's Fishing Heritage — South Pine Creek Brook Trout by Jim Jansen

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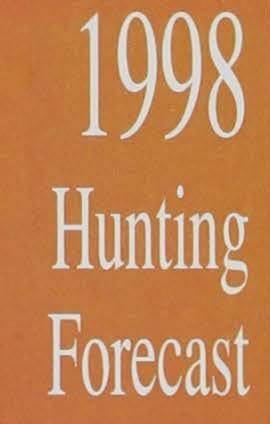
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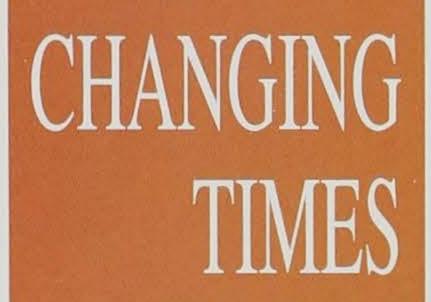
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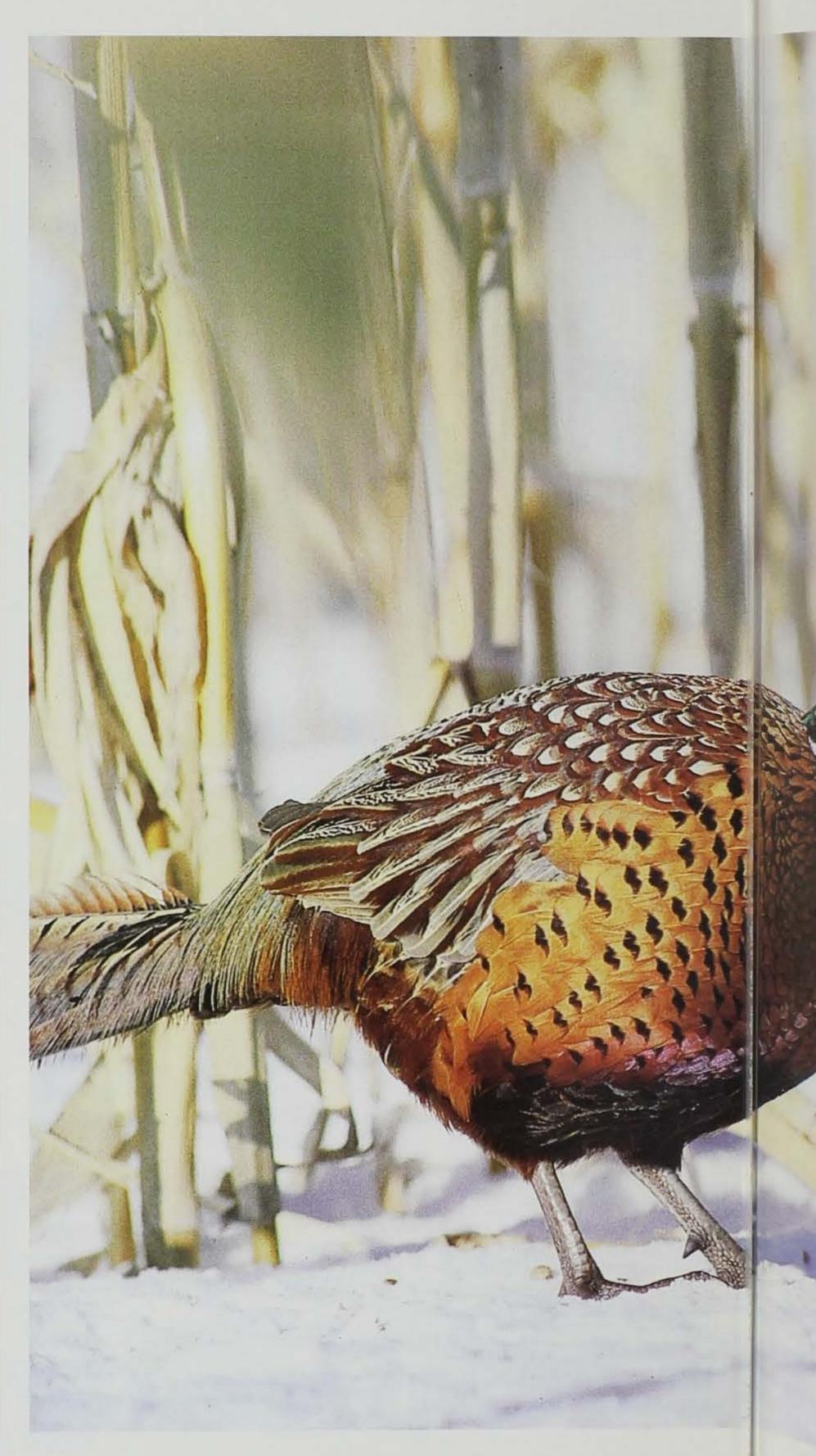
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Articles by Terry Little Photos by Roger A. Hill

... the times, they are a changin'... Bob Dylan

If you don't like the weather in Iowa, wait a day -- or an hour, or 10 minutes -- and it will change. Popular Saying



Good or bad, no matter how much warning we have, change always seems to catch us by surprise. It's generally unsettling, often unwelcome and usually received with a great deal of skepticism. We Iowans are a conservative lot and seem particularly unwilling to cope with it. Even when the evidence proves otherwise, we tend to think things were better (safer, more fun, or whatever) ". . . when I was a boy," or 10 years ago, or even last hunting season. Those of us who have watched more years go by than we probably have left seem particularly inclined to that attitude.

So this hunting season and the next couple are likely to generate unfavorable responses from some hunters. Not because the hunting will necessarily be poor (although there will be some of those problems to deal with, too), but because there will be some substantial changes in laws, regulations and licensing procedures, both state and federal, that will affect how we participate in our favorite hunting activities. Perhaps more changes will occur in a short period of years than most of us have had to deal with in quite some time. Changes that are expected this fall in wildlife populations are relatively straight forward and are predicated on short-term weather events and changing agricultural practices familiar to the experienced hunter. Legislative, federal and DNR regulations changes will affect some hunters more profoundly. Some changes will expand hunting opportunities, some will reduce them and others will affect the way we hunt or obtain licenses. Hunters that fail to pay attention could find themselves needlessly embroiled in the legal system over failure to comply with new and different procedures.

harvest of 117,000 animals. Liberal regulations have been extended for another year, allowing all hunters to get one statewide bow and one statewide firearms license valid for taking any deer. Antlerless-deer-only licenses will again be available for designated counties in southern Iowa. A record or near-record harvest should occur again in 1998.

Those hunters looking for more than just meat for the table should see Jim Zohrer's article on page 18 regarding the chances for taking one of Iowa's trophy whitetail bucks.

Changes to look for:

• More antlerless-deer-only licenses will be issued in southern Iowa. Hunters may purchase up to four antlerless licenses subject to quotas for each county. The first antlerless license will cost \$25. Each additional one will cost \$10.

• There will be more special park and urban deer hunts. See page 17 for information on where, when and how to apply.

A special hunt for severely

Hunting Opportunities

Deer. The deer herd is still abundant in spite of last year's record

disabled persons will be allowed during the youth season.

• Handguns will be allowed in both shotgun seasons, late muzzleloader season and the bonus (January) late season.

• A free license issued for one of the shotgun seasons will allow the landowner or tenant to hunt in both shotgun seasons. Only one deer may be tagged.

• The number of nonresident deer licenses will be increased to 7,500 in 1999. The fee will increase to \$150.50.

• The civil penalty poachers pay the DNR for illegally taking antlered deer from September to the start of the shotgun deer season was increased to \$2,000 and 80 hours of community service, or \$4,000 without community service. The penalty for taking other deer or at other times remains \$1,500.

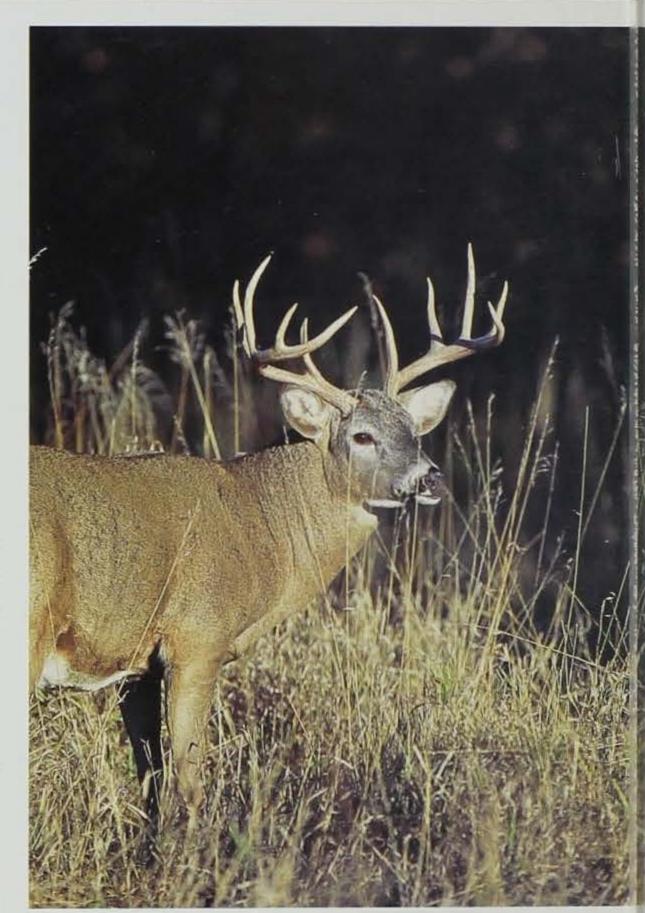
The number of deer licenses

CHANGING TIMES

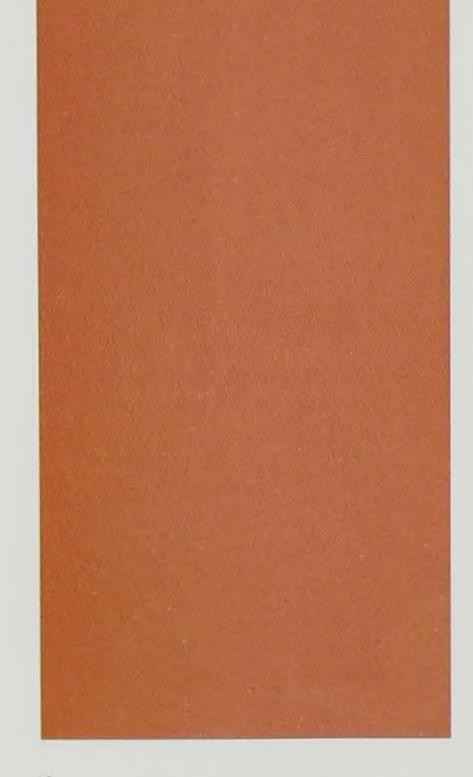
may be reduced in 1999. This second year of liberal regulations should significantly reduce the deer herd in some parts of the state. Adjustments in deer hunting opportunities may then be necessary.

Waterfowl. Breeding populations of ducks are down slightly from last year's record or nearrecord levels that produced an 11 percent increase in ducks taken in Iowa. Fall flights of those species most sought after by hunters are still expected to be strong and well above long-term goals. There will be no reduction in the seasons and bag limits for ducks.

Populations of



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Iowa-hatched giant Canada geese con-

tinue to climb with a record number of goslings hatched nearly every year. Snow geese are still well above desired levels, but populations of Arctic-nesting Canada geese are not faring so well. Both the Eastern Prairie Population (EPP), which migrates all across Iowa, and the Mississippi Valley Population (MVP), which migrates along our eastern border, are below goals and daily bag limits were reduced in some cases.

See page 26 for final 1998 waterfowl seasons and bag limits.

Changes to look for:

• HIP registration is required for the first time this year to hunt all migratory game birds, including rails, snipe and woodcock. See page 11 for details.

• Canada goose hunting opportunities were reduced slightly by changing the timing of hunting seasons. The key is to continue early harvest opportunities on abundant local giant Canadas, while reducing opportunities to hunt the EPP and MVP birds that migrate later.

• Snow goose hunting daily bag limits were increased from 10 to 20 and there is no possession limit. Season lengths remained the same in 1998.

• Trumpeter swans and sandhill cranes are expanding their range in Iowa, but are illegal to hunt. See page 12 on how to identify them.

Upland Game. Change is an annual reality for upland game populations due to the vagaries of Iowa's everchanging weather. A mild, nearly nonexistent winter elevated the hopes of bird hunters, only to have them dashed by the cool, wet, late spring and extremely wet early summer that followed. Most of the state was far wetter than normal during the critical nesting season for pheasants, turkeys and gray partridge and their production will surely be lower than anticipated. On a brighter note, quail nest later in the year, so there is some hope for at least average production of bobwhites.

As always, there will be regional differences in upland bird populations. Areas south of Interstate 80 and some parts of central Iowa were the hardest hit by wet weather and severe storms, northwest Iowa the least. But northcentral and northwest Iowa have lost a half-million CRP acres in the past two years -- acres that produced a multitude of pheasants and provided the only wildlife habitat in many areas. Areas that have substantially less habitat will portion of their 10-year cycle. Grouse hunters should take advantage, for old times sake if for no other reason. But anyone that actually hunted in that first year will probably leave the hill climbing to a younger generation.

Rabbits and squirrels are less affected by weather and should be abundant wherever habitat exists.

Changes to look for:

• Nontoxic shot will be required to hunt all game animals and furbearers (except deer and wild turkey) on selected wildlife management areas in northern Iowa. See page 10 for details.

• More fall turkey licenses were issued for southern Iowa.

• The nonresident quota for spring turkey licenses remains at 2,000. The cost was increased to \$75.50.

 A dove hunting season was proposed for 1998 but was not introavailable to trappers and hunters. But low fur prices have squelched the interest in furtaking. Little competition and lots of recreation are afforded the few furtakers that still participate.

Licensing Procedures

Substantial changes will occur over the next two years in the way hunting licenses are issued. Bills passed in the 1998 legislative session will allow the DNR to begin selling all hunting and fishing licenses electronically by the 2000 hunting season. To accomplish this, several changes were necessary that will take affect in the 1999 license year (sales beginning December 15, 1998):

• The concept of individual licenses (or combination licenses) to hunt, fish or trap has been abolished. Hunters and fishers will purchase a

> single license form and pay for the privileges they want -- hunt, fish, trap, trout stamp, etc. In 1999, a single paper license will be issued by license agents, but deer and turkey licenses will continue to be issued through the DNR central office. In 2000, all licenses, including deer and turkey licenses, will be issued electronically by license agents. • The habitat. state waterfowl and trout stamps will be



have fewer birds even where the weather was favorable.

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Before throwing in the towel, bird hunters should search their memories and take heart from 1993, a far wetter year than this one. Hunters stayed away in droves after hearing predictions of a birdless year, but pheasant and quail production in late summer was far better than expected and hunting, by this hunter's standards, was at least pretty good. Hopefully, this year will follow suit. There will certainly be enough birds to justify dusting off your shotgun, limbering up those leg muscles and exercising the dog in anticipation of some days afield. More information will be available after roadside counts are completed in August.

This year marks the 30th anniversary of ruffed grouse hunting in Iowa, and populations should be in the upper duced in the Legislature. Another effort will be made in 1999. See dove hunting facts on page 13.

Furbearers. Very little new can be said about furbearer populations, which have changed little over the past decade. Populations of nearly all species remain high and readily abolished as physical entities, but fees will be assessed for each privilege and endorsed on the license. Fees for the three will increase 50 cents each and the revenue generated will be used for the same purposes as in the past. Commemorative stamps will be available to those who want them.

CHANGING TIMES

• The state waterfowl stamp will be changed to a migratory game bird fee and apply to hunters of ducks, geese, brant, snipe, rails and woodcock.

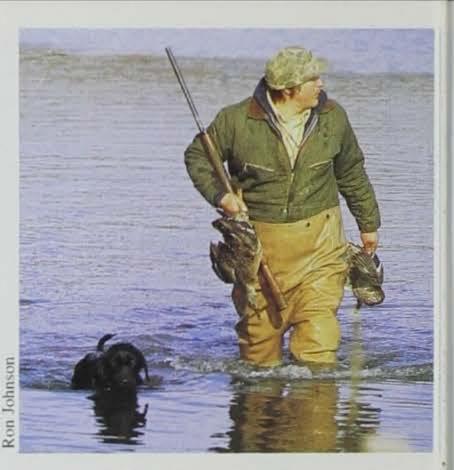
• A 50-cent writing fee will be applied to all licenses and stamps. Free landowner-tenant deer and turkey licenses will have a \$1 writing fee. All writing fees will be kept by the business or office selling the license. The fees that will be charged beginning in 1999 are listed on page 60.

• New lifetime hunting licenses and lifetime fishing licenses for persons 65 years or older will cost \$50.50 each.

• A new hunting license for nonresidents under 18 years old will cost \$25.50.

These changes and others necessary to move to an electronic licensing process will be explained in detail as they are implemented.

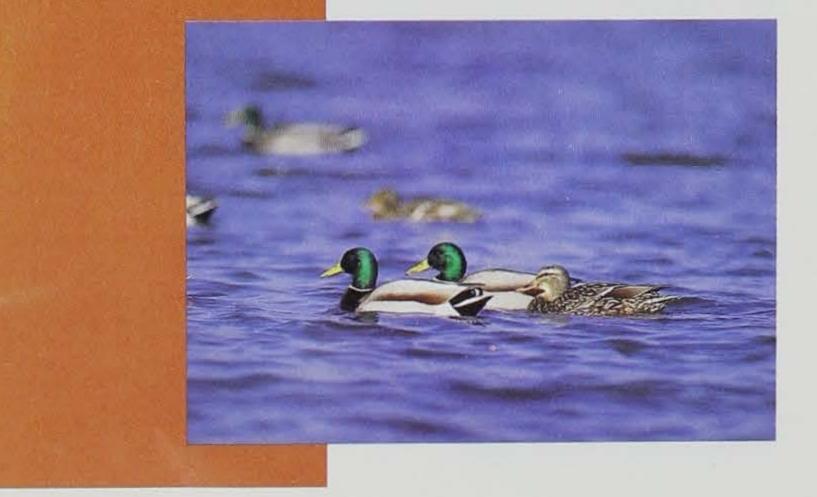
How will hunters view these changes? Probably in the usual ways -some will be unhappy and complain to the DNR, others will like the changes and remain largely silent. DNR employees are used to dealing with both situations.



business. In states where electronic licensing has been implemented, the response of license buyers and sellers alike has been enthusiastic once they have understood and used the new system for a couple of years.

Fewer individuals will be impacted by regulations changes. Slightly more than one in 10 hunters hunt migratory game birds and will be affected by HIP. An even smaller minority use the northern Iowa wildlife management areas for upland game hunting. The switch to nontoxic shot on these areas will go largely unnoticed in the context of all the hunting activities that take place each year. Both HIP and the nontoxic shot requirements are designed to provide better management of our wildlife populations, a goal that makes the minor inconveniences worthwhile in the long run.

All hunters and anglers will be impacted by changes in licensing procedures. License buyers that give the new system a chance will find the added conveniences provided will far outweigh the slight additional cost and the need to learn a new system of doing



And no ethical hunter will care if deer poachers object to paying higher penalties when they get caught stealing deer from the rest of us!

The times indeed are a changin.' To cope, we will all need to pay careful attention so we can take full advantage of the many new opportunities these changes will afford to us.

Terry Little is the wildlife research supervisor for the department in Des Moines.



Consider this scenario - A party of five pheasant hunters is hunting the Spring Run Wildlife Management Area (WMA) in Dickinson County. Their dogs are excited. Pheasants are obviously running ahead. As they approach a ditch, one of the hunters calls out "The area across the ditch is a Waterfowl Production Area (WPA). Bring all of your lead shotshells over to me and we'll leave them in a pile until we come back. We can't take lead shot into the WPA." While they are gathering and regrouping, of course, the dogs push into the pheasants and flush them out of range.

Or this one — A party of pheasants hunters is preparing to leave the parking lot on the Crystal Hills Wildlife Management Area in Winnebago County. A conservation officer pulls into the lot and begins checking licenses. She also asks to see their shotshells. One hunter says, "Sure officer. But why? We're not going duck hunting, just pheasants." The officer replies "This is a Federal Waterfowl Production Area and you can't hunt anything here unless you use nontoxic shot. That sign over there says that nontoxic shot is required." The hunter responds "But we just hunted another public area a half-mile down the road and didn't see any signs telling us we couldn't use lead." And the officer replies "That's OK on that area. It's owned entirely by the DNR and steel shot isn't required there." Do these sound far fetched? They wouldn't be if new Federal regulations that ban all but approved nontoxic shot on WPAs were implemented without state regulations being adjusted accordingly. Beginning this year, the U.S. Fish and Wildlife Service requires the use of nontoxic shot for all hunting (excluding deer and wild turkey) on all federally owned Waterfowl Production Areas in the nation to reduce lead poisoning of waterfowl and other wildlife.

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Nontoxic Shot Required for Hunting on Some Wildlife Management Areas

Beginning September 1, 1998, hunters may not possess any shot other than approved nontoxic shot (steel shot, nickel-plated steel shot, copper-plated steel shot or bismuth-tin/polymer shot) while hunting any migratory game bird. resident game bird, game animal or furbearer (except deer and wild turkey) on designated Wildlife Management Areas (WMAs). Target shooting with a shotgun with any shot other than nontoxic shot is also prohibited on these areas.

> In Iowa, thousands of acres of federally owned WPAs have been

CHANGING TIMES

purchased in the last decade in the prairie pothole region (roughly north of Interstate 80 and west of U.S. Highway 63). WPAs are managed by the DNR along with many more thousands of acres of state-owned land. Many WPAs are intermingled with and indistinguishable from state-owned tracts on a Wildlife Management Area, or are found nearby. WPAs are not fenced; they are identified only by federal green and white signs. Hunters using state WMAs may have difficulty determining which tracts of land are federally owned and which are state- or county-owned, unless they are very careful. Scenarios like those described above could easily become commonplace. To keep confusion to a minimum and keep hunters out of federal court, the DNR will require nontoxic shot on many state-owned areas in the prairie pothole region where

Federal and state lands are mingled. Several public hunting areas isolated from WPA's will be exempt.

Special Note: WMAs or other public hunting areas owned or managed by County Conservation Boards may or may not require nontoxic shot. Contact the county board headquarters in the county you are hunting for information, and lool for signs posted on county-managed area

Remember, nontoxic shot is required for hunting all migratory game birds throughout Iowa, including both public and private lands. The Fish and Wildlife Service has given temporary approval fo the use of tungsten-iron and tungstenpolymer shot for waterfowl hunting in 1998. If final approval is given these sho types would also be legal on the designated WMAs. Look for an announcement later this fall. -T.



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Areas Where Nonto	oxic Shot Is Required
County	Wildlife Management Area
Boone	Harrier Marsh WMA
Buena Vista	All state and federal areas except Bluebird Access
Cerro Gordo	All state and federal areas
Clay	All state and federal areas except Burr Access, Dry Mud
1 Pallastrac	Lake, Little Sioux, Highbridge and Fen Valley WMAs,
	and the Ocheyedan WMA target shooting range
Dickinson	All state and federal areas except Cayler Prairie and the
State of the	Spring Run WMAs target shooting range
Emmet	All state and federal areas except Birge Lake, Grass Lake and
1. 1. 1. 1. 1.	Ryan Lake WMAs, and the East Des Moines River access
Greene	All state and federal areas except Rippey and McMahon accesses
Guthrie	McCord Pond, Lakin Slough and Bays Branch WMAs,
	except the target shooting range at Bays Branch WMA
Hamilton	Little Wall Lake, Gordon Marsh and Bauer Slough WMAs
Hancock	All state and federal areas except Schuldt and Goodell WMAs
Humboldt	All state and federal areas except Bradgate and Willows accesses
Kossuth	All state and federal areas except Seneca access
Osceola	All state and federal areas
Palo Alto	All state and federal areas
Pocahontas	All state and federal areas except Kalsow Prairie
Polk	Paul Errington Marsh WMA
Sac	All state and federal areas except White Horse and Sac City
	accesses
Winnebago	All state and federal areas
Worth	All state and federal areas except Brights Lake WMA
Wright	All state and federal areas except White Tail Flats WMA
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Harvest Information Program (HIP)

This year all migratory bird hunters nationwide will have to register with the U.S. Fish and Wildlife Service's Harvest Information Program (HIP). In Iowa, this includes anyone that thinks they will hunt ducks, coots, geese, brant, snipe, rails and woodcock. Hunters who do not pursue these species, even incidentally, need not register.

Hunters must register with HIP before hunting and carry proof they have registered while in the field. Failure to register and carry proof is a misdemeanor. All migratory bird hunters required to have a hunting license must register annually, *even those with lifetime hunting privileges*.

To register, hunters need only call a toll free number (1-800-WETLAND) and answer a few questions about their hunting activity (see the box for a list of the questions for 1998). Some questions will be answered by pushing the numbered keys on the telephone, others by speaking clearly into the phone. The complete registration should take less than three minutes to complete. After registering, hunters will be given a HIP registration number. That number must be written in the red HIP box that appears for the first time this year in the upper left corner of the hunting license. Not all hunters will be surveyed. A sample selected by the U.S. Fish and Wildlife Service will be sent report cards to keep track of their migratory bird hunting activities and will be surveyed at the end of the season. The purpose of HIP is to gather better data for the management of waterfowl populations and to have, for the first time, reliable estimates of the harvest of snipe, rails, woodcock and mourning doves. Sound harvest information is one of the cornerstones of any wildlife management program and better data can only improve management of these species.



HIP TELEPHONE REGISTRATION SCRIPT

"Welcome to the Iowa DNR's automated Harvest Information Program (commonly known as HIP). At the conclusion of this recording you will need a pencil or pen and your 1998 hunting license to record your HIP registration number. If you do not have both of these available now, please hang up and call again when you have them."

If you did not hunt ducks last year, press 1 now.
If you hunted ducks, but did not bag any, press 2 now.
If you bagged between 1 and 10 ducks, press 3 now.
If you bagged 11 or more ducks, press 4 now.
If you would like these choices to be repeated, press the star key now (*
If you did not hunt geese last year, press 1 now.
If you bagged between 1 and 10 geese, press 2 now.
If you bagged between 1 and 10 geese, press 3 now.
If you bagged between 1 and 10 geese, press 3 now.
If you bagged between 1 and 10 geese, press 3 now.
If you bagged 11 or more geese, press 4 now.
If you bagged 11 or more geese, press 4 now.
If you would like these choices to be repeated, press the star key now (*
If you would like these choices to be repeated, press the star key now (*
If you would like these choices to be repeated, press 2 now.
If you hunted woodcock last year, press 1 now. If not, press 2 now.
If you hunted coots last season, press 1 now. If not, press 2 now.
If you hunted rails last season, press 1 now. If not, press 2 now.
If you hunted rails last season, press 1 now. If not, press 2 now.
If you hunted rails last season, press 1 now. If not, press 2 now.

key when you are done,

Please state slowly and distinctly your complete street address, town, state and zip code. Press the pound key when you are done.

