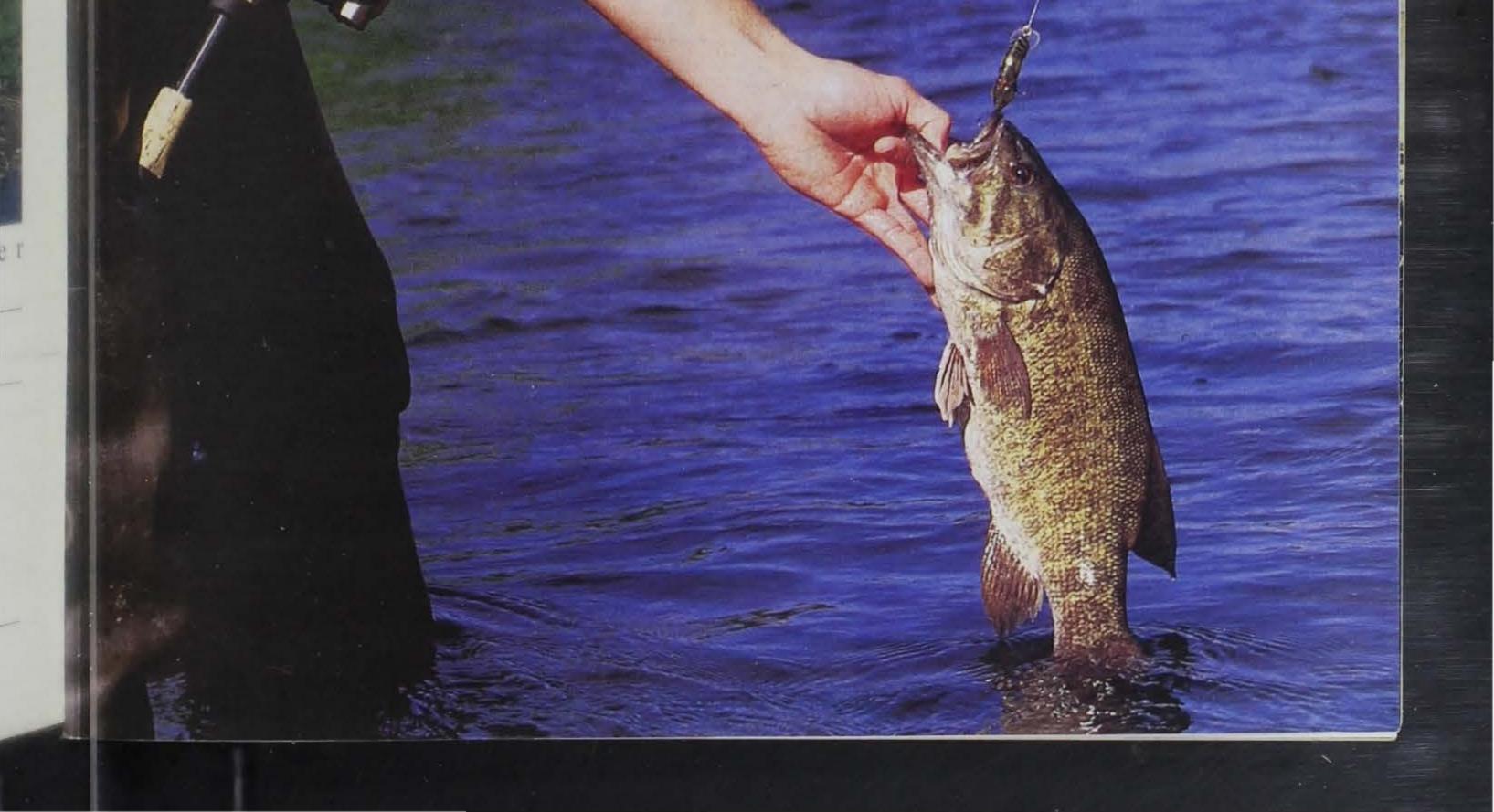
DEPARTMENT OF NATURAL RESOURCES



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

TT'S FOR THE BIRDS Resources Natural

Septer Volum

STAFF Ross Ha Julie Sp Alan Fo Lowell Clay Sn Larry F

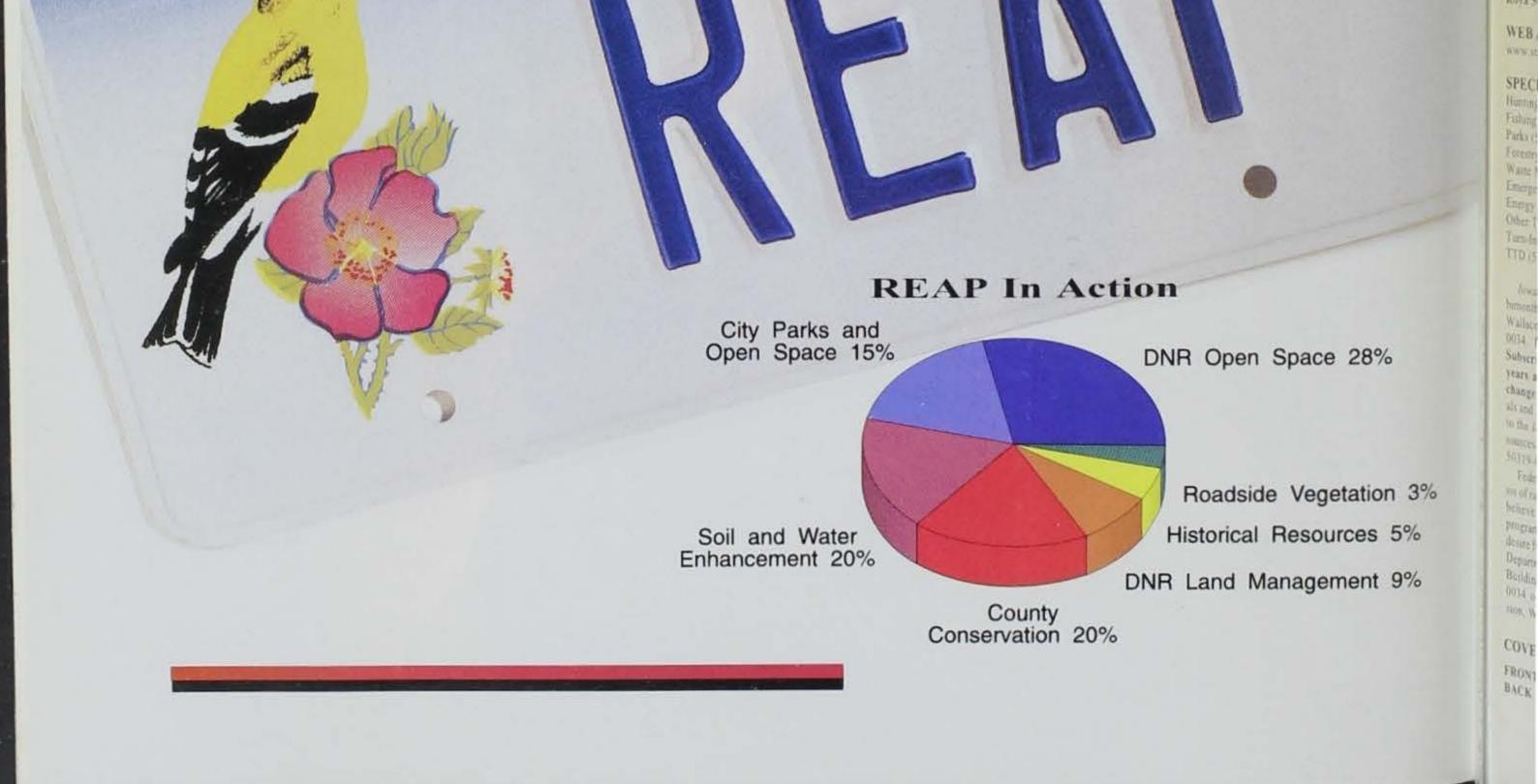
NATE Joan Sc Marian Richari Anthon William Carol J Paul C

> ENVIH COMM William Terram Rozann Kathry Rita Ve Gary C Randal James I

> > DIRE(Paul W

DEPU Lany J

DIVIS Lioda I Larry I Michae Michae Roya S



Conservationist

STATE LIBRARY OF ROWA. East 12th & Grams DES MOINES, IOWA 50319

48

September/October 1999 Volume 58, Number 5

STAFF

rotection

Iservation

Ir current

Ross Harrison, Bureau Chief Julie Sparks, Editor Alan Foster, Managing Editor Lowell Washburn, Writer/Photographer Clay Smith, Photographer Larry Pool, Graphic Artist

NATURAL RESOURCE COMMISSION Joan Schneider, Chair, Okoboji

Marian Meyer, Vice Chair, La Motte Richard Garrels, Secretary, Mount Pleasant Anthony Hough, Harlan William Sullivan, Cantril Carol Kramer, Newton Paul Christiansen, Mount Vernon

ENVIRONMENTAL PROTECTION COMMISSION

William Ehm, Chair, Creston Terrance Townsend, Vice-Chair, Newton Rozanne King, Secretary, Mondamin Kathryn Murphy, LeMars Rita Venner, Brcda Gary C. Priebe, Algona Randal Giannetto, Marshalltown James Braun, Latimer Elizabeth Christiansen, Iowa City