Please state the month, date and year of your birth. Press the pound key when you are done.

Thank you for registering with HIP. You will now be given your HIP registration number. Please write it on your hunting license in the upper left corner in the box labeled HIP.

Your HIP registration number is

Thank you for your assistance.

- T.L.

Watch for Trumpeter Swans and Sandhill Cranes

Article by Todd Bogenschutz Photos by During the past three years, the DNR has released trumpeter swans on various wetlands in northern Iowa. These swans, plus trumpeters from growing populations in states to our north, migrate frequently through Iowa into Kansas, Missouri and Oklahoma for the winter and return to Iowa, Minnesota and Wisconsin in the spring.

At the same time, lesser sandhill cranes are beginning to show up more commonly on Iowa's wetlands as a thriving crane population in Wisconsin continues to expand. So far, sandhills have been seen on 24 Iowa wetlands and nests have been verified on five.

This is good news for crane and swan watchers because both species were once common nesters in Iowa. But it also increases the opportunities for waterfowl hunters to encounter these large and impressive waterbirds, and, unfortunately, mistake them for something legal to shoot.

Adult trumpeters are pure white, while young trumpeters and young cranes are pale gray or nearly white, as are snow geese. Hunters that make an effort should have no confusion if they see a swan or crane. Both are many times larger than a snow goose, have obviously longer necks, and the legs of a crane trail out behind them when they fly like those of a great blue heron. Both have distinctly slower wingbeats than geese. Cranes produce a trilling call and trumpeters give a loud call that sounds much like a French horn. Both. are very distinct from the high-pitched yelp and cackle of a snow goose.

Hunters that don't take the extra time to identify swans or cranes should be aware Iowa, Sh violation will prob court, wh stiffer tha swans are which ind ing them. By e waterfow these larg wetlands enjoy.



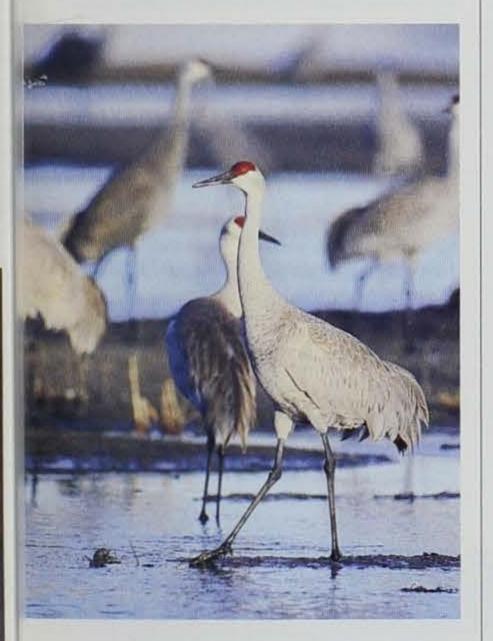
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be aware there is no season for either in Iowa. Shooting either species is a violation of state and federal laws and will probably result in a visit to federal court, where fines are typically much stiffer than in state courts. Trumpeter swans are a federal endangered species, which increases the penalty for shooting them.

By exercising a little caution, waterfowlers can help restore both of these large and impressive birds to our wetlands for future generations to enjoy.



Just the Facts . . . About Doves, That Is

Recently, a movement has developed to establish a mourning dove season in Iowa. The Iowa Dove Coalition, a non-profit organization, was formed in 1997 to add the mourning dove to the list of species that can be hunted here.

The mourning dove is an extremely popular game bird across 80 percent of the lower 48 states. Examining a few facts about mourning doves and dove hunting quickly sheds some light on this popularity:

The mourning dove is one of America's most common and abundant birds, second only to the red-winged blackbird in its continent-wide distribution.

The North American mourning dove population is estimated to be 475 million individuals -- 271 million doves (57 percent of the estimated population) inhabit the region between the Mississippi River and the Continental Divide.

The mourning dove is the leading game bird in North America. The

states to open a dove season before Sept. 1.

States can select a 70-day season with a daily bag/possession limit of 12/ 24, or a 60-day season with a daily bag/ possession limit of 15/30. Legal shooting hours are 1/2-hour before sunrise to 1/2-hour after sunset. States can choose to be more restrictive than the federal regulations, but NOT more liberal.

Of Iowa's estimated 370,000 hunters, 42,000 might hunt doves and spend an estimated \$6 million in local sporting goods stores, gas stations and restaurants.

Iowa hunters, however, do not have the privilege to hunt doves even though it is listed as a game bird in state law and we have an abundance of doves. Iowa dove hunters must travel to South Dakota, Nebraska, Missouri or Illinois to hunt them. This deters many Iowans from hunting doves and is costly for those who do travel.

The Iowa Dove Coalition formed

Waterfowl hunters need to take extra care in identifying their targets. There are no seasons on sandhill cranes (above) or trumpeter swans (left), and shooting either is a violation of both state and federal laws.

Todd Bogenschutz is a wildlife research biologist with the department in Boone.

annual U. S. dove harvest is estimated at 41 million birds or 10 percent of the estimated population. More doves are taken annually than all other migratory game birds combined.

Dove hunting is an extremely popular sport in the East, with 62 percent of the annual U. S. harvest taken east of the Mississippi River.

An estimated 1.6 million persons spent 8 million days hunting doves in 1996, and spent an estimated \$330 to \$670 million.

Iowa is one of only 11 states in the country that does not allow dove hunting.

Iowa has three times as many mourning doves within its borders as pheasants.

The dove is a migratory bird, so hunting seasons are set by the U.S. Fish and Wildife Service. To protect nesting, federal rules will not allow to rectify this situation. To have dove hunting in Iowa, the Iowa legislature must change state law and add mourning doves to the list of species for which the DNR can set seasons. The Coalition is organizing dove committees in every county to contact their legislators about the law change. Hunters who want more information and want to help bring dove hunting to Iowa should contact the Iowa Dove Coalition, at 3716 Ingersoll, Suite E, Des Moines, IA 50312, phone (515) 271-5761, e-mail iowaikes@aol.com.

The Iowa DNR has a biological fact sheet about the mourning dove in Iowa that is available from any DNR wildlife biologist or conservation officer, or by calling the DNR at (515) 281-HNTR or (515) 432-2823. People with internet access can view the dove fact sheet on the DNR's website at www.state.ia.us/wildlife

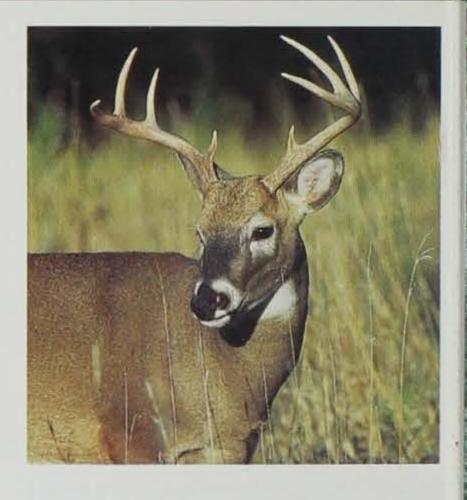
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Article by Jim Jansen and Jeff Telleen Photos by Roger A. Hill

Knocked down corn similar to the scene below can be found across the state of Iowa at this time of year. Excluding a UFO or a major windstorm, there is no doubt one of our native wildlife species is to blame. The question is "Who?" Let's look at the line-up.

The owner of the damaged corn field might say "It has to be the wild turkey. Every morning while I eat breakfast, I see 30 of them in that



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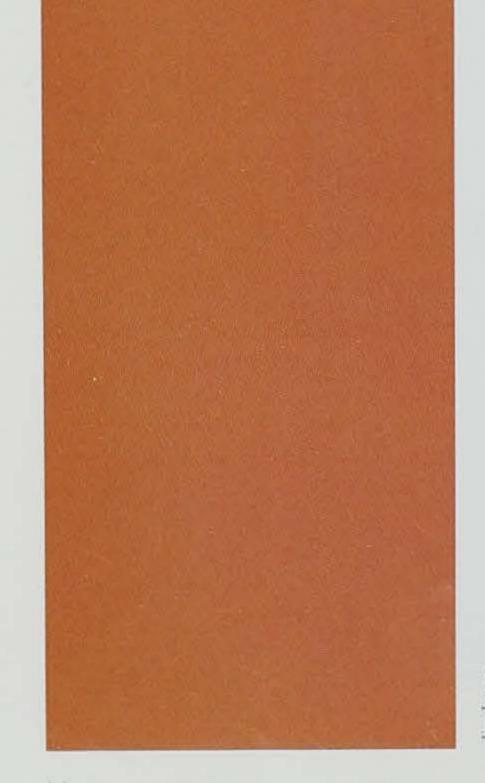
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By pr

The wild turkey is incorrect. Wild turkeys live in groups, and eat and sleep at the same time as farmers. This behavior makes them highly visible to us during the daylight, and a prime suspect. But the real damage is occurring at night.

"Well then it has to be the deer because I saw six run into that field last night."

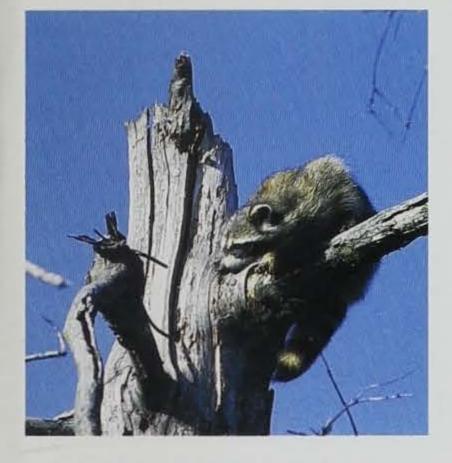


hayfield. They use their wings to knock down the corn so they can get at the ears. Twenty years ago we didn't have

Actually, the deer is also incorrect. Many areas in Iowa have only a few woodlands and have relatively low deer



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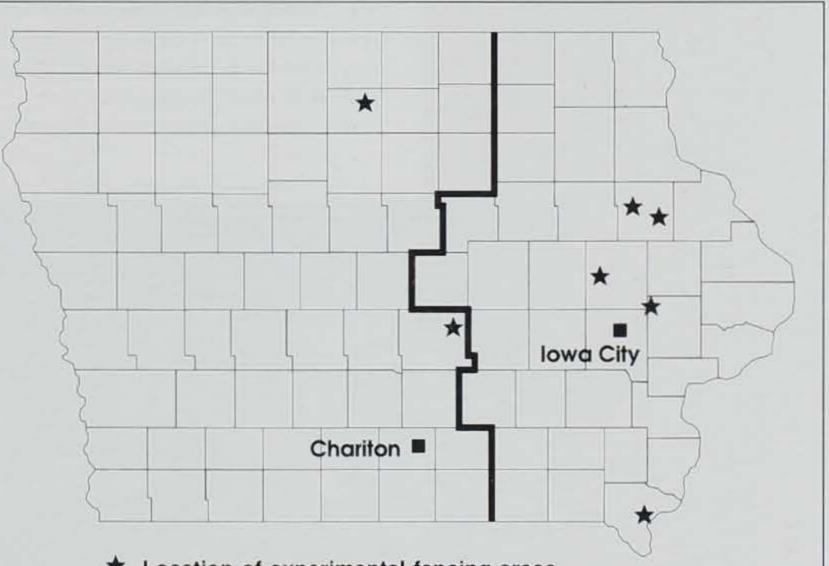
ow deer

densities. Some cities have problems because hunting is prohibited in most municipalities. The city problems, however, are isolated areas of deer over-population. The cornfield damage shown below is not related to deer sightings or deer densities, yet the perception again causes accusations.

By process of elimination, "who" becomes a raccoon. If one knew what to look for, this process of elimination could have been skipped. Wildlife damage identification requires an prised of 12 animals can knock down a substantial amount of corn in a single night. In 1997, investigations found raccoon activity was the second most common cause of corn damage.

If the above investigation is not your bag, you are in luck. Last year the Department of Natural Resources hired two biologists to implement a wildlife depredation program. Their primary job is to investigate wildlife damage complaints and when applicable, provide special tools and techniques to minimize damage. The program is funded through non-resident deer hunters' license fees. The program was needed because of landowners' increasing concerns for wildlife-caused crop losses. Whether it is corn, soybeans or trees, wildlife will use what is available in their home range. Conflict occurs when wildlife affects the monetary interests of farmers. Depredation biologists can identify "who done it" for landowners and they can suggest techniques to minimize or eliminate the damage.

Last year complaints included a variety of wildlife species, but most involved deer. Deer are Iowa's largest wildlife species and have potential for causing significant damage. Last fall, the DNR's wildlife bureau investigated 105 deer complaints. Seventy five percent of the complaints involved agricultural row crops and about 25 percent were related to trees considered a high-value crop. The tolerances of landowners for deer on their property varied, with three deer being too many



understanding of the suspected wildlife species' feeding behaviors and preferences, which change during the year. Having knowledge of wildlife biology and observing evidence at the scene are the keys to determining the actual, not perceived, culprit. Corn damage like this is classic raccoon damage probably the most common, misidentified damage. The telltale sign is bent cornstalks seen in August and September.

Corn that looks like this was damaged during the growth or "milk" stage. Deer and wild turkeys do not prefer corn at this stage of growth raccoons love it. A raccoon will crawl up the stalk until it bends over and then eat corn-on-the-cob. They are very wasteful, however, and often knock down large areas, sometimes up to a half-acre, taking a few bites out of each cob. Two litters of raccoons com★ Location of experimental fencing areas.

Jim Jansen is located in the Iowa City area (phone, 319-335-4527) and is responsible for the eastern one-third of the State. Jeff Telleen is located in Chariton (phone, 515-774-8563) and covers the remaining western two-thirds of the State.

Who Done It?

for one and 30 not enough for another.

Deer are a valued natural resource for many citizens, and a certain amount of damage will have to be tolerated. The legislature established a \$1,000 threshold to qualify commercial producers for special permits to reduce, through hunting, their local deer populations. Rules governing distribution of these special permits are set. Ornamental trees located in private lawns, gardens, flowers and wildlife food plots will not qualify for these special permits. Technical assistance will be offered to help anyone reduce damage.

In return for special permits, the producer will be asked to implement long-term damage prevention measures. For row crop producers, this may consist only of keeping records of the deer harvest and adjusting the hunting pressure to fit the long-range goals. The largest problem encountered by biologists while investigating complaints was that producers were not monitoring the deer harvest on their property and allowing hunters to harvest primarily antlered deer. The producer has to be involved in requiring their hunters to shoot a high percentage of antlerless deer. Cropping techniques and field configurations can also affect deer damage.

Constructing an eight-foot-high, deer-proof fence can virtually eliminate many problems for growers of highvalue crops. Depredation biologists are currently evaluating the effectiveness of electric fences. This year, seven electric fence demonstration areas have been established across the state. The goal is to determine which fence offers the greatest reduction in deer damage and best contains the cost.

During certain times and in certain areas, hunting deer is not an option. These circumstances require the use of repellents and scare devices that temporarily reduce damage. Depredation biologists can provide some of this equipment and technical assistance. They are special hu and count If you wildlife-in the approcontact you biologist goal of th each comassist land

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They are also involved with all the special hunts occurring in cities, state and county parks.

If you are receiving unreasonable wildlife-induced crop losses, contact the appropriate depredation biologist or contact your local DNR wildlife biologist or conservation officer. The goal of the program is to respond to each complaint in a timely manner, assist landowners in assessing crop

damage, and to provide solutions to these damage problems.

Also, if you are a deer hunter willing to buy a special license and shoot an antlerless deer to help a farmer reduce deer damage, call 319-335-4527 (eastern Iowa) or 515-774-8563. Depredation biologists are coordinating lists of hunters to refer to landowners that need assistance.

Jim Jansen and Jeff Telleen are the department's new depredation biologists located in Iowa City and Chariton respectively.

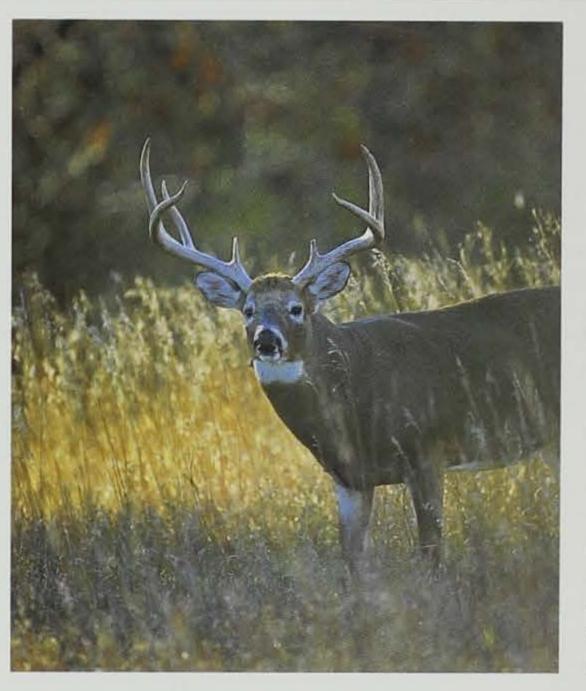
		1998-1999 SPE	CIAL DEER HUNTS	
gat.	AREA	WEAPONS TYPE	SEASON DATES	FOR MORE INFORMATION
	Backbone State Park	Firearms	Dec. 5 & 6 Dec. 12 & 13	319/924-2527
	Burlington			
	Iowa Army Ammunition Plant	Firearms & Archery	All Seasons	319/753-7903
	Cedar Falls Area	Archery Only	Oct. 5 - Jan. 10	319/277-2187
	Cedar Rapids Area			
	City of Marion	Archery Only	Oct. 1 - Jan. 10	319/377-1511
	Linn County Rural Zone	Firearms & Archery	All Seasons	319/398-3441
	Squaw Creek Park	Archery Only	Oct. 1 - Jan. 10	319-398-3505

Des Moines Area			
Polk County Rural Zone	Firearms & Archery	All Seasons	515/999-2557
Polk County Parks	Archery	Nov. 1 - Jan. 10	515/999-2557
Waterworks Park	Archery	Undecided	515/283-8791
City of Des Moines	Archery	Oct. 1 - Dec. 4 Dec. 21 - Jan. 10	515/237-1428
City of Johnston	Archery	Nov. 1 - Dec. 31	515/278-2344
City of Urbandale	Archery	Oct. 1 - Dec. 4 Dec. 21 - Jan. 10	515/278-3900
Dubuque	Firearms & Archery	All Seasons	319-589-4263
Kent County Park	Firearms	Dec. 5 & 6 Dec. 12 & 13	319/645-2315
Lake Manawa State Park	Archery	Oct. 1 - Dec. 4 Dec. 21 - Jan. 10	712/366-0220
Lake Panorama	Archery Only	Oct. 1 - Dec. 4 Dec. 21 - Jan. 10	515/755-3101
Scott County Park	Firearms	Dec. 5 & 6 Dec. 7 & 8	319/285-9656
Springbrook State Park	Firearms	Dec. 5 & 6	515/747-3591
Viking Lake State Park	Firearms	Dec. 5 & 6	712/879-2235

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Iowa's Trophy Buck Program

Article by James Zohrer Photo by Roger A. Hill



Iowa grows more than corn, beans, hogs and cattle. We also produce trophy whitetail deer, and a lot of them. In the past ten years, Iowa has consistently placed in the top five or six states and Canadian provinces in numbers of

In recent years we have been averaging about 400 qualifying entries into our Iowa Trophy Buck program. If most of the trophies taken are entered, only eight-tenths of one percent of all the antlered bucks qualify. In other words, about one antlered deer in a hundred will qualify for the record book. Does this mean if you shoot a trophy buck, you will have to shoot a hundred more before you bag another? Not necessarily. Some hunters are just luckier or better than others, or pursue only trophy bucks. In any case, a record book buck may be a once in a lifetime occur-

rence and it is something to treasure.

In order to qualify for the Iowa record book, the rack must be measured by an official measurer for the Boone and Crockett or Pope and Young clubs, or by a wildlife biologist, conservation officer or other individual certified by the DNR. Because racks may shrink, they must be air dried for at least 60 days following the date of kill before they can be officially measured. There is no time limit concerning how long ago the deer was killed for entry into the Iowa records. Deer hunters who want to have their trophy racks officially measured should write the Iowa DNR, Attn: Deer Antler Measurement, Wallace State Office Building, Des Moines, IA 50319-0034 for a list of official measurers, or they can view the list on the Wildlife Bureau home page on the Internet at www.state.ia.us/wildlife. There is no charge to have a rack measured or entered into the Iowa trophy records program.

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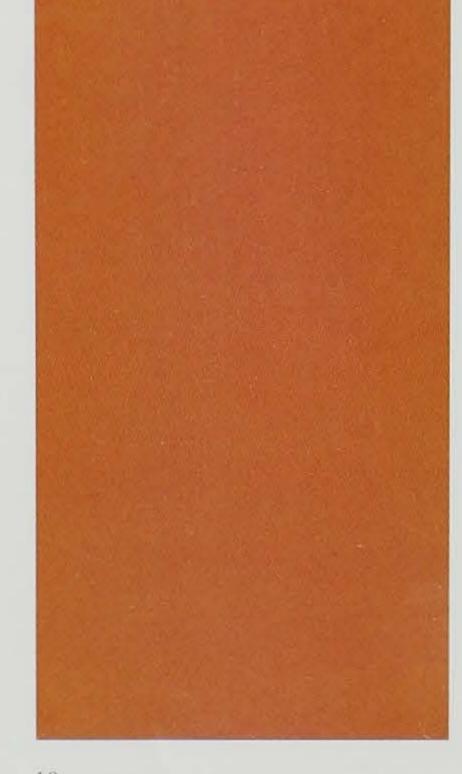
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trophy bucks entered into the national Boone and Crockett (firearms) and Pope and Young (archery) trophy deer registry programs.

The Iowa DNR also maintains a trophy whitetail registry that uses the same scoring system as the national programs. This system gives credits for the mass of the deer rack (beam circumference), for the length of the beam and points, and for symmetry of the rack. In the case of "nontypical" racks, (those with points that come off the beam in nontypical locations or angles) extra credit is also given to those nontypical points. The Iowa program maintains records in five different categories --- deer taken with shotgun, muzzleloader, handgun, bow and crossbow.

What are your odds of taking a trophy buck in Iowa? Last year, hunters took 117,000 deer in this state, of which 50,690 were antlered bucks.

James Zohrer is an executive officer working on special wildlife projects for the department in Des Moines.

1998 Record DEE

Racks

Photos by Roger A. Hill

This is a list of deer racks scored between October 1997 and July 1998.

*indicates a new entry

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BOW, TYPICAL

(Minimum qualifying score - 135 pts.)

COUNTY TOTAL TAKEN SCORE YEAR CITY 1821/8 1997 Plano Appanoose Washington 1815/8 1997 Riverside Bettendorf Muscatine 1764/8 1997 Polk 1753/8 1984 Marshalltown 1742/8 1997 Chartion Lucas 1742/8 1997 Des Moines Madison 1722/8 Burlington Des Moines 1996 Manchester 172 1997 Delaware 1997 Vinton Benton 1712/8 Davis City Decatur 170.6/8 1996 Bloomfield Davis 1702/8 1997 1994 1691/8 Fort Madison Lee 1687/8 1995 Albia Monroe Fort Madison Van Buren 168.4/8 1991 Dyersville 1674/8 1997 Dubuque 1996 Hudson Black Hawk 1657/8 1996 Kasson Ringgold 1642/8

Racks

Steve Reetz Justin Blake Robert Sullivan Pat Ferguson Kenny O'Donnell Tim Lockner Rod Goodrich Leland P. Kober Matt Henderson **Rick Regennitter** Richard Hagen Tim Nuss William Taylor Bruce Hupke Joe Sundholm Keith Roszell Chad R Machart Brad Baumler Tony Pitzen

Arcadia	Crawford	1641/8	1997
Shenandoah	Page	1636/8	1997
Urbandale	Dallas	1626/8	1997
Vinton	Benton	1617/8	1997
Columbus Junction	Louisa	160.4/8	1997
Urbandale	Dallas	1604/8	1997
Indianola	Warren	1593/8	1996
West Liberty	Cedar	159	1997
Shenandoah	Page	159	1997
Atalissa	Cedar	159	1997
Cresco	Winneshiek	1586/8	1997
Hawkeye	Fayette	158.4/8	1997
Eldon	Van Buren	158	1997
Carlisle	Warren	1576/8	1997
Le Claire	Scott	1576/8	1997
WestLiberty	Cedar	1574/8	1997
Anamosa	Jones	1572/8	1997
Urbandale	Boone	156.4/8	1993
Hamburg	Fremont	1564/8	1998

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Anthony Cochran Bill Jud Chuck Stickels Guy H Hempey John Sabel **JeffHoover** John Frank Jr Darwin Goddard Keith Pogemiller Kevin Dempster Alan Jensen Paul L Fountain II Joe Hicks **Bill Johnson** Stan Larson Brad Baumler Darwin R Goddard **JeffWarden** Todd Laughton Todd Vetter Brad Baumler Shawn Bartz William Watson Jacob Schuler Corey Martin David House Lowdell Taylor Mark Keith Ric Bishop Tim Krauss

Batavia Jefferson 1563/8 Knierim Calhoun 1553/8 Fairfield Jefferson 1551/8 Sioux City Plymouth 1551/8 155 Long Grove Washington Norwalk Warren 1543/8 Fairfield Jefferson 1541/8 Charles City Floyd 154 Muscatine 154 Van Buren Delhi Delaware 153 7/8 Jefferson Greene 153 1/8 Douds Van Buren 152.6/8 Yarmouth 152 Des Moines Hartford 1517/8 Appanoose Lansing Allamakee 1516/8 Urbandale 1514/8 Boone Charles City Floyd 1513/8 Humboldt Humbolt 1513/8 1512/8 Merrill Plymouth Lost Nation 150.6/8 Clinton Urbandale 1505/8 Boone Waterloo Winneshick 1505/8 Fairfield 150 Jefferson 149.7/8 Indianola Warren Mason City Cerro Gordo 149.6/8 West Union Fayette 1494/8 Pella Marion 1494/8 Marshalltown Marshall 1493/8 Eldridge Scott 149.3/8 1493/8 Amana Iowa

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Winthrop Cedar Rapids Linn West Branch Cedar Rapids Benton Cedar Rapids West Point Lee Albia Monroe Greenville Clay. Leon Decatur Dakota.City. Anamosa Dubuque Jackson Riverton Fremont Webster City Libertyville Hiawatha Linn Washington Davis City Decatur Aurelia Mount Vernon Linn Albia Monroe Fremont Monona New Sharon Mahaska Cedar Falls LeRoy Howard Atlantic Cass Moorehead Monona Earlville Otturnwa Wapello Des Moines Clarke Buffalo Scott Davis City Decatur Gilbert Boone Spencer Clay Des Moines Union Cresco Knoxville Marion Kasson Urbandale Woolstock Wrig Hampton Wn Dubuque Du Altoona App Mystic Marshalltown Ma Donahue Sco Decorah WB Centerville App Davenport Sco Winterset Ma Van Horne Ben Creston Uni Wa Ottumwa Peterson Buc Dubuque Dut Dyersville Clay Bellevue Jack Harpers Ferry Alla Gilman Tan New Hampton How Center Point Ben LeClaire Jack Bondurant Polk Marion Linn LeClaire Scol Aplington Butlet

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David G Baumi

James L Newm

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Randy Messer

Lane Ostendorf

Ed Adamiski

Craig Goetz.