DIRECTOR Paul W. Johnson

DEPUTY DIRECTOR Larry J. Wilson

DIVISION ADMINISTRATORS

Linda Hanson, Administrative Services Larry Bean, Energy and Geological Resources Michael Valde, Environmental Protection Allen Farris, Fish and Wildlife Michael Brandrup, Forests and Forestry Michael Carrier, Parks, Recreation and Preserves Roya Stanley, Waste Management Assistance

WEB ADDRESS www.state.ia.us/dnr

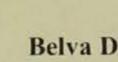




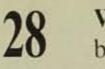
FEATURES

1999 Hunting Forecast by Terry Little

1998 Record Deer Racks



Belva Deer Lake by Wally Taylor and Tom Monroe



4

19

25

34

36

20

39

44

Wood Duck Represents the Last Word in Elegance by Lowell Washburn

Surfing for Fish by Leo Schlunz

A Fall Tribute to Iowa's Scrappy Smallie by Lowell Washburn

Cattin' Around

SPECIAL PHONE NUMBERS

Hunting (515) 281-HNTR Fishing (515) 281-FISH Parks (515) 281-TENT Forestry (515) 281-TREE Waste Management and Recycling (515) 281-8941 Emergency Spill Response (515) 281-894 Energy (515) 281- 5918 Other Topics (515) 281-5918 Turn-In-Poachers (TIP), (800) 532-2020 TTD (515) 242-5967

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.

Federal regulations prohibit discrimination on the basis of race, color, national origin, sex or disability. If you believe that you have been discriminated against in any program, activity, or facility as described above, or if you desire further information, please write to. Director, Iowa Department of Natural Resources, Wallace State Office Building, 900 E. Grand Ave., Des Moines, Iowa 50319-0034 or the Equal Employment Opportunity Commission, Washington, D. C. 20240

COVERS

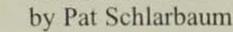
28%

etation 3%

urces 5%

ment 9%

FRONT — Smallmouth bass fishing by Lowell Washburn BACK — Fall color by Ken Formanek



Measuring Up by Kevin Baskins



62

Going Smokeless by Brian Button

DEPARTMENTS

50 Parks Profile55 Classroom Corner

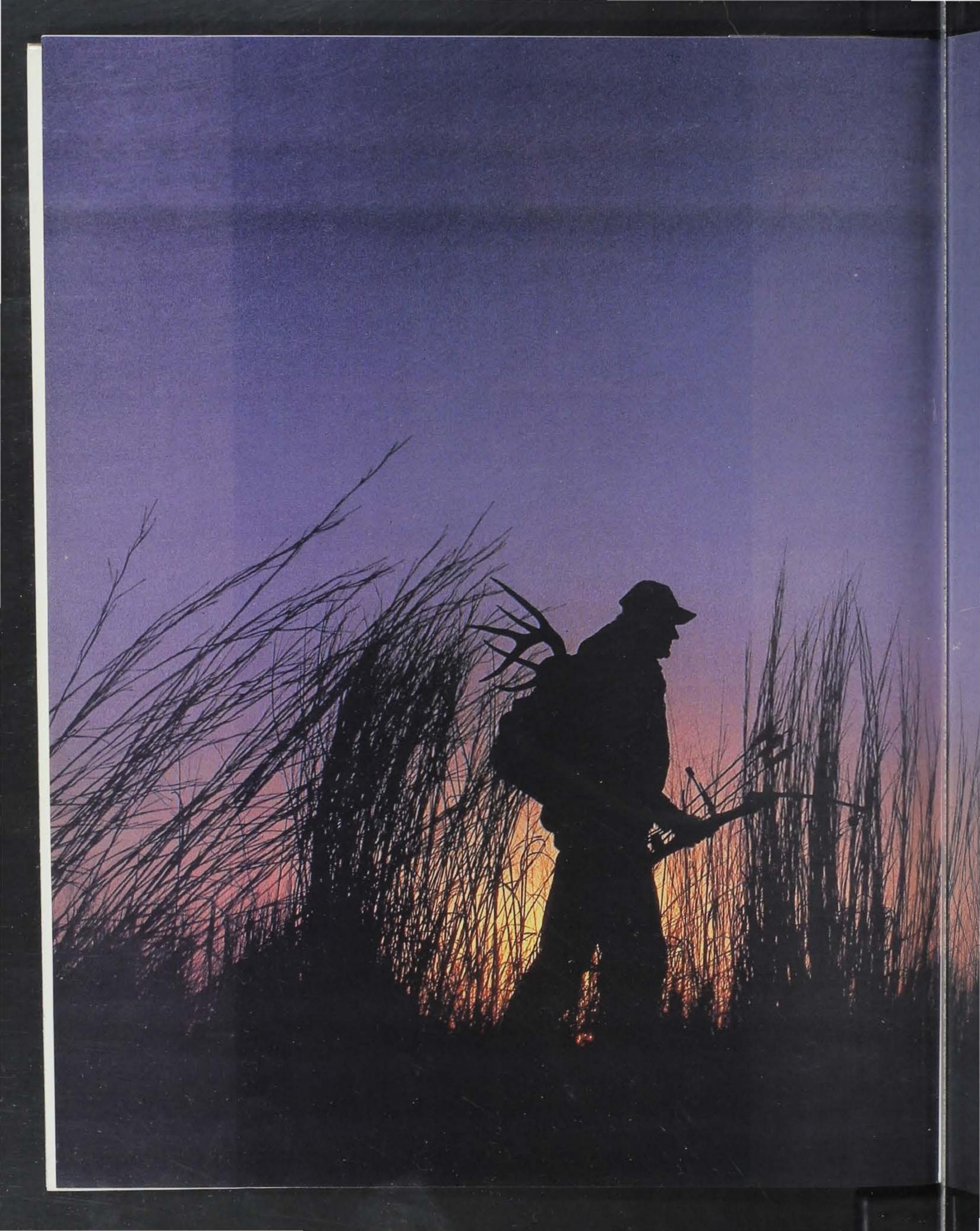
Warden's Diary

- 53 Practical Conservationist
- 57 Conservation Update
- 63 Parting Glance





September October 1999 • Iowa Conservationist 3



1999 Hunting Forecast

As the 1990s draw to a close, most Iowa hunters can reflect on a remarkable decade of hunting opportunities. In fact, most grizzled veterans whose memories extend back longer would have to admit no decade has provided a better variety of excellent hunting.

Deer, wild turkey and giant Canada goose populations reached all-time-high levels for this century during the decade and provided hunting opportunities for far more hunters than ever thought possible. Duck populations rebounded after the

drought of the late 1980s to all-time recorded highs for several popular species, including mallards, teal and wood ducks. The advent of the Conservation Reserve Program returned pheasants and gray partridge to northern Iowa and much of the rest of the state in numbers not seen since the early 1960s. International, federal and state wildlife agencies cooperated more than ever to restore wildlife habitat in its many forms. Private wildlife groups like Pheasants Forever, Ducks Unlimited, the National Wild Turkey Federation and others dug deep into their members' pockets for funds to share the cost of essential habitat programs, thereby stretching tight government budgets to limits never before possible.

> Article by Terry Little Photos by Roger A. Hill

Sure, hunting has not been great every year in every part of the state. Weather during critical nesting seasons has been poor in southern Iowa and subsequently, upland bird numbers are down. There has been too much CRP in some areas, not enough in others. In some years, water conditions in our marshes and reservoirs have been too wet or too dry for good hunting. In some years, ducks and geese have simply flown over Iowa in mass migrations to the south, leaving waterfowlers waiting in vain for more leisurely flights of northern redlegs. Suburban sprawl and ever-intensifying farming practices have taken their toll on wildlife habitat. But in spite of local problems it has been a remarkable decade.