John Schumate

Brad Baumler

Robert Parker

Mike Nobie

Duane Bousmar

Keith Robison

Dave Freihale

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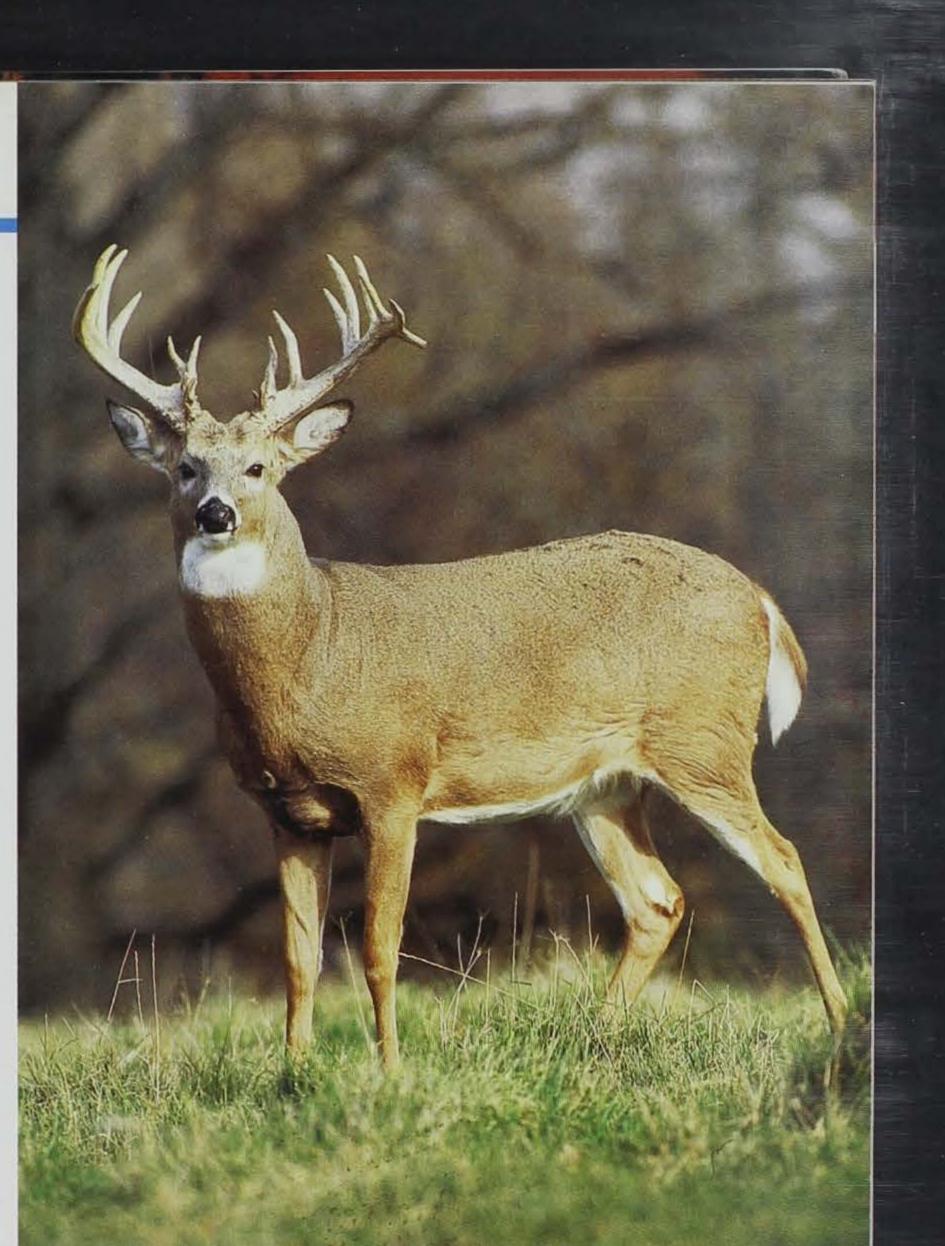
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Geno Kiley	Humboldt	Humbolt	1391/8	199:
Mike Mc Kahn	Princeton	Jackson	139.1/8	199
Stacy Bolson	Decorah	Winneshiek	1391/8	199
Brent Thie	Centerville	Appanoose	138 5/8	1996
Steve Swinconas	Scotch Grove	Jones	138 5/8	1990
Brian Hammann	Muscatine	Cedar	1383/8	1996
Jack Merle	Cedar Falls	Humbolt	1383/8	1996
Richard D Tenute	Fountain City	Allamakee	1383/8	199
Tony M. Millius	Marion	Allamakee	138	1990
Brian Kehrli	Elk Horn	Harrison	1376/8	199
Dan Swalla	Coon Rapids	Guthrie	1374/8	1996
Judd Parker	Libertyville	Jefferson	1374/8	199
John Duggan	Dubuque	Dubuque	1371/8	199
Mark Shull	Turin	Monona	137	199
Gary Charipar	Cedar Rapids	Allamakee	136.6/8	199
Mike Harland	Wellman	Washington	136 5/8	199
Douglas P Haverkamp	IowaFalls	Webster	1364/8	199
John Fry	Corydon	Wayne	1363/8	199
Brad Gardner	Wellman	Washington	1361/8	199
Adam W Anglin	Dubuque	Dubuque	136	199
EdUlicki	Le High	Webster	1357/8	199
Jerry Sickels	Mount Ayr	Ringgold	1357/8	198
Robin Mann	Gilman	Tama	1356/8	199
RyanGovig	Lewis	Cass	1356/8	1990
Terry Semke	Jefferson	Greene	1356/8	199
Matt Miller	Luzerne	Benton	135 5/8	199
Rusty Fowler	Sioux City	Plymouth	135 5/8	199
Dennis Ulbrich	Dyersville	Clayton	1354/8	199
Jim Matthews	Baxter	Jasper	1354/8	199
Larry B Porter	St Ansgar	Worth	1354/8	199
Larry Patten	Harlan	Shelby	1354/8	199
Charles White	Springville	Linn	1353/8	199
Don Hall	De Witt	Clinton	1352/8	199
Doug Chafa	Wapello	Adams	1352/8	199
Dean Dempster	Delhi	Delaware	1351/8	199
Chuck Stickels	Fairfield	Jefferson	135	199
Don Ross	Deep River	Poweshiek	135	199
Michael J Pitzen	CubaCity	Dubuque	132.2/8	199

Ryan Mesecher	Montrose	Lee	1395/8	1997
Kermit O Sneed	Stuttgart	Taylor	1394/8	1996
Dan Watson	Keota	Washington	1391/8	1996
Geno Kiley	Humboldt	Humbolt	1391/8	1995
Mike Mc Kahn	Princeton	Jackson	139.1/8	1997
Stacy Bolson	Decorah	Winneshiek	1391/8	1997
Brent Thie	Centerville	Appanoose	138 5/8	1996
Steve Swinconas	Scotch Grove	Jones	138 5/8	1996
Brian Hammann	Muscatine	Cedar	1383/8	1996
Jack Merle	Cedar Falls	Humbolt	1383/8	1996
Richard D Tenute	Fountain City	Allamakee	1383/8	1997
Tony M. Millius	Marion	Allamakee	138	1996
Brian Kehrli	Elk Horn	Harrison	1376/8	1997
Dan Swalla	Coon Rapids	Guthrie	1374/8	1996
Judd Parker	Libertyville	Jefferson	1374/8	1997
John Duggan	Dubuque	Dubuque	1371/8	1997
Mark Shull	Turin	Monona	137	1997
Gary Charipar	Cedar Rapids	Allamakee	136.6/8	1997
Mike Harland	Wellman	Washington	1365/8	1997
Douglas P Haverkamp	lowa Falls	Webster	136.4/8	1997
John Fry	Corydon	Wayne	1363/8	1997
Brad Gardner	Wellman	Washington	1361/8	1997
Adam W Anglin	Dubuque	Dubuque	136	1997
EdUlicki	Le High	Webster	1357/8	1997
Jerry Sickels	MountAyr	Ringgold	1357/8	1989
Robin Mann	Gilman	Tama	1356/8	1996
RyanGovig	Lewis	Cass	1356/8	1996
Terry Semke	Jefferson	Greene	1356/8	1995
Matt Miller	Luzerne	Benton	135 5/8	1997
Rusty Fowler	Sioux City	Plymouth	135 5/8	1998
Dennis Ulbrich	Dyersville	Clayton	1354/8	1997
Jim Matthews	Baxter	Jasper	1354/8	1998
Larry B Porter	St Ansgar	Worth	1354/8	1996
Larry Patten	Harlan	Shelby	1354/8	1995
Charles White	Springville	Linn	1353/8	1997
Don Hall	De Witt	Clinton	1352/8	1997
Doug Chafa	Wapello	Adams	1352/8	1997
Dean Dempster	Delhi	Delaware	1351/8	1996
Chuck Stickels	Fairfield	Jefferson	135	1996
Don Ross	Deep River	Poweshiek	135	1997
Michael J Pitzen	Cuba City	Dubuque	1322/8	1997



BOW, NONTYPICAL

(Minimum Qualifying Score — 155 pts.)

		COUNTY	TOTAL	
NAME	CITY	TAKEN	SCORE	YEAR
Jeremy Williams	Clarinda	Page	2071/8	1997
Jack Schuler Jr	Indianola	Warren	204	1997
David G Baumler	Decorah	Winneshiek	1967/8	1997
James L Newman	Mount Vernon	Linn	1967/8	1996
DarrellLangworthy	Waukee	Dallas	1953/8	1997
Randy Messer	Norwalk	Warren	1923/8	1997
Lane Ostendorf	Sioux City	Harrison	1891/8	1997
Ed Adamski	MasonCity	Cerro Gordo	1844/8	1997
Craig Goetz	Cedar Rapids	Johnson	1816/8	1997
John Schumate	Agency	Harrison	181 1/8	1996
Brad Baumler	Urbandale	Boone	1801/8	1995
Robert Parker	Manchester	Buchanan	180	1996
Mike Noble	Wapello	Louisa	1797/8	1996
Duane Bossman	Tama	Tama	1784/8	1997
Keith Robison	Iowa Falls	Hardin	1772/8	1997
Dave Freihale	Pisgah	Harrison	1747/8	1997
Dale Smith	Muscatine	Muscatine	1727/8	1997
Parker Franzen	Strawberry Point	Delaware	171.3/8	1997
Kenneth R. Ransom	Dow City	Crawford	170 5/8	1997

Mike Wernett	Center Point	Benton	1693/8	1997	
Mike Borwig	Swisher	Johnson	167.5/8	1997	
Gary Knoll	Dallas Center	Madison	166	1997	
Mike Noble	Wapello	Louisa	160.4/8	1997	
Todd Hinkel	North Liberty	Davis	1596/8	1997	
Douglas E Miller	Round Lk Beach	Davis	1594/8	1997	
Marvin Folstad	Mabel	Winneshiek	1567/8	1997	

CROSSBOW, TYPICAL

(Minimum Qualifying Score - 135 pts.)

		COUNTY	TOTAL	
NAME	CITY	TAKEN	SCORE	YEAR
Vicki Cowan	Exline	Appanoose	1456/8	1997
Wayne Ocker	Henderson	Mills	1417/8	1997

MUZZLELOADER, TYPICAL

(Minimum Qualifying Score - 150 pts.)

		COUNTY	TOTAL	
NAME	CITY	TAKEN	SCORE	YEAR
*John Russell	Blue Grass	Muscatine	172.4/8	1997
*Ric Bishop	Eldridge	Keokuk	1721/8	1997
*John S Cook	Maquoketa	Jones	1706/8	1997
*Darrel Orwig	Dana	Greene	1677/8	1995
Scott Creger	Winterset	Madison	1667/8	1997
Steve Dirks	Wyoming	Jones	1634/8	1998
Timothy L Waters	Albia	Monroe	163.2/8	1996
Steven Breckenridge	Ottumwa	Monroe	1596/8	1995
JeffMiedema	Pella	Marion	1587/8	1998
Dave Stoker	Montezuma	Poweshick	1566/8	1996
Darin Lintz	Crawfordsville	Washington	1552/8	1997
Bill Claassen	Waterloo	Fayette	155	1997
Brian Lindberg	Unionville	Davis	155	1997
Mike Dieger	Sioux City	Monona	152.6/8	1997
Doug Biermann	Dyersville	Jones	1521/8	1997
Larry Buttry	Harlan	Shelby	1512/8	1996
Brian Sothmann	Cumberland	Cass	1507/8	1997
Thomas G Van Eschem	Vinton	Benton	1504/8	1997

(Minimum Qualifying Score - 170 pts.)

		COUNTY	TOTAL	
NAME	CITY	TAKEN	SCORE	YEAR
Brian Hebb	Red Oak	Monona	2142/8	1996
Jason Bingham	Melcher Dallas	Marion	207	1997
David Brobston	Knoxville	Van Buren	1992/8	1991
Richard M Blaess	Mabel	Winneshick	1972/8	1997
Dr. Glen Madsen	W. Des Moines	Warren	193-5/8	1994
Chris Bergman	West Branch	Cedar	191	1997
Craig Neuzil	Fort Atkinson	Winneshiek	188.6/8	1997
Joe G Miklus II	Des Moines	Guthrie	1883/8	1997
Bob C Garside	Greenfield	Adair	184	1996
Craig Goetz	Cedar Rapids	Johnson	1816/8	1997
Tom Budde	Preston	Jackson	1807/8	1996
Glen Nelson	Atlantic	Audubon	179/7/8	1986
Todd Rollinger	Cedar Rapids	Jackson	1796/8	1994
Randy Manser	Lacona	Warren	179.1/8	1997

Robert D Peterson	Des Moines	Page	1774/8	1994
Marty Newton	Des Moines	Decatur	1756/8	1997
Bob Nonneman	Melvin	Lyon	1747/8	1959
Bob Hulshizer	Anamosa	Jones	1746/8	1997
Don Gardner	Maxwell	Polk	1734/8	1997
Scott Batterson	Drakesville	Davis	1731/8	1997
Larry Barber	Anita	Cass	172.6/8	1981
Josh B Cobb	Allerton	Wayne	172	1993
Terry Davis	Mystic	Appanoose	1716/8	1997
Eric Thraenert	Elma	Howard	171	1997
Jerry Abing	Dubuque	Dubuque	1706/8	1997
Samuel Borntreger		Wayne	1704/8	1997
Dennis Boeckenstedt	Dyersville	Clayton	1702/8	1997

SHOTGUN, TYPICAL

(Minimum Qualifying Score - 150 pts.)

		COUNTY	TOTAL		Mike Franzen
NAME	CITY	TAKEN	SCORE	YEAR '	SteveDelaney
*Lary Schmidt	Cumberland	Cass	201	1995	John W. Ecile
*W Eugene Zieglowsky	Washington	Van Buren	192.7/8	1997	Don.Swartzen
Patrick Wehrle	Fort Madison	Henry	1875/8	1996 .	Roger Witter
Pat Wehrle	Madison	Henry	186 5/8	1996	Douglas Johns
Don Greenlee	Humeston	Wayne	182.6/8	1997	Ed Macha
Elisha G Hugen	Knoxville	Monroe	1823/8	1996	Mick Still
JeffRobinett	Maxwell	Jasper	1816/8	1996	David J. Trew
Barry Ledger	Brighton	Jefferson	181	1997	James A Buen
John L. Vander Ecken	Melcher	Marion	1793/8	1997	Ron Miller
Mathew Cox	Cedar Falls	Black Hawk	1791/8		Joey B Ballard
John J. Oberhaus	Davenport	Jefferson	177.7/8	1997	Les Voss III
Max Kane	Pella	Marion	1773/8	1997	Jim Reimer
Chuck Stickels	Fairfield	Jefferson	1762/8	1996	CarlCable
Raymond H Ochl	Amana	Iowa	1757/8	1959	Curt Nyland
Kendall M Palmer	Mount Pleasant	Davis	1756/8	1997	Dale Bayless
Bill Moody	Harpers Ferry	Allamakee	1754/8	1997	Dan Gotto
Mike Hanson	Sherrill	Dubuque	174.4/8	1997	Jim Putz
Gary Dundee	Center Point	Allamakee	1736/8	1994	Justin Coppes
Patrick J Hall	Oxford Junction	Clinton	1736/8	1996	Scott Schilling
Todd Rollinger	Cedar Rapids	Jones	173.3/8	1997	Calvin Vande V
Thomas E Peters	Lansing	Allamakee	173	1997	Fred Steinhage
James Ossman	Washington	Washington	1724/8	1997	Jack L Kolka J
Colin J. Gerst	Burlington	Des Moines	172 3/8	1997	Lyle Darsey
Joe Arndt	Fairfield	Jefferson	1721/8	1997	Mark L. Stahlb
Rodney Callahan	Melcher	Marion	1716/8	1997	Cari J James
Trevor Paulus	Afton	Union	1712/8	1996	Duane Fisher
Randy Reck	Winthrop	Clayton	1702/8	1997	Jack Schuler
Jasen Morgan	Albia	Monroe	170	1995	Ken Cox
John Hays	Creston	Taylor	1696/8	1996	Mike Hanson
Aaron Atkinson	Colesburg	Clayton	169	1997	Alex Staack
Dan Ammmeter	Springerville	Jones	169	1997	Dale W. Baldw
Tom Ford	Fairfield	Jefferson	1686/8	1996	Jim Totten
Scott Schilling	Colesburg	Clayton	168 5/8	1988	Kory A_Clark
Marvin Clark	Columbia	Marion	1684/8	1994	Lonnie Swigart
Kurt Dallmeyer	Wellman	Washington	1681/8	1997	Mark Hilger
Les Bubke	Nevada	Story	1671/8	1997	Mark Randall
Kirk Tumilty	Shellsburg	Benton	167	1997	Randy Delaracy
Mark De Heer	Knoxville	Marion	167	1997	Terry Nichols
Joey King	MountAyr	Ringgold	166.4/8	1997	Jeff Crotcher
Steven Brase	Plainfield	Bremer	1661/8	1996	John Firth
Dennis Schorg	Remsen	O'Brien	165 5/8	1976	RonaldHan
Rick Rea	Waukon	Winneshiek	165.5/8	1996	Brad A: Nelson Mark II
Jason Becker	Muscatine	Muscatine	1652/8	1997	Mark Harry
Dwight Phillips	Clarinda	Page	165	1997	Nick Pross
Robert Allen	Ridgeway	Decatur	165	1997	hated1 -

Doug Weldon Jerry L'Orton Mick Miller **RickHarbst** John Beach Rod & Eddie John P. Davis Michael Brun Jody Davis Mike Bagshav Jason Catter David Nossan Robert W Wri Dave Mc Gran Travu.Porter Drew Virlee Travis Blanch Mike Franzen Steve Delancy John W. Easle Don Swartzen Roger Witter Douglas Johns Ed Macha Mick Still David J Trew James A Buen Ron Miller Joey B Ballard Les Voss III Jim Reimer CarlCable Curt Nyland Dale Bayless Dan Gotto Fim Putz

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						A REAL PROPERTY		N	Line .	
1994	Doug Weldon	Albia	Monroe	1647/8	1996	State of the latter) ···· Mie	
1997	Jerry L Orton	Lorimor	Dallas	164 5/8	1993	Contract of the state				
1959	Mick Miller	Waverly	Bremer	1644/8	1997	100 A 100 A	A STATE			
1997	Rick Herbst	Durango	Dubuque	1643/8	1997		No.			
1997	John Beach	Fort Madison	Lee	164	1997		04			- another the
1997	Rod & Eddie Shelgren	Humboldt	Taylor	164	1997	// TEX 5: (1993) (1993)		Se l	38/1935	
1981	John P. Davis	Altoona	Madison	163 7/8	1997		ALC: NO. OF THE OWNER.	The Head and		
1993	Michael Bruning	RedOak	Montgomery	163 7/8	1997			The Arte Market		
1997	Jody Davis	Knoxville	Marion	1633/8	1997					
1997	Mike Bagshaw	Cumberland	Cass	163	1997					
1997	Jason Carter	Knoxville	Marion	1626/8	1997			(八) 表現 (小) 言語(四)		
1997	David Nossaman	Leighton	Mahaska	162.4/8	1997	A LAR SAL	and and	1		
1997	Robert W Wright	Mount Pleasant	Henry	1624/8	1970	V PR S LA	4 加油林	(and	-	DEX PIN
	Dave Mc Grain	Mapleton	Monona	1623/8	1996				A CARE	A DE LOS
	Travis Porter	Iowa City	Clarke	1621/8	1994	of the rate of a	用為一個語言語	ar and the start	A A A	
	Drew Virlee	Mount Vernon	Linn	162	1997	A STATE	初天主任法		AL DE LE	书法学
	Travis Blanchfield	Churdan	Greene	162	1997	人名 尔 國家派出 引	al the state		ALC: NO	The state
-	Mike Franzen	Muscatine	Muscatine	1617/8	1996	在18 项。因为	ALL REPORT	ER-EXPLOYED ST	Re 11 14	Mineria Mar
YEAR	Steve Delaney	Harpers Ferry	Allamakee	1616/8	1997				Vice V	
1995	John W. Estle	Lockridge	Jefferson	1613/8	1996			A SELLEL		AND THE P
1997	Don Swartzentruber	Kalona	Van Buren	161	1997	CONSILIE OF SALAR TO CONFERENCE		a manage and the state	SEXA TRANSM	Carlo Carlos
1996	Roger Witter	Mc Gregor	Clayton	161	1997	Barris Barris Barris	-		100	1007
1995	Douglas Johnson	Des Moines	Warren	1603/8	1997	Bernie Schneider	Donnellson	Lee	155	1997
1997	Ed Macha	Decorah	Winneshiek	1602/8	1997	Jane Pagel	Sumner	Fayette	1545/8	1997
1996	Mick Still David J. Trewin	Mount Ayr	Ringgold Chickasaw	1602/8 1601/8	1993 1998	Pat Vorwald	Dubuque	Dubuque	154.5/8	1997
1995	James A Buenting	Fredericksburg Greenfield	Adair	160 1/8	1998	John Bailey	Centerville	Appanoose Des Meines	1544/8	1995 1997
1997	Ron Miller	Cascade	Jones	160	1997	Bob Spook Brown Dana Jensen	Yarmouth North English	Des Moines Keokuk	1542/8 1542/8	1997
1331	Joey B Ballard	Indianola	Warren	1597/8	1996	Scott Sauer	North English Muscatine	Muscatine	1541/8	1997
1997	Les Voss III	Stanton	Montgomery	1596/8	1997	Chris Bratherson	WallLake	Crawford	154 1/8	1993
1997	Jim Reimer	Albia	Monroe	1594/8	1997	Richard Vignaroli	Des Moines	Dallas	154	1984
1996	Carl Cable	Newton	Jasper	1593/8	1997	Bob Streasick	Knoxville	Marion	1537/8	1997
1959	CurtNyland	Cedar Rapids	Jefferson	1592/8	1997	Randy Lehman	Branden	Benton	1537/8	1998
1997	Dale Bayless	Shenandoah	Page	1592/8	1998	Ray Zellmer	Wiota	Cass	1536/8	1995
1997	Dan Gotto	Peosta	Dubuque	1591/8	1997	C.J. Taylor	Center Point	Adams	153 5/8	1996
1997	Jim Putz	Newton	Monroe	1585/8	1997	Marvin Clark	Columbia	Marion	153 5/8	1995
1994	Justin Coppes	Sperry	Lee	1582/8	1996	Steve Porber	Massena	Taylor	153 5/8	1992
1996	Scott Schilling	Colesburg	Clayton	1582/8	1991	Chris Ward	Cedar Rapids	Johnson	153.4/8	1997
1997	Calvin Vande Voost	Leighton	Mahaska	1581/8	1994	Randy Berg	Somers	Webster	153 4/8	1997
1997	Fred Steinhagen	Delhi	Delaware	1581/8	1985	Steve Hiatt	Exline	Appanoose	1533/8	1994
1997	Jack L Kolka Jr	Spring Grove	Winneshiek	158	1996	Mike Rezac	Armstrong	Emmet	1532/8	1971
1997	Lyle Dorsey	Russell	Lucas	158	1997	Nathan Thayer	Carlisle	Lucas	1531/8	1997
1997	Mark L. Stahlberg	Monticello	Jones	158	1997	Ned Hauser	Akron	Plymouth	153.1/8	1997
(997	Carl J. James	Tipton	Cedar	1575/8	1997	Rick Ballanger	Centerville	Appanoose	153 1/8	1996
1995.	Duane Fisher	West Chester	Van Buren	1575/8	1996	Troy Cavin	Lewis	Cass	1531/8	1992
1997	Jack Schuler	Indianola	Decatur	1573/8	1993	Chuck Derby	Albia	Monroe	153	1996
1995	KenCox	Sloan	Woodbury	1573/8	1997	Dan Pruett	Onawa	Monona	153	1997
1996	Mike Hanson	Sherrill	Jackson	1573/8	1997	Henry Hinkel	Mondamin	Harrison	153	1995
1997	Alex Staack	Oelwein	Fayette	157	1997	DavidLeih	New Virginia	Warren	1527/8	1994
1997	Dale W. Baldwin	Des Moines	Adams	157	1996	Howard A. Hughes	Hawkeye	Fayette	1527/8	1995
1996	Jim Totten	AlbertCity	Taylor	1566/8	1996	J Lucian Tuinstra	Indianola	Warren	1524/8	1997
1988	Kory A. Clark	Davenport	Jackson	1566/8	1996	Benjamin Leeper	Brighton	Washington	1523/8	1996
1994	Lonnie Swigart	Lamoni	Decatur	1565/8	1997	Melvin Baker	Fort Dodge	Webster	1523/8	1997
1997	Mark Hilger	Farragut	Fremont	1563/8	1996	Rod Schnuckel	Odebolt	Monona	152.2/8	1995
1997	Mark Randall	Woodward	Dallas	1563/8	1997	Ralph A Rettig	Augusta	Lee	152	1997
1997.	Randy Delaney	Norwalk	Warren	1563/8	1997	Scott Doescher	Cedar Falls	Plymouth	152	1996
1997	Terry Nichols	Ogden	Dallas	1562/8	1997	Jake Syfert	Salem	Henry	1515/8	1997
1997	Jeff Crotcher	Roland	Clarke	1561/8	1997	Pat Weinimont	Hopkinton	Delaware	1515/8	1996
1996	John Firth Ronald Hart	Centerville Coop Papida	Appanoose	1561/8	1997	Richard Vignaroli	Des Moines	Monroe	151 5/8	1988
1976	Brad A. Nelson	Coon Rapids	Guthrie	1556/8	1996	Dan Anderson	Decorah Dec Moiner	Winneshiek	1513/8	1997
1996	Mark Harris	Atlantic Earlyille	Audubon Delaware	1555/8 1555/8	1981 1997	Joe G Miklus II	Des Moines	Guthrie	1513/8	1997
1997	Nick Pross	Atlantic	Cass	1555/8	1997	Acel Nowachek Jon J. Latham	Wyoming Oelwein	Jackson Buchanan	1512/8 1512/8	1996 1997
1997	Jared Landy	Orient	Adams	155 3/8	1995	Paul Howe	Waukon			
1997	Sured Landy	Onen	Adams	155.5/8	195341	ramnowe	waukon	Allamakee	151.2/8	1997