So how will 1999 stack up? The short answer is "just fine." To get more details, let's talk to the DNR's wildlife specialists in charge of game species. They are all highly educated biologists with excellent knowledge of biology and management of Iowa's game animals. Just as important, they each have several years of experience monitoring wildlife populations, making hunting season recommendations, learning hunting and trapping techniques and understanding hunting and trapping traditions right here in Iowa. No one else is in as good a position to shed light on what the coming hunting season holds as they are.

Waterfowl Hunting Outlook is Bright

Duck and goose populations continent-wide, for the most part, are in good to excellent condition, according to DNR Waterfowl Specialist Guy Zenner. The total population of breeding ducks rose by 12 percent from last year to 43.8 million birds, a 34 percent increase over the 1955-98 average. With record numbers of July ponds recorded in some parts of the prairie pothole region, this year's fall flight is projected to be more than 105 million birds, up from 84 million in 1998. Mallard, green-winged teal and blue-winged teal populations were at record highs this spring, while shoveler and redhead numbers were the secondhighest recorded since 1955. Pintail and scaup populations remain lower than desirable.

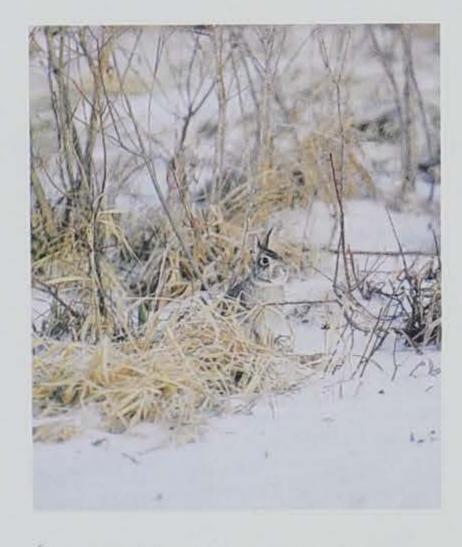
An unusually warm spring allowed many of the arctic and subarctic nesting populations of geese to produce better production in Iowa varied considerably across the state. Wet weather, flooding, generally high water and fewer muskrat houses on open marshes combined to suppress production in northwest and north-central Iowa -- historically the key nesting areas for giant Canadas. Fortunately, goose production increased in other parts of the state, so the statewide population is still holding its own.

Given the good waterfowl production in lowa, the bumper crop of ducks coming off the prairies, and average or better goose production, hunters should see excellent numbers of birds migrating down the flyways again this fall.

With the outlook generally rosy, the U.S. Fish and Wildlife Service recently approved liberal hunting regulations for the 1999 waterfowl seasons. This means essentially the same seasons as last year with slight bag limit changes. The sixduck daily bag limit can include no more than four mallards, only two of which can be hens, one pintail, two wood ducks, two redheads, three scaup, one canvasback and one black duck. The traditional two-Canada-goose bag limit has been restored and will once again be in effect throughout the entire season in the north and south zones. Desp flight, Ze realistic il success h dent upor here, the weather -The poter ever, is d The f seasons is

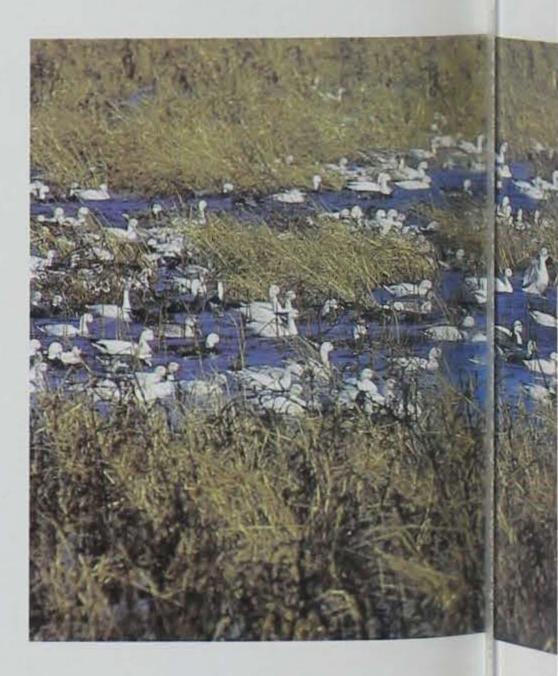
of electro was allow light goo were pro April 16 surveys i were har relatively appear to cantly in and bring How the U.S.

the U.S. U.S. Fis the requironmenta complied tions for



than in previous years. The Eastern Prairie Population of Canada geese which nests in northern Manitoba and migrates through Iowa has improved significantly from 1998. Unfortunately, it also enabled snow and Ross' goose populations to produce bumper crops of young birds. Fall flights of these "light" geese will be larger than ever and these burgeoning goose populations will likely further degrade the already overgrazed Arctic salt marshes.

Early-season duck and goose hunters often depend more on locally produced birds than on later Arctic or prairie migrants. Local duck production in Iowa was better than average, according to Zenner. Above-normal precipitation in April encouraged mallards, wood ducks and blue-winged teal to make a strong reproductive effort. In contrast, giant Canada goose implement rules hav



iderably flooding muskral ned to est and y the key Fortused in tatewide VII. producf ducks Tage M s should migral-; fall rosy, III recently tions for IS MCall last year The sixe no WO OF two. e scaup. tuck. ise bag Once e entire nes.