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12.04	Per Ber III Pitter	THE GREET	South the second	101	1.0.00					
1996	Douglas Johnson	Des Moines	Warren	1603/8	1997	Bernie Schneider	Donnellson	Lee	155	1997
1997	Ed Macha	Decorah	Winneshiek	1602/8	1997	Jane Pagel	Sumner	Fayette	1545/8	1997
1995	Mick Still	Mount Ayr	Ringgold	1602/8	1993	Pat Vorwald	Dubuque	Dubuque	154.5/8	1997
1995	David J. Trewin	Fredericksburg	Chickasaw	160.1/8	1998	John Bailey	Centerville	Appanoose	1544/8	1995
1997	James A Buenting	Greenfield	Adair	160	1997	Bob Spook Brown	Yarmouth	Des Moines	1542/8	1997
1997	Ron Miller	Cascade	Jones	160	1997	Dana Jensen	North English	Keokuk	154.2/8	1997
	Joey B Ballard	Indianola	Warren	1597/8	1996	Scott Sauer	Muscatine	Muscatine	1541/8	1997
1997	Les Voss III	Stanton	Montgomery	1596/8	1997	Chris Bratherson	Wall Lake	Crawford	154	1993
1997	Jim Reimer	Albia	Monroe	1594/8	1997	Richard Vignaroli	Des Moines	Dallas	154	1984
1996	Carl Cable	Newton	Jasper	1593/8	1997	Bob Streasick	Knoxville	Marion	1537/8	1997
1959	CurtNyland	Cedar Rapids	Jefferson	1592/8	1997	Randy Lehman	Branden	Benton	1537/8	1998
1997	Dale Bayless	Shenandoah	Page	1592/8	1998	Ray Zellmer	Wiota	Cass	1536/8	1995
1997	Dan Gotto	Peosta	Dubuque	1591/8	1997	C. J. Taylor	Center Point	Adams	153 5/8	1996
1997	Jim Putz	Newton	Monroe	1585/8	1997	Marvin Clark	Columbia	Marion	153 5/8	1995
1994	Justin Coppes	Sperry	Lee	1582/8	1996	Steve Porber	Massena	Taylor	153 5/8	1992
1996	Scott Schilling	Colesburg	Clayton	1582/8	1991	Chris Ward	Cedar Rapids	Johnson	1534/8	1997
1997	Calvin Vande Voost	Leighton	Mahaska	1581/8	1994	Randy Berg	Somers	Webster	1534/8	1997
1997	Fred Steinhagen	Delhi	Delaware	1581/8	1985	Steve Hiatt	Exline	Appanoose	153 3/8	1994
1997	Jack L Kolka Jr	Spring Grove	Winneshiek	158	1996	Mike Rezac	Armstrong	Emmet	1532/8	1971
1997	Lyle Dorsey	Russell	Lucas	158	1997	Nathan Thayer	Carlisle	Lucas	1531/8	1997
1997	Mark L. Stahlberg	Monticello	Jones	158	1997	Ned Hauser	Akron	Plymouth	153.1/8	1997
(997	Carl J. James	Tipton	Cedar	1575/8	1997	Rick Ballanger	Centerville	Appanoose	153 1/8	1996
1995	Duane Fisher	West Chester	Van Buren	157.5/8	1996	Troy Cavin	Lewis	Cass	1531/8	1992
1997	Jack Schuler	Indianola	Decatur	1573/8	1993	Chuck Derby	Albia	Monroe	153	1996
(995)	KenCox	Sloan	Woodbury	1573/8	1997	Dan Pruett	Onawa	Monona	153	1997
1996	Mike Hanson	Sherrill	Jackson	1573/8	1997	Henry Hinkel	Mondamin	Harrison	153	1995
1997	Alex Staack	Oelwein	Fayette	157	1997	David Leih	New Virginia	Warren	1527/8	1994
1997	Dale W. Baldwin	Des Moines	Adams	157	1996	Howard A. Hughes	Hawkeye	Fayette	1527/8	1995
1996	Jim Totten	Albert City	Taylor	1566/8	1996	J Lucian Tuinstra	Indianola	Warren	152 4/8	1997
1988	Kory A. Clark	Davenport	Jackson	1566/8	1996	Benjamin Leeper	Brighton	Washington	1523/8	1996
1994	Lonnie Swigart	Lamoni	Decatur	1565/8	1997	Melvin Baker	Fort Dodge	Webster	1523/8	1997
1997	Mark Hilger	Farragut	Fremont	1563/8	1996	Rod Schnuckel	Odebolt	Monona	152.2/8	1995
1997	Mark Randall	Woodward	Dallas	1563/8	1997	Ralph A Rettig	Augusta	Lee	152	1997
1997	Randy Delaney	Norwalk	Warren	1563/8	1997	Scott Doescher	Cedar Falls	Plymouth	152	1996
1997	Terry Nichols	Ogden	Dallas	1562/8	1997	Jake Syfert	Salem	Henry	151.5/8	1997
1997	JeffCrotcher	Roland	Clarke	1561/8	1997	Pat Weinimont	Hopkinton	Delaware	1515/8	1996
1996	John Firth	Centerville	Appanoose	1561/8	1997	Richard Vignaroli	Des Moines	Monroe	151 5/8	1988
1976.	Ronald Hart	Coon Rapids	Guthrie	1556/8	1996	Dan Anderson	Decorah	Winneshiek	151 3/8	1997
1996	Brad A. Nelson	Atlantic	Audubon	1555/8	1981	Joe G Miklus II	Des Moines	Guthrie	1513/8	1997
1997	Mark Harris	Earlville	Delaware	1555/8	1997	AcelNowachek	Wyoming	Jackson	1512/8	1996
1997	Nick Pross	Atlantic	Cass	1555/8	1995	Jon J. Latham	Oelwein	Buchanan	1512/8	1997
1997	Jared Landy	Orient	Adams	1553/8	1997	Paul Howe	Waukon	Allamakee	151.2/8	1997

Sidney A. Logan	Rock Rapids	Lyon	1512/8	1997	Jim Willey	Delhi	Clayton	1504/8	1997
Mike Fry	Mount Pleasant	Henry	1511/8	1996	Joel Grover	Rowley	Buchanan	1504/8	1993
Rod Cheers	Creston	Ringgold	1511/8	1997	Michael Toyne	Muscatine	Des Moines	1504/8	1996
David Larson	Anamosa	Jones	151	1997	Scott Wegman	Epworth	Delaware	1504/8	1996
Michael A Kempker	Fort Madison	Lee	151	1997	Tony Pohren	Argyle	Lee	150.4/8	1986
Mike Boswell	Davis City	Decatur	151	1991	Shawn M Ellingson	Washington	Washington	150.3/8	1997
Robert Wood	Waterloo	Franklin	151	1997	Charles E Norton	Burlington	Van Buren	1502/8	1997
Michael Hanson	Baxter	Audubon	1507/8	1997	Jim Custer	Washington	Washington	1502/8	1997
Rick Kirk	Albia	Monroe	150.6/8	1996	John E Combs	Dubuque	Jackson	1502/8	1997
Boyd Mathes	Pella	Marion	150.5/8	1997	Rick Rea	Waukon	Winneshick	1502/8	1991
Daniel Schulte	Portsmouth	Shelby	1505/8	1995	Rex Ritter	Exline	Appanoose	1501/8	1996
Greg Barta	Fort Atkinson	Winneshiek	1505/8	1991	Rick Tyler	Waterloo	Wapello	1501/8	1997
Jeremy Pettyjohn	Hamilton	Marion	150.5/8	1997	Tony Freund	Lewis	Cass	1501/8	1995
Brent Milner	Griswold	Appanoose	150.4/8	1996					

ALL-TIME TOP 10 RECORD RACKS

SHOTGUN, TYPICAL

	County		Total	
City	Taken	Year	Score	
Cumberland	Cass	1995	201-3/8	
Woodbine	Harrison	1964	200-2/8	
Des Moines	Hamilton	1974	199-5/8	
Lamoni	Decatur	1985	198-1/8	
Danville	Des Moines	1989	196-4/8	
Ottumwa	Wapello	1969	195-1/8	
New Virginia	Warren	1989	194-3/8	
Washington	Washington	1997	192-7/8	
Humeston	Wayne	1996	191-4/8	
Mapleton	Monona	1996	190-4/8	
	Cumberland Woodbine Des Moines Lamoni Danville Ottumwa New Virginia Washington Humeston	CityTakenCumberlandCassWoodbineHarrisonDes MoinesHamiltonLamoniDecaturDanvilleDes MoinesOttumwaWapelloNew VirginiaWarrenWashingtonWashingtonHumestonWayne	CityTakenYearCumberlandCass1995WoodbineHarrison1964Des MoinesHamilton1974LamoniDecatur1985DanvilleDes Moines1989OttumwaWapello1969New VirginiaWarren1989WashingtonWashington1997HumestonWayne1996	CityTakenYearScoreCumberlandCass1995201-3/8WoodbineHarrison1964200-2/8Des MoinesHamilton1974199-5/8LamoniDecatur1985198-1/8DanvilleDes Moines1989196-4/8OttumwaWapello1969195-1/8New VirginiaWarren1989194-3/8WashingtonWashington1997192-7/8HumestonWayne1996191-4/8

CHOTCHN NONTVDICA

Name	City	County Taken	Year	Total Score	Name Duane Miller	City Onawa	Taken Monona	Vear 1996	Score 198 3/
Larry Raveling	Emmetsburg	Clay	1973	282	Lloyd Goad	Knoxvilie	Monroe	1962	197-64
Lyle Spitznoggle	Wapello	Louisa	1982	258-2/8	Robert Miller	Wyoming	Jones	1977	194-2/
David Mandersheid	Welton	Jackson	1977	256-7/8	Steven E. Tyer	North Liberty	Johnson	1994	194
Carroll Johnson	Moorhead	Monona	1968	256-2/8	Roy Allison	Knoxville	Monroe	1995	193-5/
Larry J. Caldwell	Des Moines	Warren	1990	248-6/8	Jeffery L. Whisker	Clinton	Scott	1993	191
Don Boucher	Albian	Marshall	1961	245-3/8		Des Moines	Polk	1981	190-5/
Carl Wenke	CedarRapids	Lee	1972	245	Richard B. Swin				
Robert Wonderlich	Oskaloosa	Monroe	1970	244-6/8	Randy Petersburg	Waukon	Allamakee	1996	189 1/
Wendell R. Prottsman	Mt. Pleasant	Henry	1988	231-1/8	Kevin Peterson	Mediapolis	Des Moines	1989	188-1/
Frederick A. Becker	Guttenberg	Clayton	1993	230	Dave Zima	Blair	Monona	1996	186 4/
MUZZLELOAD	ER, TYPICA	1L			BOW, NONTYI	PICAL			
MUZZLELOAD	ER, TYPICA	L County		Total	BOW, NONTYI	PICAL	County		Total
MUZZLELOAD	ER, TYPICA		Year	Total Score	BOW, NONTYI Name	PICAL City	County Taken	Year	Score
Name		County	Year 1990					Year 1994	Score
	City	County Taken		Score	Name	City	Taken		Score 236-7/
Name Jerry W. Conover	City Sioux City	County Taken Monona	1990	Score 182-7/8	Name Russ Clarken	City Desoto	Taken Dallas	1994	Score 236-7/ 229-5/
Name Jerry W. Conover *John Russell	City Sioux City Blue Grass	County Taken Monona Muscatine	1990 1997	Score 182-7/8 172-4/8	Name Russ Clarken Mike Hobart	City Desoto Prole	Taken Dallas Madison	1994 1993	Score 236-7/ 229-5/
Name Jerry W. Conover *John Russell *Ric Bishop	City Sioux City Blue Grass Eldridge	County Taken Monona Muscatine Keokuk	1990 1997 1997	Score 182-7/8 172-4/8 172-1/8	Name Russ Clarken Mike Hobart Terry M. Long	City Desoto Prole Des Moines	Taken Dallas Madison Polk	1994 1993 1995	Score 236-7/ 229-5/ 229-4/ 227
Name Jerry W. Conover *John Russell *Ric Bishop *John S. Cook	City Sioux City Blue Grass Eldridge Maquoketa	County Taken Monona Muscatine Keokuk Jones	1990 1997 1997 1997	Score 182-7/8 172-4/8 172-1/8 170-6/8	Name Russ Clarken Mike Hobart Terry M. Long Jack Schuler Jr.	City Desoto Prole Des Moines Indianola	Taken Dallas Madison Polk Decatur	1994 1993 1995 1995	Score 236-7/ 229-5/ 229-4/ 227 222-1/
Name Jerry W. Conover *John Russell *Ric Bishop *John S. Cook Bruce L. Hupke Patrick G. Burkle	City Sioux City Blue Grass Eldridge Maquoketa Carlisle	County Taken Monona Muscatine Keokuk Jones Warren	1990 1997 1997 1997 1997 1994.	Score 182-7/8 172-4/8 172-1/8 170-6/8 170-3/8	Name Russ Clarken Mike Hobart Terry M. Long Jack Schuler Jr. Jerry M. Monson Ric Porske	City Desoto Prole Des Moines Indianola Clear Lake	Taken Dallas Madison Polk Decatur Cerro Gordo	1994 1993 1995 1995 1977	Score 236-7/2 229-5/2 229-4/2 227 222-1/2 221 6/8
Name Jerry W. Conover *John Russell *Ric Bishop *John S. Cook Bruce L. Hupke Patrick G. Burkle	City Sioux City Blue Grass Eldridge Maquoketa Carlisle Earlville	County Taken Monona Muscatine Keokuk Jones Warren Clayton	1990 1997 1997 1997 1997 1994 1990	Score 182-7/8 172-4/8 172-1/8 170-6/8 170-3/8 170-2/8	Name Russ Clarken Mike Hobart Terry M. Long Jack Schuler Jr. Jerry M. Monson	City Desoto Prole Des Moines Indianola Clear Lake Davenport	Taken Dallas Madison Polk Decatur Cerro Gordo Scott	1994 1993 1995 1995 1977 1996	Score 236-7/3 229-5/8 229-4/8 227 222-1/8 221 6/8 219-3/8
Name Jerry W. Conover *John Russell *Ric Bishop *John S. Cook Bruce L. Hupke Patrick G. Burkle Charles Hixson	City Sioux City Blue Grass Eldridge Maquoketa Carlisle Earlville Chariton	County Taken Monona Muscatine Keokuk Jones Warren Clayton Lucas	1990 1997 1997 1997 1994 1990 1989	Score 182-7/8 172-4/8 172-1/8 170-6/8 170-3/8 170-2/8 170	Name Russ Clarken Mike Hobart Terry M. Long Jack Schuler Jr. Jerry M. Monson Ric Porske David Propst	City Desoto Prole Des Moines Indianola Clear Lake Davenport Dancombe	Taken Dallas Madison Polk Decatur Cerro Gordo Scott Webster	1994 1993 1995 1995 1977 1996 1987	Score 236-7/8 229-5/8 229-4/8

MUZZLELOADER, NONTYPICAL

		County		1 oral
Name	City	Taken	Year	Score
Mike Moody	Hamburg	Fremont	1990	210-2/8
Vincent P. Jauron	Harlan	Monona	1990	209-1/8
Daniel Kaufman	Wapello	Louisa	1984	205-3/8
JeffTussey	Creston	Union	1995	205
Denny Baum	Ottumwa	Wapello	1990	202-1/8
Mike Garber	Eldon	Wapellio	1996	200 6/8
Dean Reyer	Osage	Mitchell	1994	200-5/8
Jim Evans	Muscatine	Muscatine	1995	196
Steve Mundell	Ottumwa	Monroe	1991	196
Ed Banks	Lens	Muscatine	1994	194-1/8

Name	City	County Taken	Year	Total Score	Name	City	County Taken	Vear	Total Score
Larry Raveling	Emmetsburg	Clay	1973	282	Duane Miller	Onawa	Monuna	1996	198 3
Lyle Spitznoggle	Wapello	Louisa	1982	258-2/8	Lloyd Goad	Knoxville	Monroe	1962	197-0
David Mandersheid	Welton	Jackson	1977	256-7/8	Robert Miller	Wyoming	Jones	1977	194-2
Carroll Johnson	Moorhead	Monona	1968	256-2/8	Steven E. Tyer	North Liberty	Johnson	1994	194
Larry J. Caldwell	Des Moines	Warren	1990	248-6/8	Roy Allison	Knoxville	Monroe	1995	193-5/
Don Boucher	Albian	Marshall	1961	245-3/8	Jeffery L. Whisker	Clinton	Scott	1993	191
Carl Wenke	Cedar Rapids	Lee	1972	245	Richard B. Swin	Des Moines	Polk	1981	190-5/
Robert Wonderlich	Oskaloosa	Monroe	- 1970	244-6/8	Randy Petersburg	Waukon	Allamakee	1996	189-1/
Wendell R. Prottsman	Mt. Pleasant	Henry	1988	231-1/8	Kevin Peterson	Mediapolis	Des Moines	1989	188-1/
Frederick A. Becker	Guttenberg	Clayton	1993	230	Dave Zima	Blair	Monona	1996	186 4/
		L.			BOW, NONTYI	PICAL			
		L County		Total	BOW, NONTYI	PICAL	County		Total
			Year	Total Score	BOW, NONTYI Name	PICAL City	County Taken	Year	Score
MUZZLELOAD Name	ER, TYPICA	County	Year 1990					1994	Score 236-7/
MUZZLELOAD Name	ER, TYPICA City	County Taken		Score	Name	City	Taken		Score 236-7/ 229-5/
MUZZLELOAD Name Jerry W. Conover	ER, TYPICA City Sioux City	County Taken Monona	1990	Score 182-7/8	Name Russ Clarken	City Desoto	Taken Dallas	1994	Score 236-7/ 229-5/
MUZZLELOAD Name Jerry W. Conover *John Russell	ER, TYPICA City Sioux City Blue Grass	County Taken Monona Muscatine	1990 1997	Score 182-7/8 172-4/8	Name Russ Clarken Mike Hobart	City Desoto Prole	Taken Dallas Madison	1994 1993	Score 236-7/ 229-5/
MUZZLELOAD Name Jerry W. Conover *John Russell *Ric Bishop	ER, TYPICA City Sioux City Blue Grass Eldridge	County Taken Monona Muscatine Keokuk	1990 1997 1997	Score 182-7/8 172-4/8 172-1/8	Name Russ Clarken Mike Hobart Terry M. Long	City Desoto Prole Des Moines	Taken Dallas Madison Polk	1994 1993 1995	Score 236-7/ 229-5/ 229-4/ 227
MUZZLELOAD Name Jerry W. Conover *John Russell *Ric Bishop *John S. Cook Bruce L. Hupke Patrick G. Burkle	ER, TYPICA City Sioux City Blue Grass Eldridge Maquoketa Carlisle Earlville	County Taken Monona Muscatine Keokuk Jones	1990 1997 1997 1997 1994 1990	Score 182-7/8 172-4/8 172-1/8 170-6/8 170-3/8 170-2/8	Name Russ Clarken Mike Hobart Terry M. Long Jack Schuler Jr.	City Desoto Prole Des Moines Indianola	Taken Dallas Madison Polk Decatur	1994 1993 1995 1995	Score 236-7/ 229-5/ 229-4/ 227 222-1/
MUZZLELOAD Name Jerry W. Conover *John Russell *Ric Bishop *John S. Cook Bruce L. Hupke Patrick G. Burkle Charles Hixson	ER, TYPICA City Sioux City Blue Grass Eldridge Maquoketa Carlisle Earlville Chariton	County Taken Monona Muscatine Keokuk Jones Warren Clayton Lucas	1990 1997 1997 1997 1994 1990 1989	Score 182-7/8 172-4/8 172-1/8 170-6/8 170-3/8 170-2/8 170	Name Russ Clarken Mike Hobart Terry M. Long Jack Schuler Jr. Jerry M. Monson	City Desoto Prole Des Moines Indianola Clear Lake	Taken Dallas Madison Polk Decatur Cerro Gordo	1994 1993 1995 1995 1977	Score 236-7/ 229-5/ 229-4/ 227 222-1/ 221 6/
MUZZLELOAD Name Jerry W. Conover *John Russell *Ric Bishop *John S. Cook Bruce L. Hupke Patrick G. Burkle Charles Hixson Kevin Burge	ER, TYPICA City Sioux City Blue Grass Eldridge Maquoketa Carlisle Earlville	County Taken Monona Muscatine Keokuk Jones Warren Clayton Lucas Fremont	1990 1997 1997 1997 1994 1990 1989 1992	Score 182-7/8 172-4/8 172-1/8 170-6/8 170-3/8 170-2/8 170 167-7/8	Name Russ Clarken Mike Hobart Terry M. Long Jack Schuler Jr. Jerry M. Monson Ric Porske	City Desoto Prole Des Moines Indianola Clear Lake Davenport	Taken Dallas Madison Polk Decatur Cerro Gordo Scott	1994 1993 1995 1995 1977 1996	Score 236-7/ 229-5/ 229-4/ 227 222-1/ 221 6/8 219-3/8 218-1/8
MUZZLELOAD Name Jerry W. Conover *John Russell *Ric Bishop *John S. Cook Bruce L. Hupke Patrick G. Burkle Charles Hixson	ER, TYPICA City Sioux City Blue Grass Eldridge Maquoketa Carlisle Earlville Chariton	County Taken Monona Muscatine Keokuk Jones Warren Clayton Lucas	1990 1997 1997 1997 1994 1990 1989	Score 182-7/8 172-4/8 172-1/8 170-6/8 170-3/8 170-2/8 170	Name Russ Clarken Mike Hobart Terry M. Long Jack Schuler Jr. Jerry M. Monson Ric Porske David Propst	City Desoto Prole Des Moines Indianola Clear Lake Davenport Duncombe	Taken Dallas Madison Polk Decatur Cerro Gordo Scott Webster	1994 1993 1995 1995 1977 1996 1987	Score 236-7/ 229-5/ 229-4/ 227 222-1/ 221 6/8 219-3/8

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1998-99

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* indicates a new entry into the All-Time Top 10 Racks.

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SPECIES	SEASON (DATES INCLUSIVE)	SHOOTING HOURS	BAG DAILY	LIMITS POSSESSION	
Youth Rooster Pheasant					
(age 15 or younger)*+	Oct. 24-25	_	1	2	
Rooster Pheasant	Oct. 31 - Jan. 10, 1999	8:00 a.m. to 4:30 p.m.	3	12	
Bobwhite Quail	Oct. 31 - Jan. 31, 1999		8	16	
Gray Partridge	Oct. 10 - Jan. 31, 1999		8	16	
Rail (Sora & Virginia)	Sept. 5 - Nov. 13	1/0 Hour Defers	12	24	
Snipe	Sept. 5 - Nov. 30	1/2 Hour Before Sunrise to Sunset	8	16	
Turkey (Gun)*	Oct. 12 - Nov. 30	Sumse to Sunset	One turkey per license	One turkey per license	
Turkey (Bow Only)*	Oct. 1 - Dec. 4 and				
	Dec. 21 - Jan 10, 1999				
Deer (Bow)	Oct. 1 - Dec. 4 and	1/2 Hour	One deer per license	One deer per license	
	Dec. 21 - Jan. 10, 1999	Before Sunrise			
Deer (Muzzleloader)	Oct. 17- Oct. 25* or	to 1/2 Hour			
	Dec. 21 - Jan. 10, 1999	After Sunset			
Youth Deer (Age 12-15) +	Sept. 19 - Oct. 4				
Deer (Bonus Late Season)	Jan 11 - 17, 1999				
Deer (Shotgun)	Dec. 5 - Dec. 9 or	Question			
	Dec. 12 - Dec. 20	Sunrise			
Ruffed Grouse	Oct. 3 - Jan. 31, 1999	Sunset	3	6	
Rabbit (Cottontail)	Sept. 1 - Feb. 28, 1999	Sunset	10	20	
Rabbit (Jack)	Oct. 31 - Dec. 1		2	4	
Squirrel (Fox & Gray)	Sept. 1 - Jan. 31, 1999		6	12	
Groundhog	June 15 - Oct. 31				
Crow	Oct. 15 - Nov. 30 and	None			
	Jan. 14 - March 31, 1999				
Pigeon**	Oct. 1 - March 31, 1999				
Raccoon and			None		
Opossum	Nov. 7 - Jan. 31, 1999	None			
Fox (Red & Gray)	Nov. 7 - Jan. 31, 1999	Open 8:00 a.m.			
Coyote	Continuous Open Season	First Day Only			

*Residents only **However, within 100 yards of buildings and bridges pigeons may be taken year round. + See regulations for all requirements.

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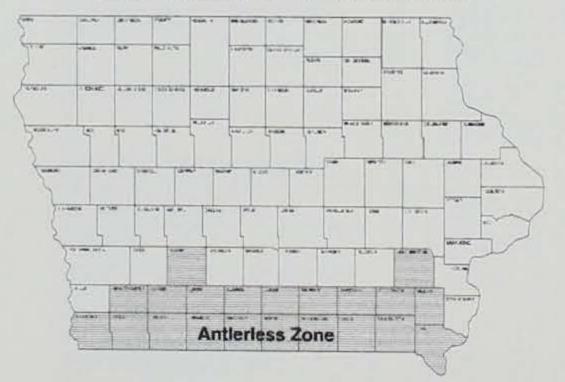
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See the 1998 lowa Hunting and Trapping Regulations brochure for detailed regulations on all seasons.

SPECIES	OPENING	CLOSING
Mink, Muskrat,* Raccoon, Weasel, Striped Skunk, Badger, Opossum, Fox (red & gray), Coyote	Nov. 7 **	Jan. 31, 1999 **
Beaver	Nov.7	April 15, 1999
Civet Cat (spotted skunk), Bobcat and Otter	Continuous C	losed Season
Groundhog	June 15	Oct. 31
*Selected areas may muskrat trapping on **All furbearer sease date. There are no o	y. ons open at 8 a.ı	m. on the opening

1998 SPECIAL ANTLERLESS DEER ZONE



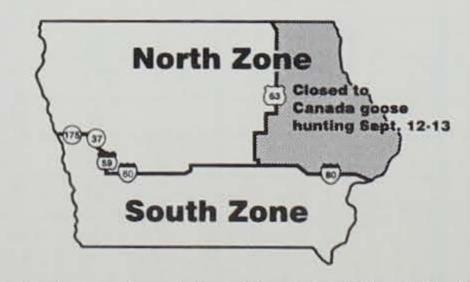
Call (515) 281-HNTR (4687)

for season information 24 hours a day, or visit the DNR's website at www.state.ia.us/wildlife

1998 WATERFOWL HUNTING SEASONS AND BAG LIMITS

SPECIES	SEASON (dates inclusive)	AREA	BAG LIN DAILY	NITS POSSESSION	SHOOTING HOURS	
Ducks Early season	Sept. 19-23	Statewide	6 (see right)	12 (see right)		
Youth Waterfowl Day	Sept. 26	Statewide	6 ducks, 2 Canada geese, 15 coots	6 ducks, 2 Canada geese, 15 coots	1/2 Hour Before Sunrise to Sunset	
Ducks	Oct. 10 - Dec. 3	N. Zone	6 (see right)	12 (see right)		
Late season	Oct. 17 - Dec. 10	S. Zone				
Canada Geese North Zone	Sept. 12-13 (see map at right) Oct. 3 - Oct. 31	N. Zone	2	4		
North Zone	Nov. 1 - Dec. 11		1	2		
Canada Geese South Zone	Oct. 3 - Oct. 11 Oct. 17 - Oct. 31 Dec. 1 - Dec. 16	S. Zone	2	4		
	Nov. 1 - Nov. 30		1	2		
Geese	Oct. 3 - Dec. 11	N. Zone	2 white-fronted and 2 brant	4 white-fronted and 4 brant		
white-fronted/brant	Oct. 3 - Oct. 11 Oct. 17 - Dec. 16	S. Zone				
Snow Geese Early Season	Oct. 3 - Dec. 31	Statewide	20	Unlimited		
Snow Geese Late Season	Feb. 20 - March 10, 1999	Statewide	20	Unlimited		
Coots	Same as Ducks		15	30		
Woodcock	Oct. 3 - Nov. 16	Statewide	3	6	Sunrise to sunset	

DUCKS: The daily bag limit is six (6) ducks and may include no more than four (4) mallards [no more than two (2) of which may be female], one (1) black duck, two (2) wood ducks, two (2) redheads, one (1) canvasback and one (1) pintail. The **possession limit** for ducks is twelve (12) and shall not include more than eight (8) mallards (no more than four (4) of which may be female), two (2) black ducks, four (4) wood ducks, four (4) redheads, two (2) canvasbacks and two (2) pintails. **MERGANSERS:** Daily bag limit is five (5) (no more than one (1) of which may be a hooded merganser); possession limit is ten (10) (no more than two (2) of which may be hooded mergansers). Check **the 1998 hunting regulations brochure for areas closed to waterfowl hunting.**



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.

1999 Stamp Designs

The 1999 Iowa Waterfowl Stamp was designed by Mark Anderson of Sioux Falls, S.D., three-time Ducks Unlimited Artist of the Year, winner of the DU Golden Palette Chisel Award and artist of four South Dakota duck and habitat stamps. The stamp shows a pair of trumpeter swans standing in a marsh. The stamp is sized at 6-1/2 by 11 inches and is available as a sponsor print through Ducks Unlimited, or for \$135 as an artist proof. Artist proofs can be ordered by writing 4908 E. 36th St. Sioux Falls, S.D. 57110, or by calling (605) 371-1033.

The 1999 Iowa Habitat Stamp, a pheasant pair, was designed once again by national award-winning artist Larry Zach of Ankeny. Signed and numbered prints of the habitat stamp are available for \$95 and artist proofs are \$125. Both prices include a \$5 mint stamp. Image size is 6-1/2 by 11 inches. Prints of the stamp are available through local art dealers or by writing White Oak Publishing, 901





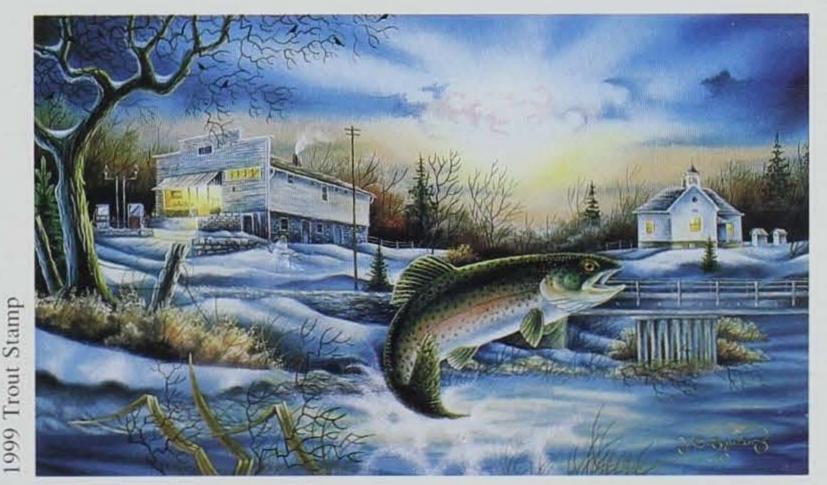
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website at

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SE Trilein Dr., Ankeny, Iowa 50021 or calling (515) 964-1570.

The 1999 Iowa Trout Stamp print was designed by Iowa "industrial wildlife" artist J.D. Speltz. Speltz is a two-time national and seven-time state stamp and print artist. This year's stamp depicts a rainbow trout jumping through a winter snow scene near Highlandville. The print image is 6-1/2 by 11 inches. A limited number of artist proofs and regular edition prints are available for \$39.95. Prints and proofs can be ordered through the Speltz Studio of Wildlife, Box 391, Armstrong, Iowa 50514, or by calling (712) 864-3001.



Prairie Grass Power

Article by Jessica Free Photos courtesy of Chariton Valley RC&D Reprinted from the 1998 Renewable Energy Newsletter

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Southern Iowa farmers are realizing the power that lies in their fields of switchgrass. Yes, grass.

Switchgrass is a perennial warm-season grass native to Iowa, which has been grown for decades on land not well-suited for conventional row crops. Now, the native prairie grass is being transformed into an energy cash crop. Leading the way in this endeavor is Chariton Valley Resource Conservation and Development (RC&D), Inc., serving Appanoose, Lucas, Monroe and Wayne counties in southern Iowa. Chariton Valley's project goal is to demonstrate switchgrass as a viable crop that can be marketed as a tradable commodity. The RC&D is currently promoting switchgrass' potential for large-scale production across Iowa.

The first step? Finding producers who are willing to grow switchgrass on marginal lands in order to demonstrate the crop's potential. In southeast Iowa, 40 farmers have joined forces to grow switchgrass and have even established a producers' organization called Prairie Lands Bio-Products, Inc. to help expand switchgrass markets.

Fuel for the Fire

Currently power generation is the prime reason for growing switchgrass. "We're replacing coal and oil as energy sources," explained Don Clark, Prairie Lands member. Next spring, a major test will be run at the Ottumwa Generating Station, co-firing 1,500 tons of switchgrass at the power plant. Within two years, project partners plan to have the facilities and technology to burn switchgrass on a continual basis.

Over the long-term, Chariton Valley RC&D and project partners hope the Ottumwa plant will have 35 megawatts of capacity from switchgrass, requiring 40,000 to 50,000 acres annually and displacing five percent of coal annually. "Within five years we anticipate having everything in place

Bales of switchgrass can be run through a tub grinder and pulverized into small pieces (left). The groundup material is then ready to be cofired with coal to produce energy at a power plant. Switchgrass can also be used as animal bedding (below).





One Producer's Story

Loren Eddy has been farming all his life. His commercial cow-calf operation, purebred Angus herd and 110 acres of switchgrass are located about three miles northeast of Centerville. Eddy has been growing switchgrass for more than 12 years, and is active in developing the crop into marketable products.

As a member of the board of directors for Prairie Lands BioProducts, Inc., Eddy sees an opportunity for added income in switchgrass. "Switchgrass can show as great a return per acre as corn or beans, or more," he said. "And although we all think of bettering ourselves financially, we have the community in mind, too. This project is more far-reaching than you might think."

With great confidence, Eddy said, "In the next couple of years, the acreage of switchgrass will increase, and in the next five years it'll triple. As a Prairie Lands member, I want to see diversified uses. I want pellets, mulch, logs for fireplaces." He would also like more farmers to jump on the bandwagon. "CRP contract holders and anyone who has marginal lands should join, but the prime corn and soybean ground will soon be used, too." and the plant fully operational," said Marty Braster, project coordinator.

Prairie Grass Products

Along with its co-firing capabilities for electricity production, switchgrass has the potential to be used as an ethanol feedstock, or transformed into logs or pellets for home heating. Research and development of nonenergy products currently includes:

- mulch
- fiberboard
- paper
- ♦ animal bedding

Multiply the Benefits

Environmental, economic and energy benefits of the biomass project are abundant. Co-firing switchgrass with coal results in reduced air emissions such as carbon dioxide and sulfur dioxide. If the 1.4 million acres currently held in the Conservation Reserve Program in Iowa were converted to switchgrass, it could provide the annual electricity used by 800,000 homes, or the equivalent of more than three million tons of coal. The various products made from switchgrass also have the potential of being an important income source for entire communities.

Prairie Lands Bio-Products, Inc.

At the suggestion of the Chariton Valley RC&D, and with assistance from Iowa Farm Bureau and the USDA, a group of Iowa switchgrass producers has formed a nonprofit organization called Prairie Lands Bio-Products, Inc. with goals to:

- Identify and develop switchgrass products and markets for those products;
- Produce switchgrass to satisfy the demand for products;
- Evaluate environmental benefits of producing and using switchgrass; and
- Educate the public about the potential of switchgrass.

By exploring opportunities to market switchgrass, the organization increases incentives for farmers to produce switchgrass in quantities needed to support this emerging sector of the agriculture industry.

Prairie Lands Bio-Products, Inc. plans to continue carrying out projects promoting switchgrass commercialization. The organization works with the Chariton Valley Biomass Project to conduct research, develop management and harvest techniques, and ensure a supply of switchgrass for energy generation.





(Left to)

Tom Har

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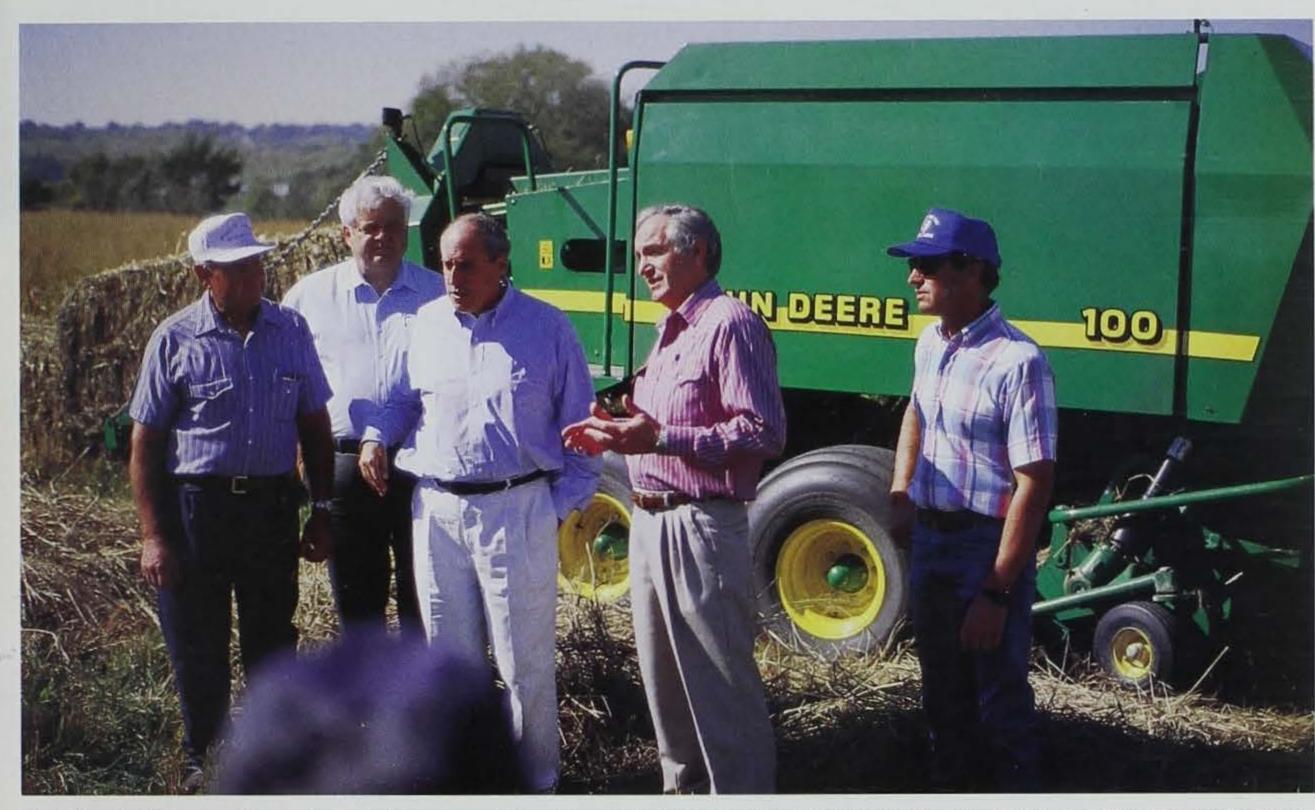
In October 1997, the Chariton Valley biomass project received national attention when U.S. Secretary of Agriculture Dan Glickman visited a switchgrass field on Loren and Wilma Eddy's southern Iowa farm. Glickman praised Iowa for its pioneering efforts to establish switchgrass as an alternative fuel.

Get Involved!

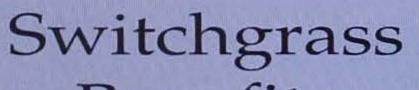
Iowa's switchgrass industry is an important emerging market for the state's agriculture base. For more information on switchgrass or to get involved, contact Alison Kovac with the DNR at (515) 281-8094 or Marty Braster at Chariton Valley RC&D at (515) 437-4376.

Jessica Free is an energy information intern with the information and education bureau and is a student at Drake University.

This meadow lark (above left) makes its home in a shelter of switchgrass. Several species of birds feel safe to build nests and lay eggs (above right) in the thick cover provided by the prairie grass. Not only does switchgrass enhance wildlife habitat, but it also decreases soil erosion when used as buffer strips, and protects water quality by reducing the use of pesticides and fertilizer associated with row crop production.



(Left to right) Loren Eddy, farmer; Representative Leonard Boswell; U.S. Secretary of Agriculture Dan Glickman; Senator Tom Harkin; and Randy Eddy, farmer, discuss switchgrass' potential in Iowa.



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Benefits

- Provides farmers an alternative cash crop and potential source of revenue.
- Creates new markets through the development of fuel, animal bedding, fiberboard, paper, pellets and logs, mulch and ethanol.
- Enhances wildlife habitat.
- Decreases soil erosion.
- Protects water quality by reducing pesticides and fertilizer associated with row crop. production.
- Reduces air pollution when burned as a coal replacement.
- Reduces fossil fuel imports when used as an energy source.



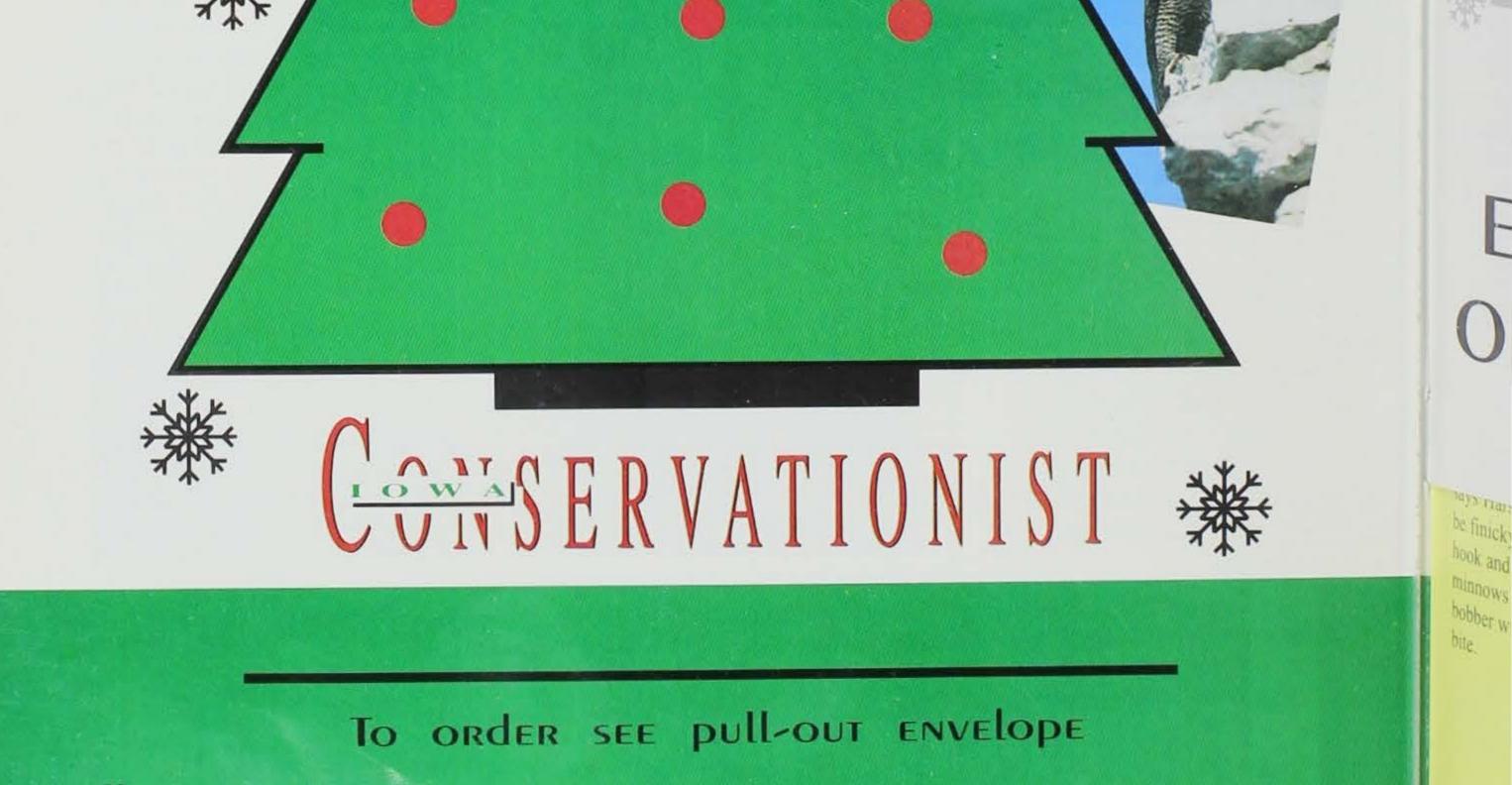
Switchgrass' growing season is from June to August, when it reaches 6 to 8 feet in height. The crop is then harvested (above) between October and March.

THE PERFECT GIFT

FOR EVERYONE ON THE LIST

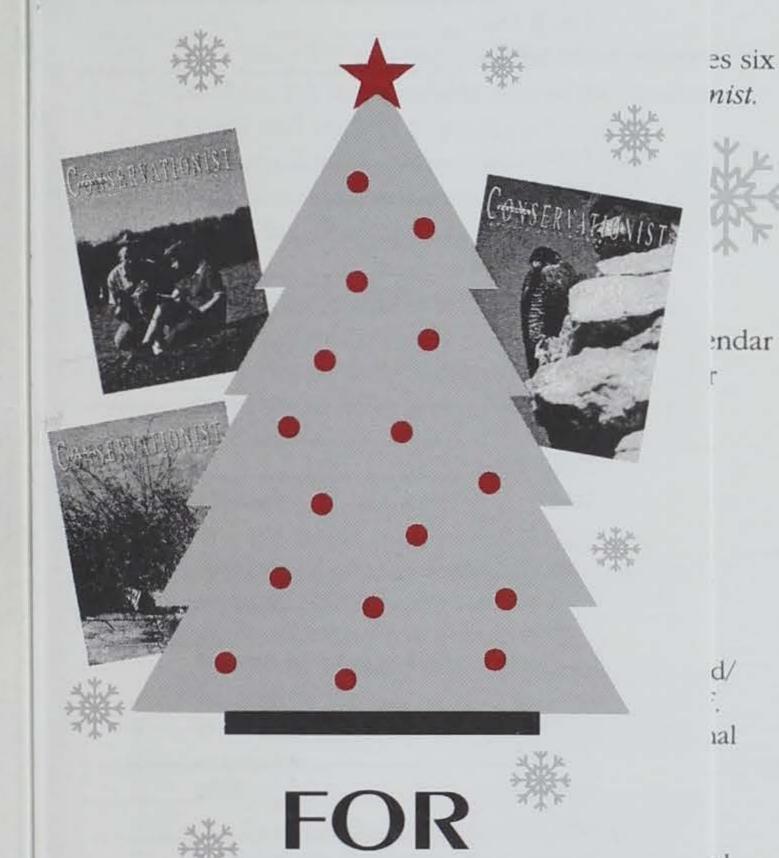
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32 Iowa Conservationist · September October 1998

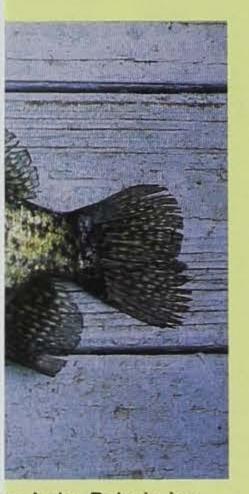
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Article by Jim Berquist Photos by Ron Johnson

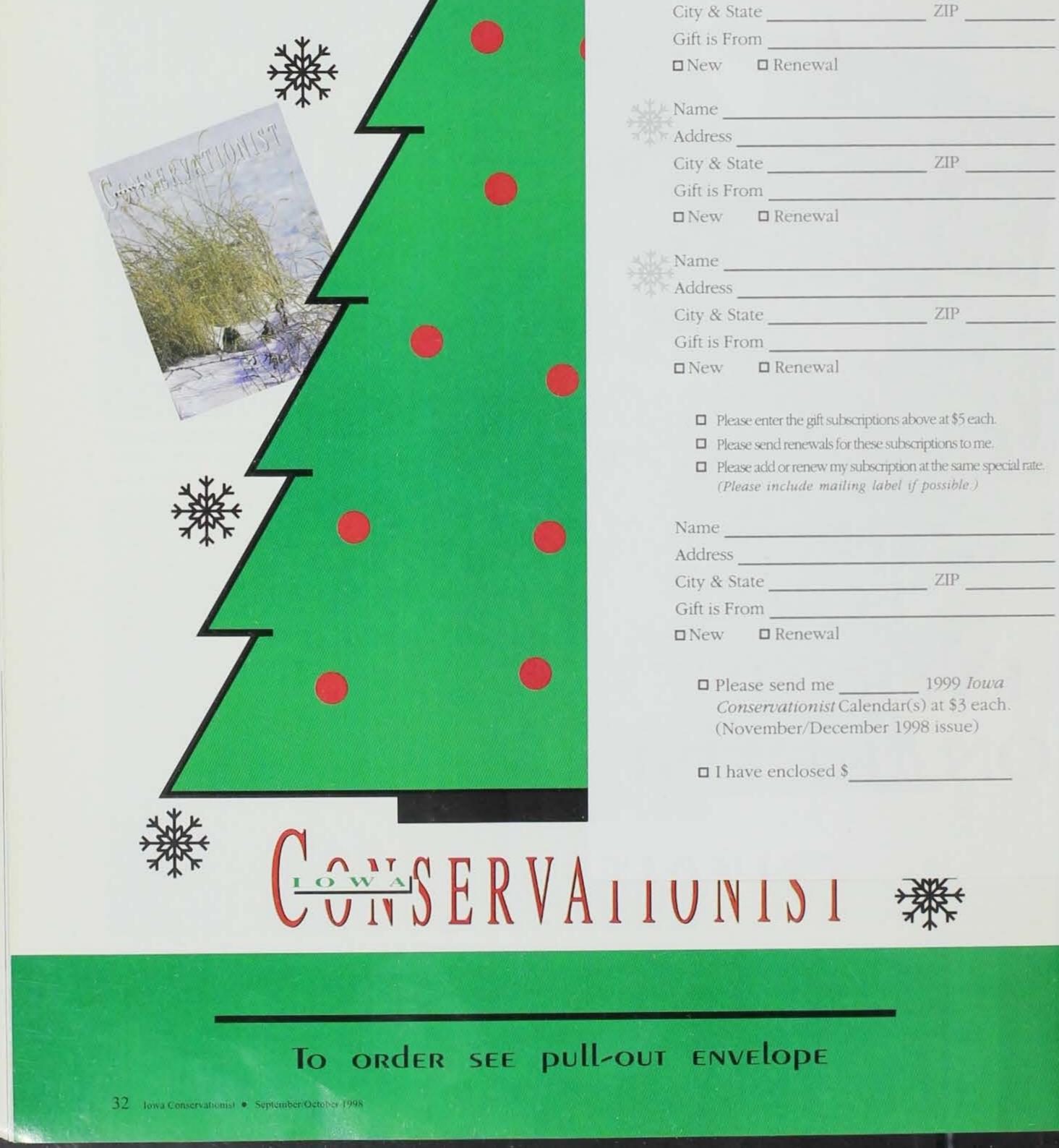
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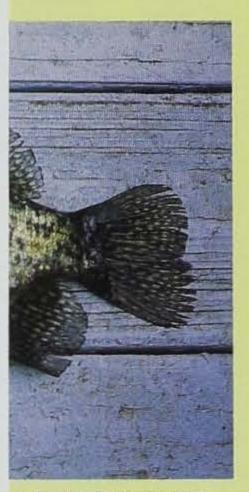
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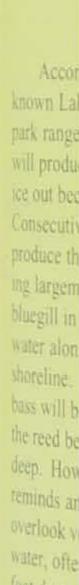
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FROM:

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32 Iowa Conservationist

September October 1998

plenty of action at Lake Pahoja

Lake Pahoja Recreation Area provides enjoyment to thousands of people a year in the form of camping, hiking, swimming and picnicking. However, many of the daily visitors come to the park to specifically fish the lake. Covering more than 69 acres, Lake Pahoja provides excellent yellow perch and bullheads.