Despite predictions of a large fall light, Zenner cautioned hunters to be ealistic in their expectations. The uccess hunters have in Iowa is depenent upon wetland habitat conditions ere, the timing of the migration and fall /eather -- all of which are unpredictable. The potential for a good season, howver, is definitely there.

The fate of extended light goose easons is less certain. Last year the use f electronic calls and unplugged guns vas allowed during the late split of the ght goose season and additional days vere provided between March 11 and vpril 16 for taking light geese. DNR urveys indicate about 12,000 light geese vere harvested. Although this was a elatively small first step, these actions ppear to have the potential to signifiantly increase harvests of light geese nd bring this population under control.

However, the Humane Society of he U.S. has filed a lawsuit against the J. S. Fish and Wildlife Service alleging he requirements of the National Envionmental Protection Act must be omplied with before the liberal regulaions for taking of light geese can be mplemented again. As a result, the ules have been withdrawn until a fullblown environmental impact statement (EIS) can be prepared, hopefully by early 2001. In the meantime, a bill was passed by the U. S. House of Representatives that would allow the Service to permit the more liberal rules for taking light geese next spring while the Service prepares the EIS. The liberal regulations may or may not be allowed this year. Waterfowlers should closely watch the development of this legislation and any regulations changes that may result. (See page 58 for more on this year's waterfowl season.)

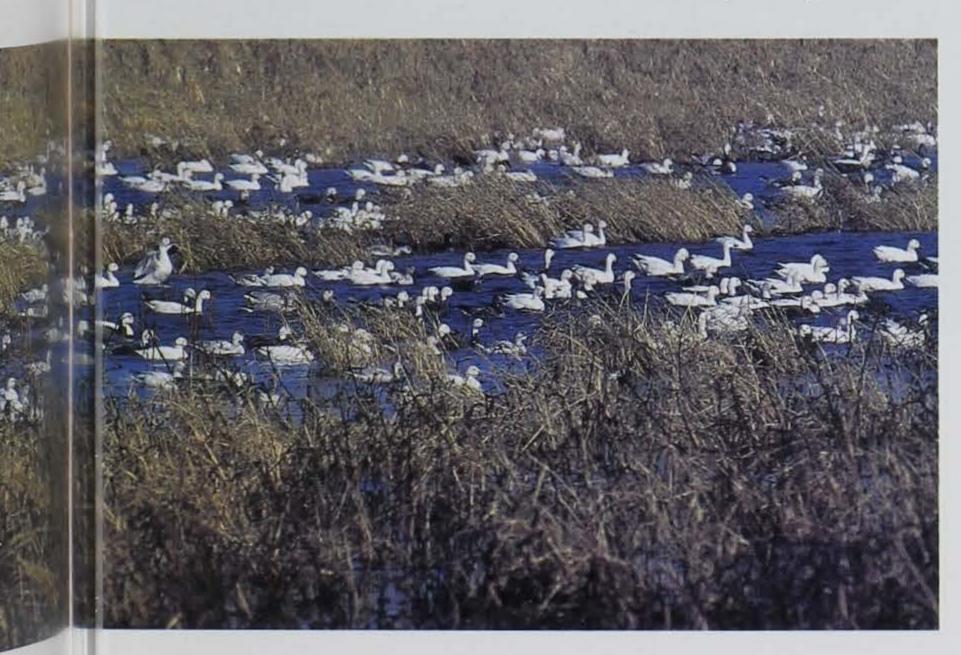
Furbearers Are Everywhere

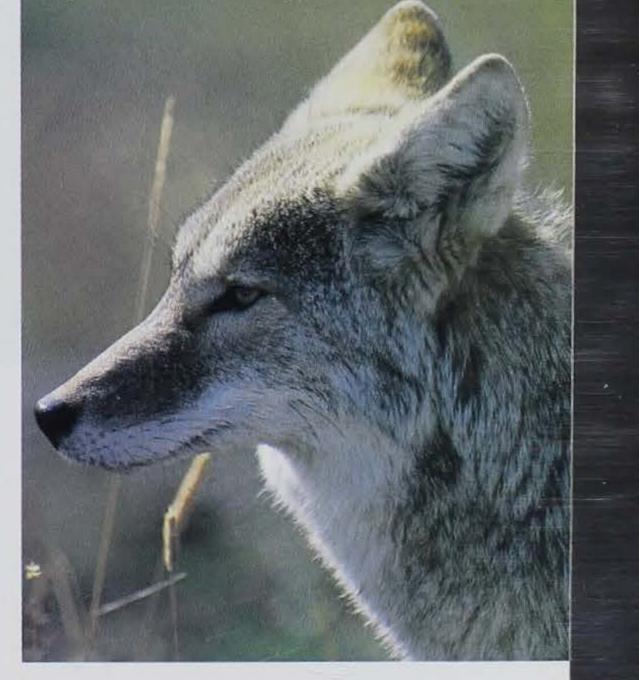
Ron Andrews, DNR furbearer resource specialist, reports most furbearer populations remain at very high levels. Spring spotlight surveys indicate raccoons are at record-high numbers in most areas of the state. Coyotes remain at good numbers throughout the state, with the highest densities in the traditional areas south of Interstate 80 and in the two tiers of counties along the eastern and western borders. Beaver populations remain at very high levels in their traditional habitats.

The only exceptions are muskrat and red fox. In recent years, high water

Tables of hunting and trapping seasons and limits can be found on pages 11 through 14.







September/October 1999
 lowa Conservationist 7

levels in most marshes have caused muskrat populations to plummet. Their numbers will remain low until drought conditions or artificial water-level drawdowns allow emergent vegetation to re-establish. Red fox populations remain low because of the persistence of mange and because coyotes have invaded traditional red fox ranges, outcompeting foxes for space and habitat. The fur market outlook is predicted to be soft again, so trappers should find light competition while enjoying this traditional outdoor experience.