According to Greg Harson, wellknown Lake Pahoja angler and local park ranger, the upper part of the lake will produce the best action shortly after ice out because this area warms quickly. Consecutive days of warm sunshine will produce the best fishing — concentrating largemouth bass, black crappie and

bluegill in the shallow water along the north shoreline. Largemouth bass will be associated with the reed beds 4 to 5 feet deep. However, Harson reminds anglers not to overlook very shallow water, often less than one foot deep, as largemouth will frequent these areas As spring progresses and water temperatures stabilize, panfish begin to disperse throughout the lake. Bluegill and crappie will be found along rocky shoreline areas, usually in conjunction with the numerous brush piles and artificial fish habitat structures which have been added to the lake. "These slowly approach the area and watch their electronics for signs of fish activity. "Once fish are detected," Harson says, "anglers should quietly anchor and cast tube jigs for crappies, allowing the bait to fall horizontally back to the boat." Crappies prefer a bait that is retrieved horizontally unlike



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also. Surface lures, plastic baits and jigs are best at this time of the year and with fairly low water temperatures, a slow presentation will improve success. Panfish anglers will find bluegill and black crappie along the riprap

areas in the upper portions of the lake. Cast 1/32- or 1/64-ounce tube jigs with light gear and allow the jig to swing vertically back to locate fish. "Remain flexible in your presentation, though," says Harson. When the fish appear to be finicky, switch to the old fashioned hook and bobber combination. Small minnows or waxworms under a small bobber will entice these fussy fish to bite.

Crappies and perch are the mainstay of the Lake Pahoja ice angler.

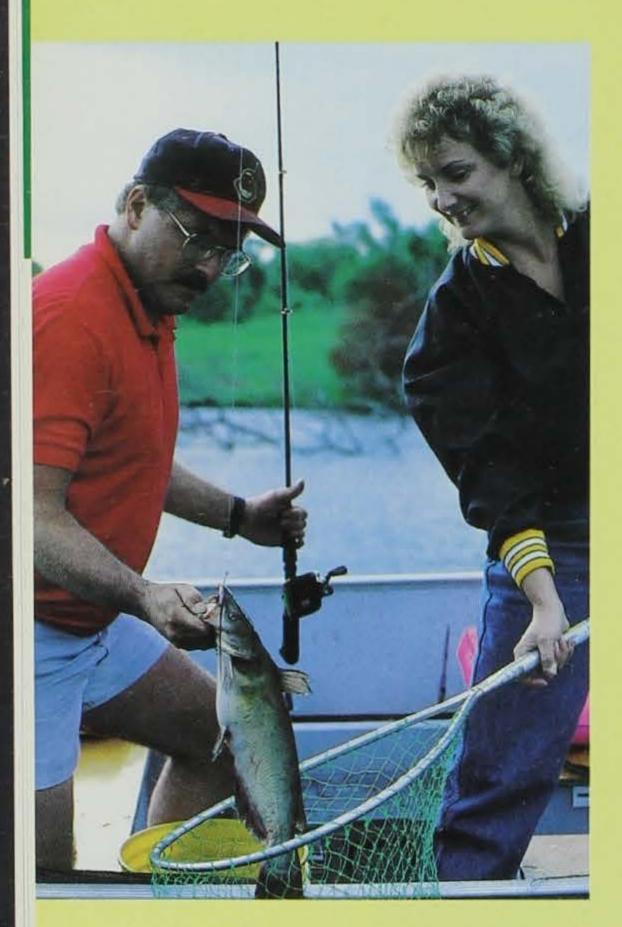
brush piles have been effective in concentrating the panfish populations throughout the summer season," says Harson. See the map showing the locations of the artificial fish habitat and public docks on page 35. Fish habitat has also been marked with buoys for easy location by the anglers. Typically, fish will suspend above or just outside of these sunken fish structures. Harson recommends anglers

> Article by Jim Berquist Photos by Ron Johnson

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Bluegills typically spawn during the early summer period. The old roadbed on the south side of Lake Pahoja and other hard-bottom areas in the sheltered shallow coves are excellent spawning areas for bluegill. Male fish set up territories in these hardbottom areas and fan out saucer-shaped nests that resemble elephant tracks. Nesting bluegill are easy to spot with a good pair of polarized glasses and the action can be nonstop as these scrappy fish aggressively defend nests. Minijigs, small hooks, earthworms and small bobbers are the basic tackle needed to provide a fun-filled, actionpacked day with many fish.

Largemouth bass spawning begins in early June with nesting fish located in the sheltered hard-bottom areas associated with rock, reed beds or some other cover. Harson notes that largemouth can be easily caught at this time of year and encourages anglers to practice catch-and-release of this important predator fish.

After the spawn, largemouth bass will be found in their summertime haunts. Rocky areas, points and cedar logs located adjacent to deeper water are excellent areas to begin to look for summertime largemouth bass. Plastic worms, surface lures and a jig-and-pig often produce the best action; however, anglers are reminded to be versatile in their lure selections. Finding the right combination will often mean the difference between catching several fish or going home skunked. One fishing trip last fall, I had not landed a single fish and didn't have a single hit after several hours on the lake. After glancing through my tackle box, I decided to try a jig-and-pig. Wow, what a difference! In a short hour, I boated several bass and lost several others. After catching several fish, 1 felt very satisfied. I had remained flexible enough to catch fish. Lake Pahoja is also noted for its premiere channel catfish angling. Numerous large fish are harvested annually, with one of the largest - a 16-pound channel catfish --- taken in 1997. Jim Christianson, fisheries biologist, credits this excellent fishery

to the cage catfish program conducted in cooperation with the Lyon County Conservation Board. Small catfish delivered to Lake Pahoja each spring are placed in cages located in the lower portion of the lake. County personnel feed the caged fish daily and when they reach approximately 7 to 8 inches, they are released into the lake. We need large fish to stock into the lake to obtain a viable fishery for catfish. If the small fish were stocked directly into the lake, very few would survive due to predation by largemouth bass.

Best fishing for channel catfish begins in mid- to late-June and is excellent throughout the summer months. The best fishing occurs during the early evening hours and at night using traditional prepared baits. Shore anglers will find ample access and several prime spots located on the north side of the lake. Look for areas where the water depth drops off moderately fast to deeper water. Also, don't overlook the north shoreline of the upper part of the lake. This has traditionally been an excellent spot for large fish. Boat anglers fishing the southeast corner will also be rewarded with excellent catfishing.

Yellow perch angling brings visions of the Iowa Great Lakes, but anglers shouldn't overlook Lake Pahoja. Growth of Lake Pahoja's abundant yellow perch "bite" commonly begins in July and continues throughout the fall fishing season. Knowledge of the thermocline depth is an essential element in quickly locating active schools of perch. Typically, the thermocline becomes established at 11 feet during the summer season and active fish can be found using the depths just above the thermocline. Check out potential spots by watching your electronics for signs of schooling fish. Mark the depth of water these fish are using and fish vertically with yellow and white, or salt and pepper mini jigs tipped with wigglers or waxworms. As the summer season progresses, yellow perch tend to prefer live bait and can be found concentrated in the upper portion of the lake.

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From catfishing in the early spring to crappies through the ice, Lake Pahoja offers quite a menu of fish.

> Winter doesn't mean the end of the fishing season at Lake Pahoja. Soon after safe ice, the lake abounds with anglers

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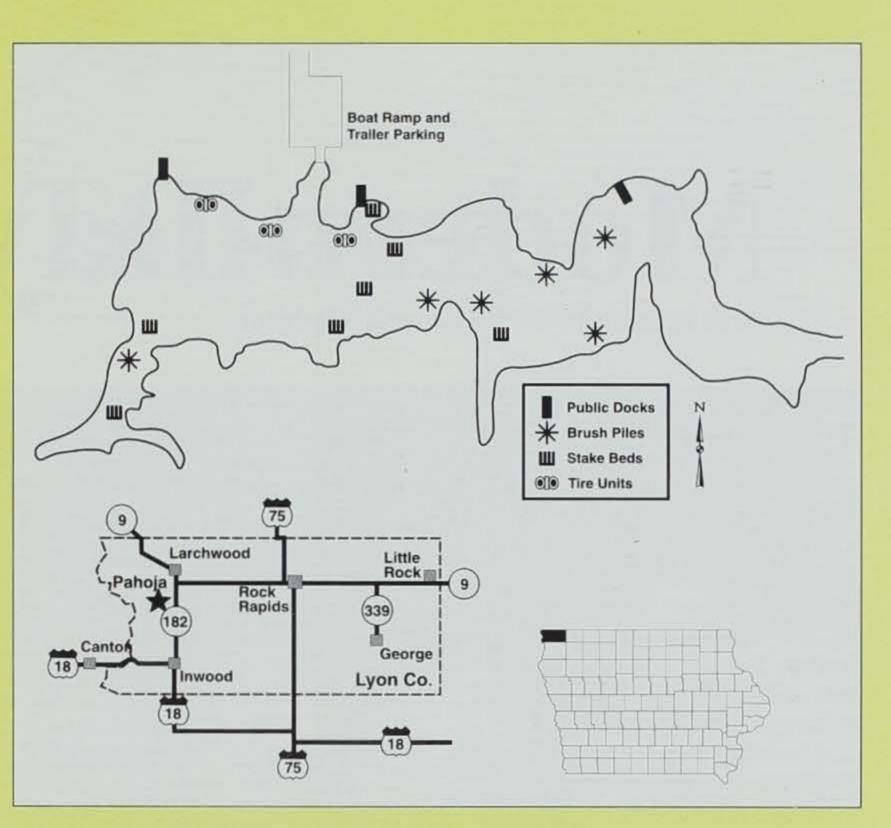
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and shortly after, numerous ice shelters appear. Black crappie and yellow perch become the mainstay of the ice angler's harvest. One note of caution, anglers not familiar with Lake Pahoja should be aware that an aeration system is in operation in the dam area of the lake during the winter months causing thin ice conditions. Early ice finds the best activity in the upper end of the lake. Mid- and late season will find anglers concentrated in the middle of the lake.

With leisure time becoming a cherished commodity, come and visit the Lake Pahoja Recreation Area. Wet a line and enjoy the scenic beauty the park has to offer. For camping and further information, contact the Lyon County Conservation Board at 712/472-2217 or 712/753-2313.

Jim Berquist is a natural resources technician for the department located at Spirit Lake.



Lake Pahoja's yellow perch "bite" usually begins in July and runs through the fall.



Modern-Day SwansR

Article and photos by Lowell Washburn

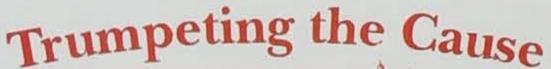
Iowa waterfowl enthusiasts have good reason to celebrate. For the first time in more than a century wild, freeflying trumpeter swans are successfully rearing their young on an Iowa wetland.

Although wild swans were once a common summer resident in the state. populations declined sharply as European settlers began taming the northern Iowa landscape during the mid-1800s. Swans had become scarce by the end of the Civil War; and by 1880 they had all but vanished. The last attempted nesting of wild trumpeter swans in Iowa occurred in 1883 at Twin Lakes in Hancock County.

During the past five years, however, DNR wildlife biologists have joined forces with privatesector conservationists in a unique and aggressive endeavor aimed at returning a wild population of swans to Iowa wetlands. According to DNR swan restoration coordinator Ron Andrews, public participation has been one of the recovery's key components. "Our trumpeter swan restoration began in earnest during 1993, and much of the success of our program has been the direct result of a \$140,000 donation from the family of David A. and Robert Luglan Sampson," said Andrews. "Their support enabled the program to catapult forward, and marked a positive turning point in the swan recovery." During the initial phase of the recovery, the DNR tried to capitalize on public interest by making pairs of captive, breeding-age swans available to private landowners. Andrews noted that any young produced by the captive birds were to eventually be allowed their freedom. As surviving swans matured, it was hoped they would return to Iowa marshes to nest.

"The enthusiasm and overall support for Iowa's swan program has been almost overwhelming," said Andrews. "Although public demand has far exceeded the supply of adult [captive] swans, we have been able to place breeder pairs with 34 private cooperators. We still have a long list of people requesting swans for their wetlands, and our biggest problem is finding enough birds to fill those requests."

In addition to the young being produced by captive breeders, the DNR



ready to set up housekeeping in earnest. After constructing a 4-foot-wide nest, the pair laid four eggs which successfully produced three young. For pond owner Jack Kennedy, the opportunity to host Iowa's first modern-day swan family has been a unique and rewarding outdoor experience.

"I can't begin to tell you how much we've enjoyed these birds," said Kennedy. "We've had the Boy Scouts down here, and they camped and observed the swans. They loved them as much as we do. What more can I say?

The swans are beautiful, and it's been very exciting to have them here."

Andrews agrees.

"I think that everyone who has been involved in the swan recovery is feeling a real sense of satisfaction," said Andrews. "This is a historic event — a major



has also released 140 yearling swans into wetlands across the state. These birds were acquired from a variety of sources including private aviculturalists, U.S. zoological parks and the Alaska Department of Fish and Game.

Last spring, there were signs that the effort was approaching success when a pair of free-flying, 3-year-olds established a breeding territory (but failed to nest) on a private pond near Epworth in Dubuque County. When the birds returned this year, they were

milestone in waterfowl conservation. This is definitely the pair we've been waiting for."

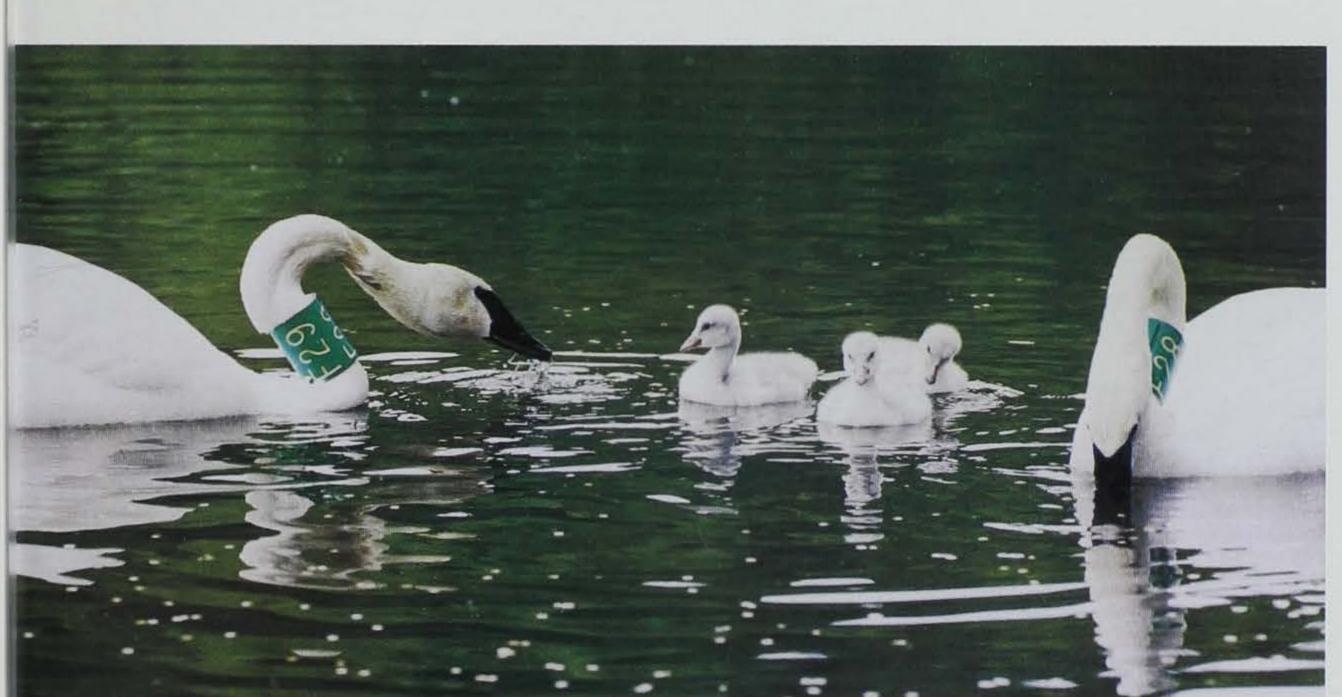
"I don't think there's any question that Iowa's first successful wild nesting will continue to generate plenty of interest during the next several weeks," said Andrews. "We have also just received word that Iowareleased swans have currently established two new nests in Minnesota and one nest in Ontario, Canada. To me, that's like icing on the cake."

"At this point I'm very optimistic that this is the start of something big, as far as trumpeter swan restoration is concerned. From here, I'd like to think that we'll actually reach our recovery goal of establishing at least 15 freeflying, nesting pairs of Iowa trumpeters by 2003. Now that we've crossed this important hurdle, I think it's all within reach."

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lowa's first modern-day family of trumpeter swans enjoy the good life on a Dubuque County pond. The 4year-old parent swans were produced by captive breeders owned by Epworth's Jim Foreman. As youngsters, the neck-collared birds were allowed free flight. (Public reports of the neck collars during the past four years have revealed the swans have spent most of their lives traveling up and down the Mississippi River. The birds were reported as far north as Ferryville, Wis.) This summer, the swans returned inland where they successfully nested on a secluded pond in Dubuque County. According to DNR swan restoration coordinator Ron Andrews, this marks the first lowa production of wild swans since 1883.

Hunting The Mighty Muskie

If you're looking for a good fight, this savage brawler will fill the bill ---- and then some

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With a mouth full of daggers and a glare to match its temper, the muskie has the moxie to actually scare the humans who pursue it.

Articles and photos by Lowell Washburn

When it comes to maintaining a pure predator persona, no freshwater fish can match the strength and ferocity of the mighty muskellunge. With a mouth full of daggers and a glare to match its temper, the muskie has the moxie to actually scare the humans who pursue it.

The outright savagery of a muskie's strike is legendary. Most of us have seen those sobering photos of the leg of a Michigan water skier (giant buzz bait?) who was attacked by an ill-tempered lunker. In essence, this netripping, tackle-busting "Toothasaurus" is nothing less than aquatic big possesses a passion for muskies that borders on obsession. A large share of his adult life has revolved around this magnificent predator. A successful career on the tournament circuit has taken him across Canada, Minnesota and Iowa where he has caught and released more than 300 trophy muskellunge.

His biggest catch occurred last September at Spirit Lake. The fish was landed around 4 a.m., and as

"On Iowa waters, I don't think there's any question that fall is the best time to

"I'm letting her go," he yelled to his partner. In an instant, the fish disappeared into the darkness. A trip to the local doctor revealed a badly bruised torso and two fractured ribs.

"I guess I'll never know for sure how big that fish really was," says Christensen. "I just know that it was my biggest ever."

Enticing an adult muskellunge to strike a lure represents one of angling's greatest challenges, and the

> species is often referred to as "the fish of 10,000 casts." But in Christensen's view, it doesn't have to be that way. Simple things, like picking the right time and location, can greatly reduce the time between bites.

Property

game.

This may be one of the reasons why those who pursue the fish are generally referred to not as anglers, but rather as "muskie hunters." And when it comes to hunting the Iowa muskie, no one does it better than Spencer's Lance Christensen. A professional fishing guide and taxidermist by trade, Christensen

Muskie hunter Lance Christensen displays a 51-inch muskie taken last September at West Okoboji. To minimize the risk for both fish and angler, the monster muskellunge was tranquilized for the photo and then released to fight again.

catch muskies." Lance Christensen, muskie hunter

Christensen and his fishing partner leaned over the edge of the boat to obtain an accurate measurement, the muskie became violent. As the huge fish continued to struggle, its convulsing muscle action began beating Christensen against the side of the gunwale. The first measurement on the thrashing fish read 56 inches. The second measurement read 54 inches. As the unmerciful beating continued, Christensen suddenly "felt something give," followed by a wave of excruciating pain. "On Iowa waters, I don't think there's any question that fall is the best time to catch muskies," he says.

"Casting is by far my favorite technique. With casting you get the excitement of the follow as well as that bone-jarring strike at the boat."

It takes big tackle to catch big fish, and Christensen's favorite lures are giant crank baits, jerk baits and magnum bucktails.

"When the lure reaches the boat I do an aggressive 'figure-8' each and every time. Eighty percent of my strikes occur right at the boat, and every one scares me to death," says Christensen.

"A lot of times I don't even know a muskie is after me until I start to pull the lure from the water and the fish explodes from the surface. Believe me, that's exciting," he says.

"Picking the right location or habitat is also crucial," says Christensen. "Most of the muskies I catch on Okoboji are associated with vegetation such as cabbage weed or coontail. Almost without exception, the big fish will be waiting right on the edge of the weed bed."

According to biologists, it takes a muskie anywhere from 18 to 20 years to reach the dimensions of the fish pictured with this article. Although Christensen is not opposed to anyone who puts a trophy muskie "on the wall," his personal choice has been to release all the fish he catches.

"Catch-and-release is the future of this sport — but only if it is done right," he says.

"Proper handling at the boat is the main thing that will determine the survival of the fish.

"People need to realize that catch-and-release is only worth doing if the fish lives," he adds.

Some tips. Whenever possible, a large fish should never leave the water. In many situations, the best way to remove giant and potentially



Bucktail spinners are favorites among muskie hunters.

off. For photos, it is better to "support and hug" a big muskie than it is to "hang" it. But be careful during those photo-ops. Big muskies can Christensen also cautions that prolonged photo sessions can greatly jeopardize a muskie's chance for survival.

"I like to tell people that a fish can hold its breath out of the water for about as long as you can hold your breath under the water. I think that's a good rule of thumb," says Christensen.

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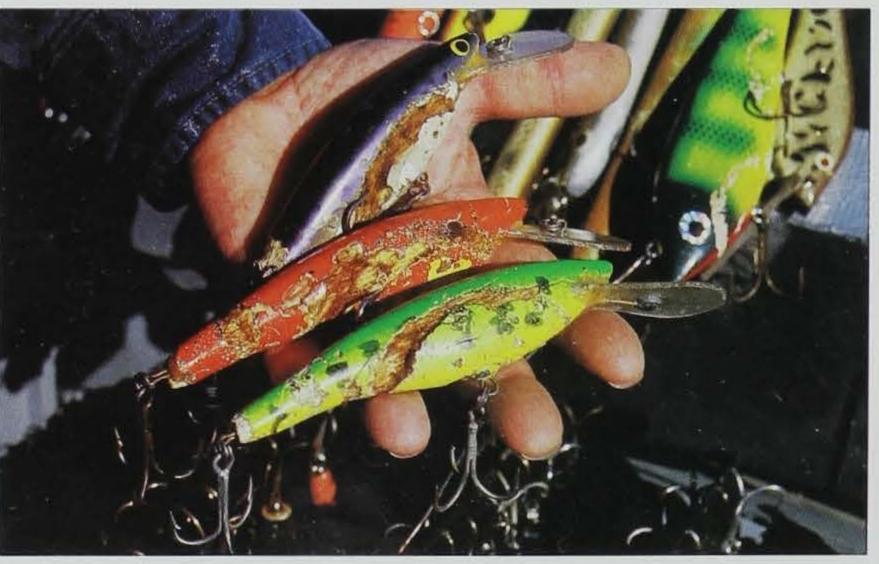
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Legendary for their quick, savage strikes, "Toothasauruses" often leave behind visual reminders of their power. Their razor sharp teeth and ferocious attacks can destroy lures. In some cases, muskies have been known to split plugs in half with their vicious attacks.

Spirit Lake Fish Hatchery

Home to Iowa muskie program

Everyone likes to see a big fish. But when it comes to seeing really big fish — especially those with lots of long sharp teeth — there's no better place to go than the Spirit Lake Fish Hatchery.

The Spirit Lake Hatchery is most famous for its annual production of millions of young walleyes. But it is also the birthplace of the tiny dart-shaped, baby muskellunge that will one day become the trophies of which angling dreams are made.

According to hatchery manager and DNR fisheries biologist, Wally Jorgensen, Iowa's muskie program began in 1960 when 40 pure-strain muskie fingerlings were stocked in Clear Lake and West Okoboji. The fish thrived, and by the late 1960s, Iowa biologists had begun gathering eggs from locally reared



DNR fisheries biologist, Wally Jorgensen fills an automatic muskie feeder with dry feed at the Spirit Lake Fish Hatchery.

people come here when the fish are active and the bite is on, I think the chance of hooking a trophy in Iowa is about as good as it is anywhere," he said.

"Our current state record is a 45pound, 9-ounce, 52-incher taken from Spirit Lake in 1995. That fish was the largest muskellunge taken anywhere in North America that year. I think that speaks very highly for the quality of our Iowa muskie fishery," said Jorgensen. One of the more interesting aspects of Iowa's muskie program is that the DNR has been able to sustain the fishery with minimal annual stockings. Only 7,000 fingerlings are released in the state each year. According to Jorgensen, much of the program's success hinges on intensive management within the hatchery.

At about 10 days of age, the muskie fry are introduced to a diet of highprotein, dry feed. When the fish reach the 4-inch length, they are switched to live minnows, which fisheries personnel net and deliver to the hatchery for the remainder of the summer. In October, the 9-1/2- to 10-inch advanced fingerlings are moved to holding ponds. The following spring, they are recaptured for stocking across the state. At about 7 years of age, the survivors reach the legal, 36-inch length. From then on, they are "on their own."

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brood fish. Today, the DNR has expanded the muskie program to include seven Iowa waters.

"Since that very first stocking, our goal has been to provide anglers with an opportunity to catch the fish of a lifetime, and I think that we've been very successful at that," said Jorgensen.

"One of our original intentions was to provide a resource where someone could catch a trophy muskie in 70 to 90 hours of fishing. Of course that catch rate will vary among individuals, but if

To increase the survival rate after release, muskies raised in fish hatcheries are grown to 9 or 10 inches before they are stocked in Iowa waters, at a cost of \$2.80 per fish.



"It costs \$2.80 to produce a 10-inch muskie fingerling and much of that cost results from having to provide live minnows," said Jorgensen.

"But at 9 or 10 inches, we've produced a very quality product. The survival of these fish is so much greater than it was for the 5-inch fingerlings that we used to stock, that it is well worth the extra effort," he added.

The increased survival of the 10inch advanced fingerlings is so great, in fact, that fish managers are currently switching to alternate year stockings for most of the state's muskie waters.

-L.W.



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Articles Lowell

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Cousins of the woodcock, snipe are no strangers to the marsh. Their long legs keep them dry as they probe the wetlands for food with their trademark long bills. Snipe are migratory birds and typically make their first appearance in Iowa in late September. Accomplished fliers, their zigzag flying capabilities make them a challenge for hunters.