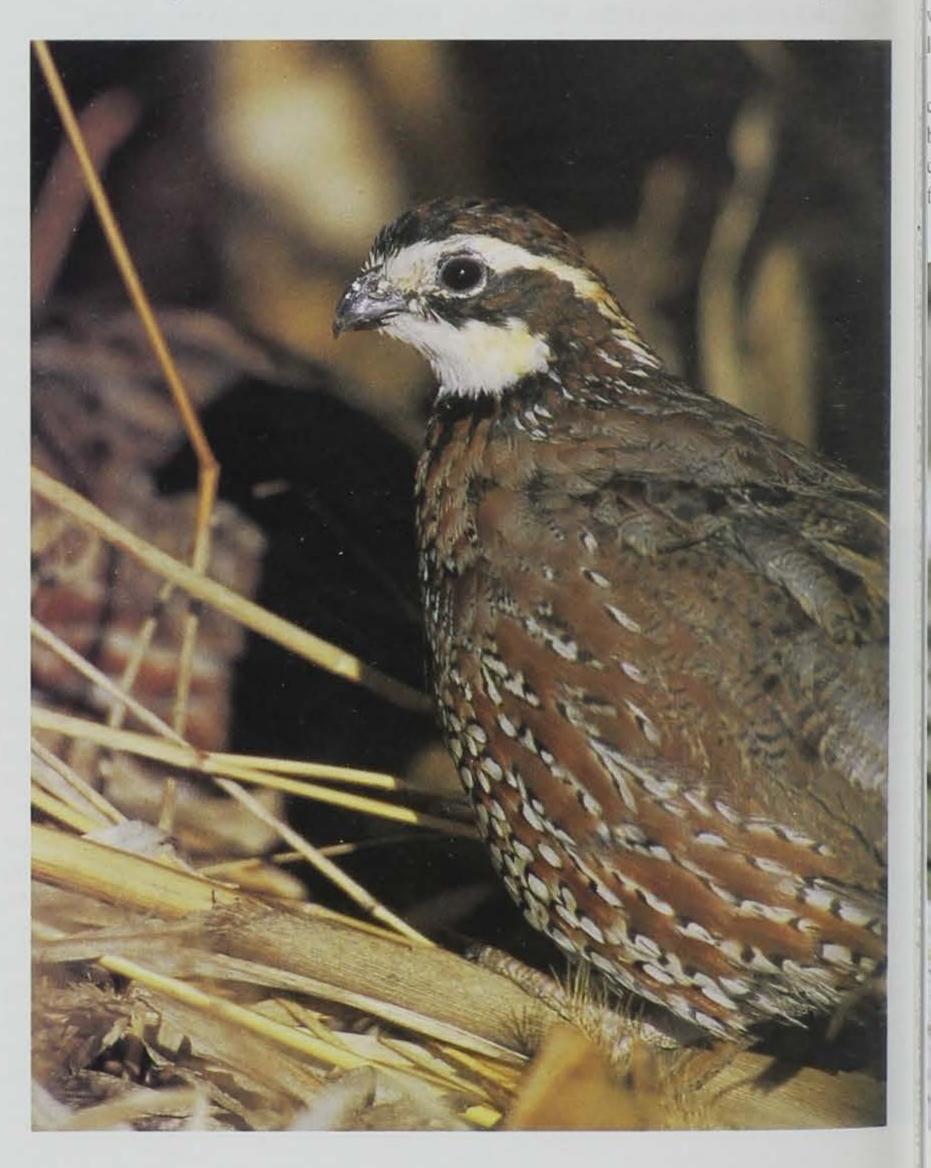
Upland Game Outlook is Cloudy

Upland game hunting forecasts are chancy at this early August writing because most survey routes have not been completed. Wet weather -- a plague in south-central and southwest

Iowa during the past few nesting seasons -- shifted farther north and east this spring. This should allow better nesting conditions in southern Iowa, but some of Iowa's best pheasant range in northeast and central Iowa suffered through heavy rains and flooding during the critical early- to mid-June nesting season. The loss of Conservation Reserve Program fields continues to hurt pheasant numbers, especially in north-central and northwest Iowa where most fields were taken out of CRP over the past two growing seasons.

Todd Bogenschutz, the DNR's

upland wildlife specialist, reports based on completion of one-third of the roadside routes, pheasant populations statewide will likely be 15 to 30 percent lower than last year. Counts all across southern Iowa should be higher than the past few years, but a major recovery in a single year is unlikely. In places where breeding populations are far below historic levels, more time will be needed before pheasants are abundant again. Pheasant numbers in north-central, northeast, central and east-central Iowa will probably be lower than last year. Most of far northwest Iowa escaped the



heavy rai similar to pheasant

Phei be a little This year up simila Drowned job of pro because r initial new chicks se year indio re-nesting the state, will not b least we Gray

certainly bobwhite counts sh found in



ports base of the pulations o 30 perces all across her than to ecovery in aces whe below II be neces nt again entral, entral low last year escaped to

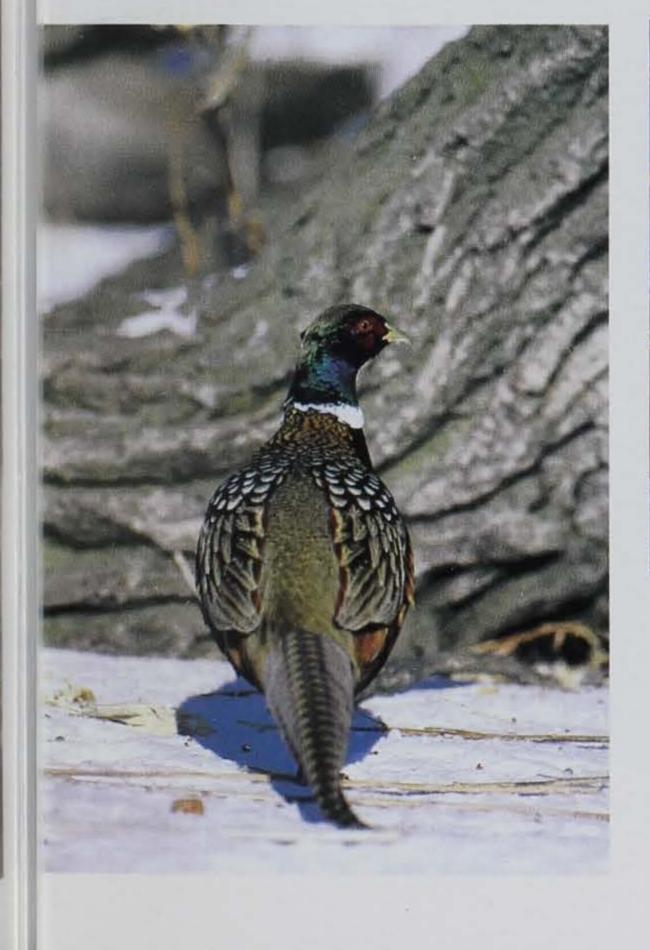
heavy rain and counts there should be similar to last year in areas where pheasant habitat still can be found.

Pheasant populations will hopefully be a little better than the counts indicate. This year's rainfall patterns are shaping up similar to 1993 -- the "Year Iowa Drowned." Roadside surveys did a poor ob of predicting populations that year because many hens re-nested after their nitial nests were lost. The ages of chicks seen on the surveys so far this year indicate a late hatch or extensive re-nesting in the northern two-thirds of the state, and chicks from those nests will not be visible on the surveys. At east we hope that is the case.

Gray partridge counts will almost certainly be lower than last year; bobwhite quail and cottontail rabbit counts should be higher. Partridge are found in good numbers in the parts of the state typically having the poorest nesting conditions, so it is hard to expect above-average production. Quail counts will be slightly better because the primary quail range in southern Iowa was dry. Like pheasants, however, it will take more than one year to see a major increase. Cottontails, with their seemingly limitless ability to reproduce, could be abundant again in many areas.

Deer Continue to Abound

Willie Suchy, the DNR's deer specialist, reports aerial and spotlight counts conducted this past winter found deer numbers to be very similar to those in 1998. Counts in southern Iowa were down slightly, while numbers in most other areas were about the same. Suchy attributes the decline in southern Iowa partly in response to the extra does taken in the past two years during the antlerless and bonus January seasons, and partly due to some EHD losses. EHD, or epizootic hemorrhagic disease, was reported in many counties in southern Iowa last fall. The overall mortality appeared to be low, but by its nature, losses are spotty and in some local areas could be much greater. The disease is transmitted from stagnant water to deer by a species of midge, a tiny flying insect. A few cases of EHD are reported almost every year, but last year's warm dry fall provided ideal conditions for the midge. A repeat of last year is unlikely since weather conditions have been wetter later in the summer. The occurrence of the disease is not related to deer numbers and depends upon dry weather conditions to concentrate deer around water where the midges are present.

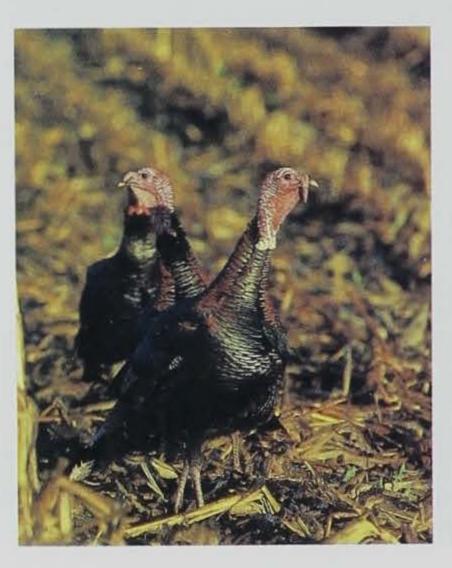




September/October 1999 • Iowa Conservationist 9

Because deer numbers remain similar to 1998, few changes were made in hunting regulations for 1999. The DNR continues to reduce deer numbers in targeted areas where populations are believed to be too high. Hunters can take a deer of either sex on a statewide license in all counties during the youth, bow, two muzzleloader and two regular shotgun seasons. Antlerless licenses will also be available for targeted counties in southern Iowa, and for selected parks and urban areas. (See page 18 for a list of special hunts.)

Suchy expects hunters to have another good season this fall. In most areas, hunters should see about the same number of deer as last year when 112,608 deer were harvested. Although this was about 5,000 fewer than the record harvest in 1997, hunters had good results in most seasons and areas. Success rates were good -- more than



two-thirds of the shotgun hunters, about half of the muzzleloader hunters and one-third of the bow hunters tagged deer.

Wild Turkey and Ruffed Grouse Should Be Good

Wild turkey brood surveys are conducted after the upland game roadside counts, so the results are even more tentative. Dale Garner, the DNR's wild turkey specialist, believes the turkey hatch will follow the same pattern as the pheasant. Early results suggest good production in southern Iowa, particularly in southeast Iowa, and poorer production in the north half of the state. Young turkeys -- the birds most vulnerable to hunters -- may be less available in northern Iowa, and could slightly reduce hunter success. Turkey populations in all regions were in good shape going into the nesting season, however, so hunters will still find plenty of birds to chase. (See page 15 for more on upcoming turkey season changes.)