Articles and photos by Lowell Washburn

It was shortly after sunset when I heard the garage door slam. My son, Matt, soon appeared in the kitchen entry, carrying a fresh mallard. He seemed excited — perhaps more so than a single duck would normally warrant.

"Well, how did it go?" I asked.

"They're here," he exclaimed without really addressing my original question.

"Who's here?" I asked. "The snipe," he replied impatiently. "The marsh is loaded with them. They're everywhere. I've never seen so many in one place in my life."

With that, he reached into his game bag and began to extract the plump long-bills that offered proof of his claim.

Now I was excited. Quickly I began asking questions.

Exactly where had the snipe been located? How tight did they hold? Were they mostly singles or were there some flocks? How many shots had been fired? By the time the interrogation was finished, there remained little doubt that the season's first "big push" had arrived. We planned a hunt for the following evening. The appointed hour finally rolled around, and we arrived at the marsh filled with anticipation. After donning chest waders and loading our pockets with steel #6s, we began to explore the soggy mudflat that edged the wetland. The results came quickly. Snipe are often heard before they are seen. And when the species' distinguishing "scaipe" caught my ear, I turned to glimpse the afternoon's first bird as it launched from the mud 10 steps to the right. I instinctively snapped a shot and the bird tumbled. At the shotgun's report, two more snipe

flushed from the same location. Firing twice, I managed to down a second bird.

Our next encounter came a few yards later as we approached a cluster of bogs. Although the uneven ground contained no concealing vegetation, five snipe suddenly erupted from nowhere. The birds came out low, and within six feet of take-off appeared to have attained the speed of sound. I heard a shot, and from the corner of my eye, I saw one of the birds fall. I heard another shot but this time I didn't look to see what happened. By now my full concentration was locked onto a lone bird that was sizzling across the mudflat, crossing left to right. I was struggling hard to get the shotgun muzzle into sync with the snipe's erratic, zigzag flight path. I finally got the rhythm and squeezed the trigger.



Sometimes referred to as a marsh quail, the snipe's flying capabilities provide a challenge for hunters. Above, a hunter shows the fruits of an outing on a northern Iowa marsh.

Unfortunately, it was at that precise moment that the retreating long-bill decided to zig as I zagged. At the sound of the gun, a shower of tiny mud balls erupted at least two feet behind and a full foot to the side of the retreating bird.

There was another "scaipe" as a sixth snipe launched from the bogs. I managed to bag that one on the second try.

Twenty yards farther, another flock - this time containing an even dozen birds — exploded from the flat. We both shot twice. And we both missed twice.

As I waited to see if the birds would circle [new migrants often do], I heard a call from behind. Turning, I spotted a high flock barreling in from

the northeast. It was obvious that the birds were "locked on" to the mudflat, and at 75 yards the flock balled up and began its nose-diving decent. Within seconds, I could hear that miniature "jet aircraft" sound as the wind roared through their stiff wings. In an instant, they were on me.

It could have been an excellent opportunity to add another bird or two to the bag. The only problem was that when the snipe passed over and around me, they were still traveling about 9,000 miles per hour. At 10 yards I fired - three times - all misses. As I quickly tried to reload another single jumped and I missed it too. Meanwhile, Matt had missed a couple and hit a couple. I was wishing for an easy shot.

By now, our presence was no

secret and snipe were coming out of the woodwork. They really were everywhere.

My supply of shotgun shells was running dangerously low, and I worried about running out of ammo. Five minutes later I did. It really didn't matter. By then the boot-sucking mud was beginning to get the best of me anyway.

I guess I won't bother to relate my final score from that fast-paced hunt. Let's just say that I fell somewhat short of the 8-bird limit.

A hunter explores a marsh edge in search of snipe.

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Snipe: A Creature of Habitat

At first glance, the jacksnipe looks like a creature made of spare parts.

Its legs are too long, its tail too short, and the round body is obviously too plump. To top it all off, the snipe's camo-striped face is equipped with a sharp, stiletto-like bill that nearly doubles the bird's length.

There is, of course, good reason for Mr. Long-bill's outlandishly exaggerated features. Long legs allow this highly specialized marsh dweller to remain high and dry while probing the wetland edge in a constant search for invertebrate food supplies.

While most species of shorebirds may lean toward the "tame" side, the snipe is a highly nervous critter, always on the lookout for possible danger. Whenever possible, the bird would rather hide than fly. Consequently, the jacksnipe is bedecked in a complex pattern of brown and buff camouflaging that even rivals the cryptic plumage of the upland gamebirds.

During the breeding season, most snipe are found from the marshes of prairie Canada northward to the subarctic. The continent's largest fall concentration occurs along the southern edge of Canada's James Bay.

Snipe migrate by night and spend the daylight hours replenishing spent fuel reserves. In Iowa, the first substantial invasions usually occur during the third or fourth weeks of September. Depending on weather and local habitat conditions, peak numbers have usually arrived in northern Iowa by the second or third week of October.

Preferred habitats include shallow backwaters, open margins along cattail marshes and boggy pastures. Mud flats interspersed with shallow puddles and sparse vegetation are the ultimate snipe magnet.

Although snipe generally tend to hold tight, their speed and erratic flight patterns make them extremely challenging. If you manage to bag more than one "marsh quail" for every six shots fired, consider yourself an expert. My advise, however, is not to count your shells.

-L.W.

"Master of stealth," snipe use their size and markings to blend into the surroundings. RESTORING IOWA'S FISHING HERITAGE

> SOUTH PINE CREEK BROOK TROUT

Article and photos by Jim Jansen

rook trout — unforgettable, brilliantly colored fish - are Iowa's only native trout species. The physical nature alone of the small headwater streams they inhabit make them a challenge to any angler. While often thought of as the most gullible of the trout species, Iowa's South Pine Creek brook trout are the exception to the rule, and a substantial population of these naturally reproducing trout can be found in this Winneshiek County stream. (See related Iowa Conservationist article in the May/June 1996 issue.) This population of fish behaves in a challenging, wary fashion, similar to the brown trout.

The South Pine brook trout behave differently for a good reason. It has been confirmed that these fish are genetically different from other brook trout studied in the United States. Electrophoresis analysis, or DNA tracking, done by the Illinois Natural History Survey, showed the South Pine fish to be unique. A recommendation to preserve this genetic stock followed. The results of this study support the theory that this population may perhaps be remnants of the historic native population present in Iowa before it was settled. Regardless of their origin, to our knowledge these brook trout

have been a naturally reproducing population for at least 25 years.

This alone is significant, given the dramatic land use changes which have degraded many streams in Iowa and the increase of accidental spills which have killed fish in many of our inland streams. Of course, it has been feared this unique population of brook trout living in South Pine Creek could be eliminated overnight with no hope of recovery. The citizens and future generations of Iowa could lose an important part of their natural heritage. Fortunately, the Iowa Natural Heritage Foundation purchased the property and "As I looked upon the crystal clear water of South Pine Creek, I watched patiently for the brilliantly colored brook trout to strike my fly. The sun shone and made the spots on the trout come alive. He looked like a tiger ready to attack. My eyes danced with excitement as the image moved toward my hook. Suddenly, he struck like lightning. I struck back and set the hook in its powerful jaws. He struggled, but it did him no good. I reeled him in with excitement. And as he lay on the wet watercress, I unhooked him. My heart was still pounding as I watched South Pine's brook trout swim away."

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Brook trout are lowa's only native trout species. They are brightly colored and pose a challenge to many anglers (above). A substantial population of these naturally reproducing trout can be found in Iowa's South Pine Creek in Winneshiek County. Eggs were collected from female members of the South Pine population to be propagated artificially at the Manchester Hatchery (left). The process was difficult and in the first year, 146 one-inch fingerlings were produced from 1,000 eggs.

Habitat above the barrier dam at French Creek was enhanced with the use of halflogs (front) and mini-bank hides (back) which provide overhead protection from predators (above). An installed half-log increases the amount of available habitat in the creek (left).

significantly boosted success in 1996, when several hundred 4-inch fingerlings were produced. Finally, the hatchery was able to produce adequate numbers of the fish and it was up to fish management personnel to find them a home.

The historic range of brook trout in Iowa is limited to tributaries of the Upper Iowa River such as South Pine Creek. The State of Iowa owns land on many of the tributaries, however, only French Creek in Allamakee County had water quality similar to South Pine. Evidence of similar water quality was reflected in the tremendous, naturally reproducing brown trout population already occupying this historic brook trout stream. While French Creek matched South Pine's water quality, the brown trout and brook trout could not live side by side. The brown trout would compete with the brook trout and eventually dominate the stream.

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sold it to the Iowa DNR, setting in motion a project to protect a part of Iowa's heritage — the brook trout of South Pine Creek.

So how do we preserve something so fragile? A catch-and-release and artificial-lure-only regulation was adopted on the stream. Sperm samples were collected in 1995 and sent to Iowa State University Veterinary Disease Laboratory for long-term storage, but this was only the male half of the genetics. The only way to get all of the genetics stored in a different place was to take male and female fish from South Pine and establish a population in another stream. In order to establish a second viable population of these trout, a transfer of several hundred fish was needed. The question was how to accomplish the transfer without

compromising the fragile South Pine population.

Knowing one 14-inch female brook trout produces approximately 1,200 eggs, the most conservative method possible was to take eggs from a female brook trout and propagate them artificially at the Manchester Hatchery. We believed collecting eggs would have the least impact on the existing population. The process of artificially producing these wild trout to fingerling size (2 to 4 inches) was difficult at the Manchester Hatchery. The fish were more skittish than typical hatcherystrain trout and did not readily take to feed. In 1995, only 146 one-inch wild brook trout were produced from 1,000 eggs, but much was learned. Changes in materials and methods

Two options were available. The trout could be sent back to Germany where they originated or the stream could be split. Brown trout enthusiasts would probably be



unhappy with the Germany idea, so the stream was split. The problem was nobody knew if the brown trout would agree to the split.

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A great wall was built, called a barrier dam, intending to block the stream and remove the brown trout living above the dam. To our knowledge, this method of competition reduction had not been tried in the Midwest.

Approximately 300 wild browns

A barrier dam was constructed to impede brown trout movement back down into the restoration area. Because of high water, the barrier dam is probably not keeping every brown trout out of the restoration area. but it has made a big difference (left). One of the 300 brown trout removed from the water upstream of the barrier dam, a fish of this size is capable of eating many wild brook trout (below).

f the th Pine is land on er. only ounty had Pine. ity was aturally lation brook reek uality, the ould not rout trout and n able. 10 ted or rown ably be

were captured above the dam and released below in 1996. Habitat above the dam was also enhanced by the addition of half-logs and mini-bank hides, increasing the amount of overhead cover where the skittish brook trout could hide.

In October 1996, approximately 200 brook trout from South Pine Creek were stocked in French Creek. The vast majority were 1-inch fingerlings, but some larger fish, including 16 adults, were also stocked. The adults were added specifically to increase genetic diversity. With the addition of adult trout, there was the remote chance of immediate, natural reproduction the first year.

The brook trout did spawn in November 1996, evident by a 1997 survey which found a few young fish in



French Creek. In that same survey, about 65 brown trout were found above the dam, most likely young, small fish missed the previous year during the removal process.

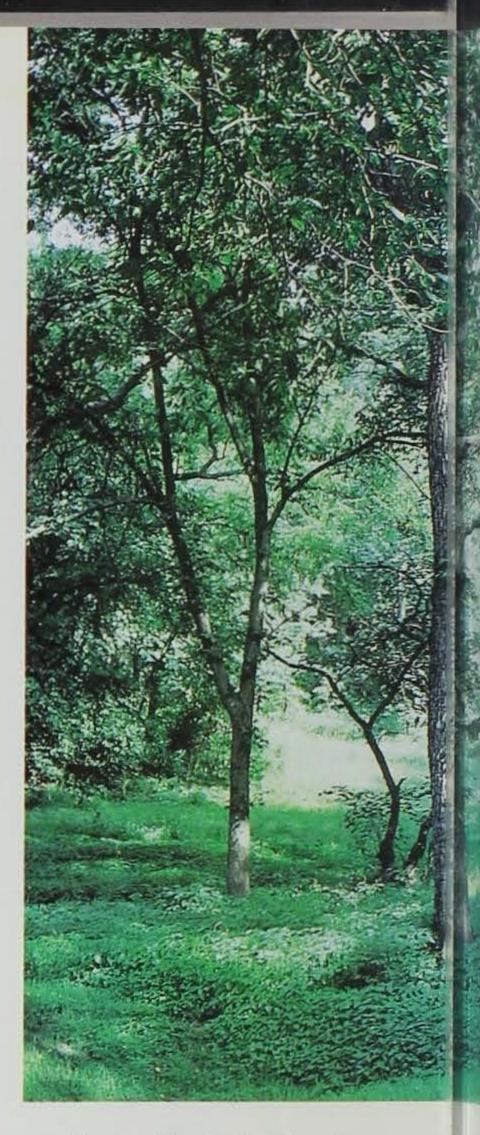
The project is now looking even more hopeful. Sampling in 1998 showed more than 60 young brook trout and 50 older fish exceeding 8 inches, indicating a second consecutive year of successful reproduction. The dam appears to be working because this year's survey found only 12 brown trout above the dam. Because of high waters, the barrier dam is probably not keeping every brown trout out but it has definitely made a difference.

A part of Iowa's fish heritage has been restored and hopefully will flourish thanks to the unique qualities of South Pine Creek and a dedicated group of people. Ultimately, the opportunity to fish for Iowa's only native trout — the brook trout — will be left for all future generations.

Jim Jansen is a wildlife biologist for the department and a former fisheries technician at Decorah.



A Place of Quiet Beauty Waubonsie State



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Park

Article by John Lambertz Photos by Ron Johnson March 18, 1926, Hamburg Reporter read "STATE PARK ASSURED FOR HAMBURG."

After eight years of hard work, the headline told the story. The first 200 acres of what is now Waubonsie State Park was about to be purchased from Ed Mincer. The Friday before, W. J. Brown, on behalf of the park committee, met with the State Board of Conservation, passing a resolution to purchase the property. The following Tuesday, the State Executive Council appropriated the money.

The state paid \$7,500 of the \$10,000 purchase price, with the people of Hamburg raising the balance. The park site was chosen because "it was typical bluff land, very rough and containing choice trees of many kinds as well as wildflowers and other things which the state wishes to conserve in the natural state. The park will not be an

Glaciers laid the groundwork and wind and rain carved out the valleys to torm the Loess Hills of Waubonsie State Park.

amusement resort and will be left as near as possible in its natural state.

equestrian use in a state park was opened. Today, the park is entering a new The trails were developed with the help of local riders and construction workers. The area proved to be an immediate success, and to this day, draws riders from a fourstate area.

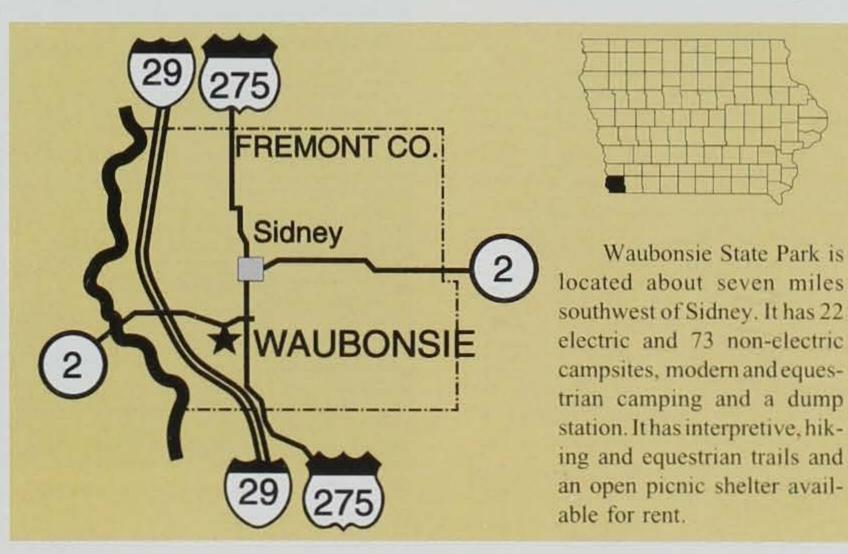
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Located in the extreme southwest tip of Iowa in Fremont County, the park has seen its share of growth. Since its inception, the park has grown to more than 1,200 acres, and as it was envisioned, much of it remains in its natural state. During the Depression, a Civilian Conservation Corps tent camp was established in the park to begin developing the area. Later, the camp was moved to its permanent location in Sidney near where the Rodeo grounds are now. The Civilian Conservation Corps crew built erosion control structures, hiking trails, two trailside shelters, a picnic shelter and a modern rest room facility.

It was in the 1960s when the next period of development occurred. In 1960, a modern campground with a shower house and electrical hook-ups was developed in the picnic area on top of the hill. In 1966, the first area dedicated for

phase in its history. Over the next two years, many of the park's facilities will be renovated. The camp area will see the shower house replaced and a new electrical system installed for campers.





The yucca plant, indigenous to the area, stands out in the rolling landscape of Waubonsie State Park.

The shelter house at the overlook will get a facelift, with a new roof, upright timbers, an handicap accessibility ramp and remodeled rest rooms.

The park's history dates back much further than 1926. One needs to look back 14,000 to 24,000 years ago to find what makes Waubonsie park unique. It was during that time period that the glaciers were melting and the runoff carried silt down the Missouri River valley. When winter came, the glaciers ceased melting, the water stopped flowing and the fine silt was deposited in the river valley. Strong winds blew the silt into great mounds where the park is located. the Pottawattamie tribe moved into Fremont County from the Indiana/Illinois region. As settlers moved farther west, the tribe again entered into a treaty to move to Kansas in 1846. Waubonsie was allowed to stay in his log home in Iowa where he died in 1846.

In 1858, Henry and Matilda Baker

came to Fremont County from Michigan and settled in the area where the park now stands. Twin boys were born Dec. 23, 1858. One boy died the following day and the other on Jan. 6, 1859. They were buried across the hollow from their house. This was the start of a small family graveyard in the park. The graveyard is still maintained by Baker family descendants. The gate to the graveyard is always left open for all who wish to enter and imagine what it was like to live back in those times.

More than 100 years ago, professor Thomas Macbride envisioned a system of "county" or "rural" parks that would preserve and protect the natural resources of Iowa. These areas were to be places of quiet beauty. In 1919, the state park system began purchasing areas with scientific interest, historical association or natural scenic beauty; places where people could learn about history, enjoy the changes of the seasons, see wildlife, have a picnic or just watch the sun set across the Missouri River valley. A place like Waubonsie State Park --- "A Place of Quiet Beauty."

John Lambertz is the park ranger at Waubonsie State Park.

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These mounds are called the Loess Hills. The soil is highly erodible, which created deep ravines, narrow ridge tops and high bluffs. The overlook is more than 300 feet above the road located at the base of the bluff.

In 1993, an archeological study was conducted at the park. There is evidence the area was inhabited as early as 8000 B.C. It appears these inhabitants, like the Native Americans that would come later, considered the narrow west ridges of the Loess Hills sacred ground and lived in the valleys or on the wider ridges east of the hills. In 1836, Chief Waubonsie and



Hiking and equestrian trails provide exercise and viewing opportunities for visitors to the park.

Practical Conservationist

uitaof' Re Gary Cole, Hunter Ed. Institution and

FROM THE

KITCHEN OF:

2 eggs, beaten

Golden Pheasant Nuggets

2 whole pheasant breasts,

cut in 1" square pieces

*These recipes are from the Wardens' Cookbook available from your conservation officer. Cost is \$12, the supplement is \$5. The cookbook contains a variety of outdoor recipes for all seasons of the year.

Connie Purtilo, wife of Gary Purtilo,

Mix together all ingredients but the pheasant

Conservation Officer, Bellevue

1 c. water

1 1/2 tsp. salt

1 c. flour

4 tsp. sesame seeds

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FROM THE **KITCHENOF**:

FROM THE

KITCHEN OF:

Roasted Duck Breasts

flour seasoned with

1 can onion soup

salt and pepper

6 to 8 duck breasts

Bob Mullen, Conservation Officer, Toledo

wife Dianne, Mason City

Roll duck breasts in seasoned flour. Brown in hot

together soups and ladle over breasts. Bake at 350

oil. Remove and place in oven dish or roaster. Mix

degrees for 45 minutes, or until tender. Baste

occasionally while baking.

1 can cream of

soup

mushroom

Stuffed Roasted Quail

8 quail with skins on 1 c. chicken livers, chopped 1 med. onion, chopped 1/4 green pepper, chopped 1/3 c. chicken bouillon + 1/3 c. water

3/4 c. celery, chopped 1/4 c. butter 1 1/2 c. cooked, long grain rice

To make stuffing, fry onion, pepper and celery over medium heat in butter until vegetables are tender, about 7 minutes; add livers, mix and simmer for 5 minutes, stirring. Add cooked rice and mix well. Fill cavities of each bird with stuffing and rub bird with butter. Place in shallow roasting pan. Heat bouillon and water to boiling point and pour over birds, enough so about 1/2-inch stands in bottom of roasting pan. Place pan in 450-degree oven and roast 30 minutes. Baste with pan juices. Serve on heated platter. Serves 4.

breasts. Dip in batter. Deep fat fry the pheasant at 375 degrees for 3 to 5 minutes. Cooking by internal temperature? The following is a list of game and the internal temperature of each after cooking for safe consumption.

> 140-150 degrees Quail 140-150 degrees Pheasant Venison 130-140 degrees 145-150 degrees Turkey 130-150 degrees Geese 140-150 degrees Duck 150 degrees Fish

Practical Conservationist

Deer meat has less fat than domestic meats and becomes dry when cooked, even when broasted. It's best to serve venison a bit rare. The longer it's left in the oven, the drier it gets and it looses flavor and tenderness.

FROM THE **KITCHENOF:**

Wyoming Marzetti

1 1/2 lb. gound venison, elk, antelope or beef

Variation: Blueberries or raspberries can be substituted for the apples. 1 lg. can tomatoes (or seasoned tomato

FROM THE

KITCHENOF:

Apple Pan Dowdy

1/4 c. Bisquick

1 c. brown sugar

1/2 tsp. salt

1 tsp. vinegar

1 c. water

l tsp. vanilla

Don Simonson, Conservation Officer,

FROM THE KITCHEN OF:

Don Simonson, Conservation Officer, Burlington

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1 pkg. broad (1-1/4" size) noodles 1/2 lb. Old English cheese

juice) 1 sm. can mushrooms 4 sm. raw onions

Sear the meat (while meat is searing, put the onions and then the cheese through the meat grinder). Add the onions. Last, add the cheese and mushrooms. Cook a little and season with salt and pepper. In a fairly large casserole dish (which has been greased), place a layer of uncooked noodles. Add a layer of the meat mixture and pour some of the tomatoes over the top. Continue to make layers of each, being sure to end with noodles on top.

If you have run out of tomatoes and the mixture seems dry, pour a small can of tomato puree over the top. Bake in a slow oven, 350 degrees, 1 1/2 to 2 hours. Serve this casserole with a tossed salad and a dessert for a good hearty meal.

Venison With Sour Cream

Lon Lindenberg, Conservation Officer,

and wife Sandy, Bondurant

5 c. sliced apples

1 1/2 c. Bisquick

cinnamon, nutmeg &

1 T. butter

1 c. rich milk

Heat oven to 400 degrees. Grease a 9x12-inch pan. Make sauce of the first

Singredients. Cook over low heat, stirring until thickened. Remove from heat

Add vanilla and butter. Cool. Put apples in pan and sprinkle with cinnant and and a second and and and a second and and and a second and and a second a second and a second an

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sugar and cinnamon. Pour sauce over all. Bake for 30 to 40 minutes.

2 lb. venison	1 clove garlic
1/4 c. fat	1 c. diced
l c. diced celery	carrots
1/2 c. minced onion	1 tsp. salt
l bay leaf	4 T. flour
4 T. butter	1 c. sour
2 c. water	cream

Cut venison in pieces and melt fat in heavy frying pan. Add meat and garlic. Brown on all sides and arrange in dish. Put vegetables in remaining fat and cook for 2 minutes. Add salt, pepper and water. Pour over meat. Bake slow in oven until meat is tender. Melt butter in frying pan and stir in flour. Add water that the meat was cooked in and boil until thick. Add sour cream and more salt if necessary. Pour over meat and vegetables. Serve with buttered noodles and currant jelly.

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Classroom Corner

Camouflage by A. Jay Winter

It's a jungle out there! In order to survive in Iowa's wilderness, each animal must adapt to its surroundings in order to maintain protection for itself and its offspring. In this exercise, students become "predator" and "prey" in a version of "hide and seek."

Background:

Animals have an ability to blend in with their environment, which they use to survive. Examples of this are the spotted pattern of fawns, the shape of walking sticks and the color of rabbits.

Animals that do not blend in usually have some other defense. For example, skunks have a potent spray.



Age: 5-13 years

Objective:

Students will be able to: 1) Identify how and why animals use camouflage to survive.

Materials: Blindfold

Subjects: Science Physical Education Language Arts

Duration: 20+ minutes

Group Size: 25 or less

Key Words: Adaptation Predator

Prey

A thicket is a prime place for animals to blend into their surroundings and protect themselves from predators. Many animals have brown or tan coats that change with the seasons to provide each with its own version of camouflage.

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A. Jay Winter is a training officer for the department at Springbrook Conservation Education Center near Guthrie Center.

Classroom Corner

Evaluation:

Name some of the factors that affect your visibility in the woods.

Extension:

1) Research different types of camouflage used by animals and humans.

2) Research the use of camouflage in the military.

3) Repeat the activity with someone wearing a blaze orange vest (observe how easy it is to see).

References:

Project WILD manual, copyright 1986, Western Regional Environmental Council.

Procedure:

 This activity can be broken down into two activities for different age groups. The activity for younger ages is labeled A, and the activity for older students is labeled B.

2) Introduce to your students the concepts of camouflage and discuss the items listed in the background section.

3A) Explain to the group that one person, the predator, will try to find the other group members, the prey, after they hide in the surrounding woods. Establish boundaries for the prey (usually as far as you can see in the woods) and explain the boundaries to the students.

4A) The predator will be blindfolded while the prey hide, but after removing the blindfold, the predator cannot relocate to identify prey. They may maneuver within their spot. The predator identifies prey by describing their location and naming them.

5A) When the predator has located all the prey possible, have the found prey sit quietly in groups according to when they were found.

6A) The blindfold is put back on the predator and the prey are instructed to come closer and hide. This is repeated until all the prey are found.

7A) Repeat, if desired, with a new predator or a new habitat type.

8) Discuss why some prey were captured before others. Possible explanations may include brightly-colored clothing, contrasting patterns, not hiding or making noise. This relates to wildlife needing camouflage to survive. For example, a rabbit has to hide from coyotes to avoid being eaten.

3B) Demonstrate camouflage by lining the students up on the road and having them walk slowly into the woods. As each student becomes harder to see, tell them to stop and stand still by name. After everyone is stopped, have them return to the starting point, pacing the distance back to the road. Repeat this procedure in a different habitat type.

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4B) Discuss why some students proceeded further than others. Possible explanations may include bright clothing, contrasting patterns, noise or brush thickness. This relates to wildlife needing camouflage to survive. For example, a rabbit has to hide from coyotes to avoid being eaten.

Example: Bird Beak Adaptation

Birds have a wide variety of adaptations—including the characteristics of their beaks, feet, legs, wings and coloration. These adaptations have evolved so the bird is better suited to its environment and lifestyle. For example, a variety of beak adaptations are listed below:

Adaptatio Beaks	n pouch-like	Bird pelican	Advantage can hold fish, a food source
	long, thin	avocet	can probe shallow water and mud for insects, a food source
	pointed	woodpecker	can break and probe bark of trees, for insects, a food source
	curved	hawk	can tear solid tissue, like meat, a food source
	short, stout	finches	can crack seeds and nuts, a food source
	slender, long	hummingbird	can probe flowers for nectar, a food source

REAP CONGRESS RECOMMENDS ADDITIONAL FUNDING FOR PROGRAM

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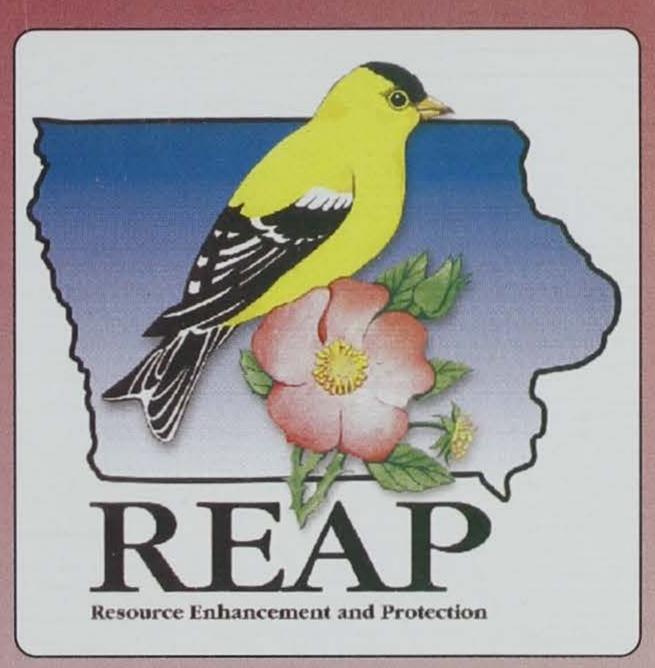
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The Congress for Iowa's Resource Enhancement and Protection (REAP) program reaffirmed its stance that the program is of great benefit to the state, but that funding has been lacking in recent years despite the good financial standing currently enjoyed by the state.

The consensuses were reached during the semi-annual REAP Congress July 11 at the State Historical Building in Des Moines.

"Congress delegates agreed the program is of great benefit, but made it clear that they were disappointed with the level of funding the program is receiving from appropriations by the state Legislature," said Kevin Szcodronski, REAP coordinator for the Department of Natural Resources. Legislation authorizes \$20 million to be allocated to REAP each year, but the program has consistently received less than half that amount. Appropriations to REAP for the last three years have been \$9 million, and the Congress sees no reason why the full \$20 million cannot be provided considering the state is currently in good financial standing.

"The Congress was also informed that sales of the natural resource license plate, of which REAP is a beneficiary, are down drastically from previous years," Szcodronski said. REAP receives about \$800,000 a year from sales of the natural resource license plate featuring lowa's state bird and flower, the goldfinch and wild rose. About 64,000 vehicles currently carry the plate, but only 1,800 have been sold in the first six months of 1998. "If this pace continues," Szcodronski said, "total sales in 1998 will be 3,600, compared to 30,000 plates in 1995, 15,000 in 1996 and 17,000 in 1997. The REAP Congress strongly recommended measures be taken to increase promotion of the plate in an effort to increase sales." The REAP Congress also took action on two issues not directly a part of the program, but related in that they affect lowa's natural environment. Szcodronski said the Congress unanimously endorsed a resolution of "wholehearted" support for Iowa's current beverage container deposit law and voiced opposition to its weakening or elimination. Congress members expressed concern that they did not want REAP projects to be subjected to bottle and can litter. Action was also taken in support of the nationwide wildlife diversity initiative called "Teaming with Wildlife." This initiative is seeking funds for nongame wildlife programs. REAP was initiated in 1989 and has received national recognition for its progressiveness in investing in the state's natural and cultural resources. The REAP Congress is made up of 85 people elected during 17 public meetings held throughout the state this last winter. These 17 meetings are held every other year and the Congress is held the following summer. This was the fifth REAP Congress since the program's inception. The responsibility of the



Congress, as specified in state law, is to "organize, discuss and make recommendations to the governor, the general assembly and the Natural Resource Commission regarding issues concerning resources enhancement and protection." Actions and recommendations of the 1998 REAP Congress will be provided to the governor and Legislature for their consideration during the legislative session that begins in January 1999.

REAP is essentially a financial investment in Iowa's natural and cultural resources. It serves to purchase additional lands for parks, forests, recreation areas and wildlife areas managed by cities, county conservation boards and the state Department of Natural Resources.

REAP provides cost-share money to farmers for soil and water enhancement projects, including tree and grass plantings, grass waterways, terracing and animal waste facilities. REAP money has also helped to beautify Iowa roadsides through wildflower and prairie plantings.

Iowa's cultural resources benefit from REAP through grants awarded by the Historical Resource Development Program. REAP also helps pay for conservation education programs providing classes for teachers interested in including environmental projects in their classrooms. Videos, booklets and other education materials are also produced through REAP.

For more information about the REAP program, contact Szcodronski at (515) 281-8674.

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Conservation Update

Eight Osprey Released In Iowa

Homes were found in Iowa for eight osprey recently released into the wild through the cooperative efforts of local, state and federal wildlife and environmental agencies.

Pat Schlarbaum, Department of Natural Resources wildlife technician, said four osprey were released at the Hartman Reserve Nature Center in Black Hawk County July 16 and four at the Macbride Raptor Project in Johnson County July 17.

During the next 10 years, 100 osprey from Wisconsin and Minnesota will be released at various sites across Iowa. Wisconsin and Minnesota will receive \$400 to \$500 per bird to cover agency expenses.

"Large and narrow-winged, the osprey is commonly called the fish hawk or fish eagle," Schlarbaum said, "but it is neither a true hawk or eagle. Males and females are similar in appearance and size, though females tend to be slightly larger. Ospreys weigh about 4 pounds, are 17 to 22 inches long and have a wingspread of about 56 inches. In flight, the osprey's wings are angled back. "Most osprey first breed at 4 years of age," Schlarbaum explained, "and prefer to nest near large rivers, lakes or reservoirs with ample food and nesting sites such as platforms or large, dead trees. Historically, osprey nested in several adjacent states, although there are no documented accounts of osprey nesting in Iowa. However, excellent nesting and foraging habitats were available, so it is very likely osprey nested here prior to European settlement."

"Osprey exhibit a strong nesting loyalty to the area where they are fledged and do not disperse well," Schlarbaum said. "Nonbreeding osprey come to Iowa each year, but return to other locations to nest. By bringing osprey to this area, Iowans will have the opportunity to observe a unique and powerful fishing raptor."

The releases were a cooperative effort of the DNR's Wildlife Diversity Program, Macbride Raptor Project, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service (USFWS) and Midwest Raptor Research Fund.

Record Number of Turkey Hunters Equals Record Harvest

A record number of Iowa hunters set a harvest record during the 1998 spring turkey season, reported Dale Garner, forest wildlife research biologist for the DNR.

A four-season format with a quota of 5,500 licenses available during the first three seasons and an unlimited license quota for the fourth season resulted in a record 40,863 resident shotgun licenses being issued. An additional 1,727 archery-only licenses were issued.

Wild turkey harvest by residents was estimated at 15,810 bearded birds, representing a 7 percent increase over the record set in 1997, Garner said. "The statewide hunter success rate of 43 percent is the third highest rate recorded since Iowa opened its first spring turkey season back in 1974," Garner said.

Nonresident hunters also enjoyed their ninth year of spring turkey hunting in Iowa with more than 2,000 nonresident licenses issued and 938 birds harvested.



Valley Captures National Science Bowl Championship

West Des Moines Valley High School captured the Department of Energy's **1998 National Science Bowl** competition by defeating North Hollywood High School of Hollywood, Calif., in the final round of competition. For winning the competition the team members received an all-expense paid trip to Lindau, Germany to meet with Nobel Laureates in chemistry. Pictured left to right are: Federico Pena, Secretary of Energy; Margaret Christiansen, team coach; team members Chris Rotzien, Mikhail Seregrine, Paco Jain (team captain), Drew Volker and Adrienne Clark; and Bill Nye (The Science Guy).

1998 Toxic Clean-up Days

Following is a list of toxic clean-up days planned for the remainder of 1998. The information below includes the coordinators of each clean-up day, their addresses, phone numbers and the location of the clean-up day, respectively.

SEPTEMBER 19

O'Brien County

Dave Honkomp, NW Iowa Area Solid Waste Agency, 4540360th Street, Sheldon, Iowa 51201, (712) 324-4026, O'Brien County Fairgrounds, 390th Street.

Calhoun County

Keith Roos (environmental specialist), Calhoun County Environmental Health Department, 515 Court Street, Rockwell City, Iowa 50579, (712) 297-7131, Secondary Roads Complex, Rockwell City.

Audubon County

Janet Hansen, Audubon County Landfill, 1881 215 Street, Audubon, Iowa 50025, (712) 563-3589, Recycling Transfer Station, Audubon County Landfill.

Iowa 51201, (712) 324-4026, Clay County Fairgrounds, West 18th Street.

Delaware County

Roy Atkinson, Delhi Lion's Club, R.R. 1, Box 84, Delhi, Iowa 52223, (319) 922-2017 or (319) 922-2588, Delaware County Fairgrounds, 200 East Acres St., Manchester, Iowa.

AdamsCounty

James Amdor, Adams County Courthouse, P.O. Box 28, Corning, Iowa 50841, (515) 322-3240, Adams County Fairgrounds.

OCTOBER10

Sioux County

Dave Honkomp, NW Iowa Area Solid Waste Agency, 4540 360th Street, Sheldon, Iowa 51201, (712) 324-4026, Sioux County Fairgrounds, Sioux Center.

Henry County

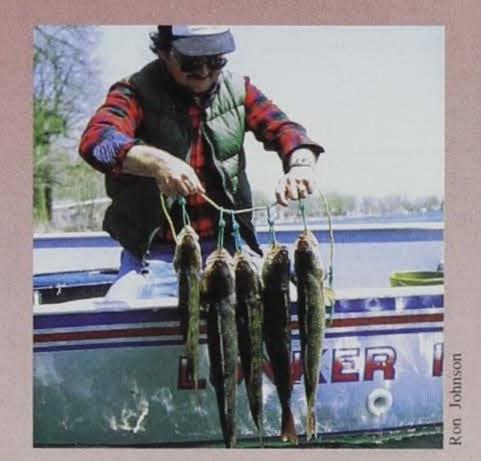
Ed Farley (director), Henry County Emergency Management, 220 W. Monroe St., Mt. Pleasant, Iowa 52641, (319) 385-1479(phone) or (319) 385-1466(fax), Henry County Fairgrounds, McMillan State Park.

Stocking: Key To Walleye **Abundance In Iowa Great Lakes**

The Iowa Great Lakes region is a popular vacation area drawing more than one million visitors each year.

Many of the visitors are anglers, many of whom are after walleye. Each year, 30 to 50 percent of the anglers visiting the Iowa Great Lakes fish for walleye.

"Natural reproduction of walleye in the Iowa Great Lakes is limited so annual stockings of fry and fingerlings are neces-



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SEPTEMBER 26

Osceola County

Dave Honkomp, NW Iowa Area Solid Waste Agency, 4540 360th Street, Sheldon, Iowa51201,(712)324-4026,OsceolaCounty Sheriff's Building, 1928 Highway 60.

Louisa County Deb Krohn (naturalist), Louisa County Conservation Board, Box 261, 609 James L. Hodges Ave., Wapello, Iowa 52653, (319) 523-4539, Louisa County Fairgrounds.

Hancock County

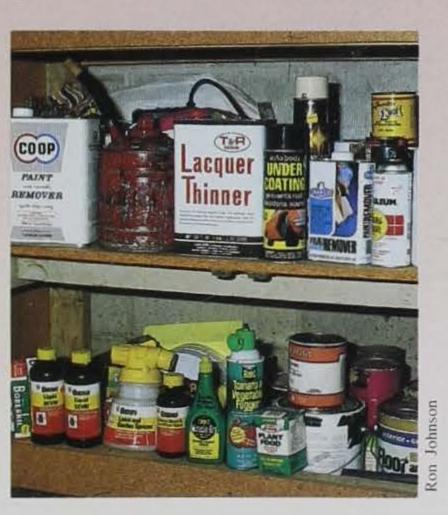
Steven Woodruff (naturalist/conservation technician), Hancock County Conservation Board, 875 State Street, Garner, Iowa50438, (515) 923-2720, Hancock County Fairgrounds, 2210 Jewel Avenue, Britt, Iowa.

OCTOBER3

Clay County Dave Honkomp, NW Iowa Area Solid Waste Agency, 4540 360th Street, Sheldon,

Taylor County

Michael Ware (emergency management director) and Jim DeLozier (county engineer), 505 State Street, Bedford, Iowa 50833, (712) 523-2167, Taylor County Fairgrounds, Bedford, Iowa.



sary to sustain these fisheries," said Joe Larscheid, DNR fisheries biologist.

Recent research has determined most large (5- to 6-inch) fingerling walleyes stocked in the fall died within two to five weeks after they were stocked in these lakes. Larscheid concluded that this high post-stocking mortality was size-related and that larger fingerlings (7 to 8 inches) need to be stocked in order to reach stocking objectives.

An investigation is under way to determine the most cost-effective method of raising 7- to 8-inch walleyes and preliminary results are encouraging. Findings from this study will be used to determine the most effective stocking strategy that will ultimately improve walleye fishing opportunities in the Iowa Great Lakes.

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1999-2000 Hunting Licenses and Stamps (Available Dec. 15, 1998)

RESIDENT	
Resident Hunting	\$12.50
Lifetime Combination (disabled military veteran or P.O.W.)	\$30.00
Lifetime Hunting License (65 years of age or older)	\$50.50*
DeerLicense	\$25.50
Turkey License	\$22.50
Fur Harvester License	
Resident age 16 and older	\$20.50
Resident under age 16	\$5.50
Wildlife Habitat Fee	\$5.50
Migratory Game Bird Fee	\$5.50
Annual free Fishing or Combined Hunting and Fishing licenses are	available for
low income 65 or older and low income permanently disabled. Call 5	515/281-8688
for information/qualifications.	

NONRESIDENT

Hunting Preserve (Resident and Nonresident	\$5.00
Nonresident Hunting (18-years-old or older))	\$60.50
Nonresident Hunting (under 18)	\$25.50*
Nonresident Fur Harvester	\$180.50
Wildlife Habitat Fee	\$5.50
Migratory Game Bird Fee	\$5.50
Nonresident Deer License	\$150.50
Nonresident Turkey License	\$75.50

DNR's Energey Bureau Receives 1998 Energy Conservation Award For Energy Bank

The DNR's Energy Bureau has received the prestigious 1998 Energy Conservation Award from the National Energy Resources Organization (NERO). The bureau was honored at an awards dinner in Washington D.C. May 5.

The Energy Bureau received the award for developing the Iowa Energy Bank. Through public-private partnerships, the Iowa Energy Bank leverages private capital, matched with some federal funds, to implement energy efficiency improvements in taxpayer-supported institutions. Partners in the program include the U.S. Department of Energy, the utility industry, engineers, banks and other private businesses.

Since its inception in 1986, the Energy Bank has leveraged \$5 million in federal funding to achieve more than \$138 million in efficiency improvements, \$16.3 million in annual energy cost savings, 3,750 job-years created and thousands of tons of reduced

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* New licenses for 1999-2000

Energy Summit Planned for Iowa's High Schools

The Department of Natural Resources and the Center for Energy and Environmental Education (CEEE) are co-sponsoring an Energy Summit Oct. 30 at the University of Northern Iowa campus in Cedar Falls.

The goal of the Energy Summit is to bring together high schools from across the state to discuss Iowa's energy picture. The forum will be similar to a United Nations discussion, in which each high school will be given an energy-related topic such as fossil fuel use or renewable energy development — to advocate.

Any high school in the state can participate in the Energy Summit. We are looking for teams of five students per high school. The DNR and CEEE will help provide materials and assistance in preparing topics. Contact the DNR's Dewayne Johnson, (515) 281-7018. E-mail: djohnso@max.state.ia.us

Federal Government Passes Ethanol Tax Exemption

A major victory was won for the agriculture industry May 22 when Congress agreed to extend the ethanol tax incentive through 2007.

The bill has since been signed into law by President Clinton, ensuring the continued growth of the industry through a tax

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break of 5.4 cents per gallon, with modest reductions every two years.

Iowa farmers produce more than 180 million bushels of corn each year for use in the production of ethanol, making the state one of the nation's largest producers.

air emissions in schools, hospitals and local government buildings.

"The program has performed at 118 percent of original projections," said Larry Bean, administrator of the Energy and Geological Resources Division. "The Energy Bank represents government fiscal responsibility, government responsiveness and government efficiency."

NERO is a national organization that works to bring together representatives of U.S. industry and government with an interest in the development, supply and use of energy. Past recipients of the Energy Conservation Award include Dow Chemical Company, Xerox and 3M. have skill and total curr is de your

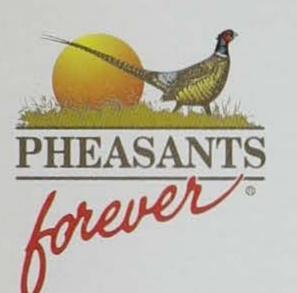
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Pheasants Forever, Inc. is dedicated to the protection and enhancement of pheasants and other upland wildlife populations through habitat improvements, education and land management policy changes. Iowa is the largest Pheasants Forever state with 99 chapters and more than 18,000 members.

PRIVATELAND

In the past 13 years, local chapters have raised and spent nearly \$8.5 million dollars locally, allowing both members and the local community to

benefit from their labors. The main focus of chapters is the improvement of wildlife habitat on private land. Iowa Pheasants Forever chapters have provided for:

115,785 acres of winter food/cover plots

- 89,506 acres of nesting cover
- 7,860 winter cover plantings (including 4.5 million trees)

PUBLICLAND

Pheasants Forever is also active in cost-sharing toward the purchase of public wildlife management areas. Iowa chapters have contributed \$2,245,579 toward the purchase of 221 public wildlife areas (33,579 acres) with the DNR, other agencies and organizations. All of these Iowa wildlife areas are available for you and your families to enjoy throughout the year.

EDUCATION

Education is an important part of the groups outreach, through the Leopold Education Project, Ringnecks youth program and the skills camps offered through the DNR. Outdoor Journey for girls and the Hunting and Conservation Camp for boys have been very successful, introducing 12- to 15-year-olds to a variety of outdoor skills. These two programs are held at the Springbrook Conservation Education Center and have allowed 1,053 youth to participate through Pheasants Forever sponsorships totaling \$54,725 since 1993. The Leopold Education Project is a conservation curriculum geared toward teachers and based on the teachings of Aldo Leopold. It is designed to expand instructors' skills in teaching outdoor education and allow youth to develop a personal land ethic.

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:

- September 10 Spirit Lake - October 15 Pisgah -November 12 **Des Moines** - December 10 Des Moines

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For more information please contact your local Pheasants Forever Chapter or one of the Pheasants Forever regional wildlife biologist:

Jim Wooley, Southern Iowa -(515)774-2238 Matt O'Connor, Northern Iowa -(319)926-2357 Mark Heckenlaible, Western Iowa -(402)687-2004

www.pheasantsforever.org; e-mail: pf@pheasantsforever.org; Leopold Education Project-(612)773-2000



Jim Wooley presents Gloria Baker, youth camp coordinator with a check for \$54,725, representing Pheasants Forever's contribution.

Environmental Protection Commission:

- September 21 Rathbun Fish Hatchery
- October 19
 - Des Moines (tentative)
- -November 16
 - Des Moines (tentative)
- -December 21

Des Moines (tentative)

Warden's Diary

Remembering the Hunt

It was one of those beautiful crisp November days. It was the kind where the sky was so blue it seemed almost iridescent. The wind blew gently over the hills, but enough to stir up the leaves as they gave up their hold on the trees. The sun was shining brightly, but starting to give way its warmth to the vanguard of winter.

I was walking down an old lane between two hedgerows near Garden Grove. Long since being retired as a field barrier, the hedge had almost grown together from both sides, forming a canopy over the lane. The hibernating grass crunched under my feet as I walked into the natural tunnel.

I looked from side to side watching for the movement which I knew would come quickly and without warning. Almost as a reflex, I kept checking the safety on my shotgun as my dad had taught me, as if the safety could somehow magically be disengaged by itself. It was cool enough my breath was forming clouds in the air which were wafted away by the breeze.

Suddenly, an explosion to my side! A small light brown shape shot into the air and straight across the front of me. Quail. I raised the shotgun and fumbled for the safety. It flashed into the hedge on the other side and down the valley between the hills. A second flash! I tried to track it. I pulled the trigger. The recoil of the Winchester rocked me back in my steps. A miss. A third flash from the other side. Another shot, another miss. How can something so small be so surprising? Before I knew it, they were coming out of the hedgerows on both sides of the lane, just like someone was throwing clay birds in front of me. In just a few seconds the crash of small wings was over. I stood there having made my contribution to the Federal Shotshell Corporation and nothing to show for it. There are not many things more humbling than quail hunting. plan while I identified it as a rooster. As the barrel crossed it, I pulled the trigger. It crumpled in mid-air and fell to the ground.

Unloading the shotgun, I set it down and walked over to pick up the pheasant. I picked it up and looked at it. Is there anything much more beautiful than these birds? Have you ever noticed how its colors almost glow? How they are blended so subtley? I was already thinking about the taste too. Mmmm, yes!! I field dressed the bird and put it in the back of my jacket. I continued walking down the lane, over the hills, stopping to skip a few rocks across the ponds, and thinking of the bass I had caught there during the summer. I finished the trip off sitting in the living room with the couple that owned the farm. I didn't shoot anything else, didn't get a limit. But I got a memory that has lasted a lifetime.

That couple is gone now. I haven't been back for many years, but I can see that day just as clearly as if I was walking down that lane today. And I would probably still miss those quail.

I wonder how many of us stop to think how good we have it right now.

I've gotten a little further along in age now. I can remember when T-shirts were all white with no writing on them. I can remember when pheasant and quail were few and far between. I can remember when turkeys were an experiment. I can remember when seeing a deer was almost an event that brought out the town.

I shook my head and reloaded. My shooting looked about like my golf game. At least with golf, I tried to blame a bent club. Golf and quail hunting. Quite possibly related in their frustrations.

I walked farther, and the hedge gave way to an opening next to where a slough met the lane, coming down between the hills to a fence line. All of a sudden there was a whoosh of wings and a clatter to my right at the edge of the slough. A pheasant had held there as I approached. I had come too close for it, and it was lifting off like a rocket, trying to make its escape, bolting straight up and gathering speed.

I pivoted to my right and brought the shotgun across its flight

Waterfowl? Remember the point system?

Not too long ago, I was riding my bicycle on a road next to a creek. I thought I saw some movement in the creek between the trees. I stopped my bike. Standing in the creek drinking were a doe and twin fawns. The doe looked up and bounded into the safety of the cover as did one fawn. The second fawn jumped, stopped, took one curious look at me and scampered after its mother. I shook my head in wonder as I thought of someone who accosted me at a gas station a month earlier, forcefully telling me to "kill every one of them."

We are in the gravy days of wildlife in Iowa right now. We have forgotten how it was. We reach a low point when we look at wildlife as some kind of rodent to be eradicated. Sure, some problems may exist, but we have proven they can be solved too. When wildlife and the outdoors no longer stir our souls or amaze our technothrilled minds, then we have forgotten how far we have come as we expand and push wildlife out.

When that happens, it can all slip away very quickly. Then from where will the memories come?

by Chuck Humeston



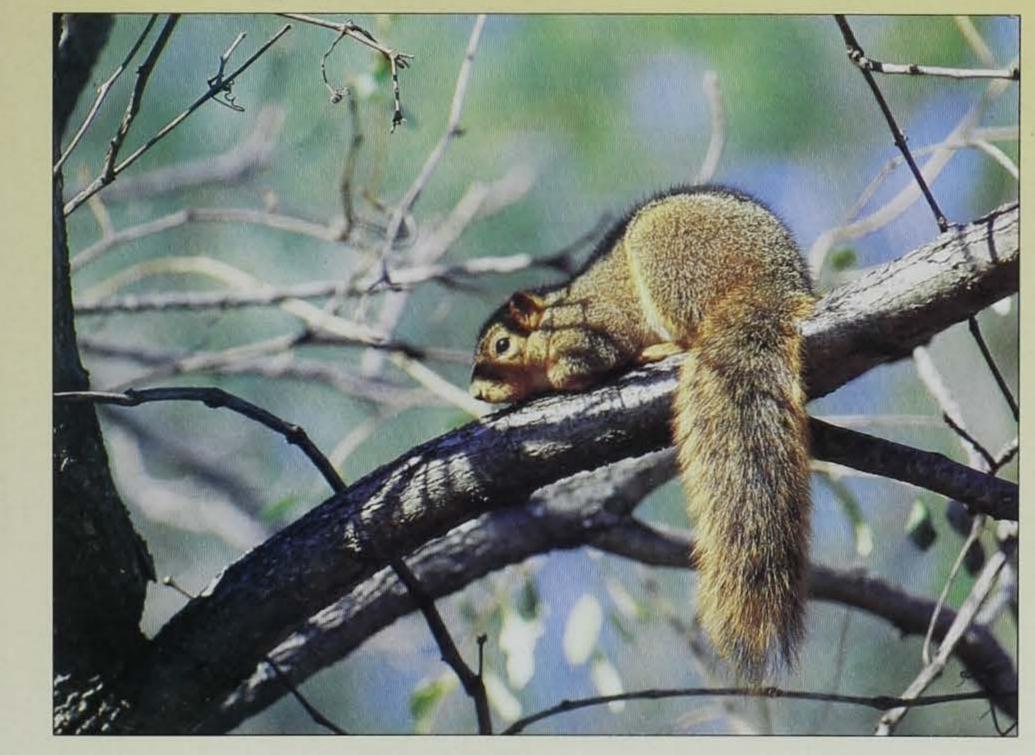
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