Because huntable ruffed grouse populations are limited geographically to the northeast corner of Iowa and are pursued by so few hunters, the DNR does not conduct annual surveys. Grouse populations in Minnesota and Wisconsin are still near the top of their 10-year cycle. however, so Iowa grouse numbers should be as high or higher than recent years.

Terry Little is the department's wildlife research supervisor.



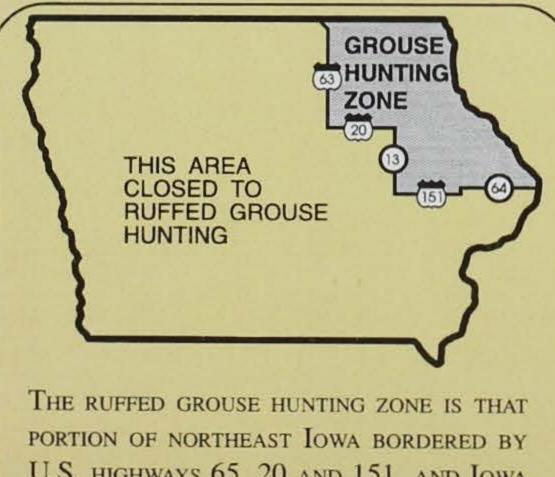
Iowa 1999-2000 Hunting Seasons and Bag Limits

u's will

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

success gions we asting set 1 find pl 15 for n 15 for n 15 for n changest 15 for n 15 for n changest raphical and are be DNR for use d Wisson 10-year of the plans

	the state of the s	the second s		
1999-2000 T	RAPPING	SEASON		
SPECIES	OPENING	CLOSING		
Mink, Muskrat*, Raccoon, Weasel, Striped Skunk, Badger, Opossum, Fox (Red and Gray), Coyote	Nov. 6, 1999	Jan. 31, 2000		
Beaver	Nov. 6, 1999	April 15, 2000		
Civet Cat (Spotted Skunk), Bobcat and Otter	Continuous Closed Season			
Groundhog	June 15, 1999	Oct. 31, 1999		
ALL FURBEARER SEASONS OPEN AT 8 A.M. ON THE OPENING DATE. THERE ARE NO DAILY BAG OR POSSESSION LIMITS *Selected areas may be established in February for MUSKRAT TRAPPING ONLY.				



U.S. HIGHWAYS 65, 20 AND 151, AND IOWA HIGHWAYS 13 AND 64.

1999-2000 Hunting Licenses and Fees

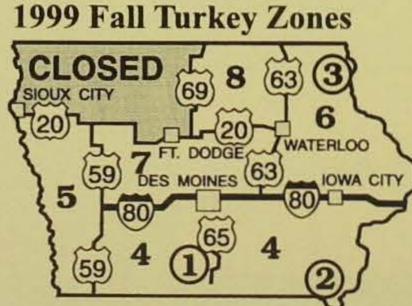
RESIDENT

Resident Hunting Lifetime Combination (dis Lifetime Hunting License Deer License **Turkey License** Fur Harvester License Resident age 16 a Resident under ag Wildlife Habitat Fee Migratory Game Bird Fee

NONRESIDENT

Nonresident Hunting Prese Nonresident Hunting (18-Nonresident Hunting (und Nonresident Fur Harvester Wildlife Habitat Fee Migratory Game Bird Fee Nonresident Deer License Nonresident Turkey Licens

* New licenses for 1999-2000



Fall turkey season is closed to nonresidents in 1999.

N

	\$12.50	
sabled military veteran or P.O.W.)	\$30.00	
(65 years of age or older)	\$50.50*	
	\$25.50	
	\$22.50	
and older	\$20.50	
ge 16	\$5.50	
	\$5.50	
	\$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 515/281-8688 for information/qualifications.

erve	\$5.00
years-old or older))	\$60.50
ler 18)	\$25.50*
r	\$180.50
	\$5.50
	\$5.50
	\$150.50
ise	\$75.50
or 1000 2000	

6

ZONE 1 is all units of Stephens State Forest west of U.S. Highway 65 in Lucas and Clarke counties.

ZONE 2 is all units of Shimek State Forest in Lee and van Buren counties.

ZONE 3 is units of Yellow River in Allamakee County.

BOW-ONLY fall turkey licenses are valid statewide.

1999-2000 MIGRATORY GAME BIRD SEASONS AND BAG LIMITS

	STATEWIDE	
Ducks, Mergansers and Coots	Sept. 18-22 Oct. 16 - Dec. 9	
Youth Waterfowl Hunting Day	Oct. 9	
Snow geese	Oct. 2 - Dec. 26 Feb. 19 - March 10, 2000	
Woodcock	Oct. 2 - Nov. 15	
Snipe	Sept. 4 - Nov. 30	
Rail (Sora and Virginia)	Sept. 4 - Nov. 12	
	NORTH ZONE	SOUTH ZONE
Special Canada Goose Season	Sept. 11-121	NO SEASON
Canada, White-fronted and Brant geese	Oct. 2 - Dec. 10	Oct. 2 - Oct. 10 Oct. 16 - Dec. 15

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

Shooting Hours: One-half hour before sunrise to sunset for all species except woodcock, which is sunrise to sunset.

Daily Bag and Possession Limits:

Ducks: Daily limit is 6, including no more than 4 mallards (of which no more than 2 may be female), 2 wood ducks, 2 redheads, 1 black duck, 1 pintail, 3 scaup and 1 canvasback. Possession limit is twice the daily bag limit.

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

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

Geese: Daily limit for Canada geese is 2. For other geese, the daily limit is 2 white-fronted, 2 brant, and 20 snow geese. Possession limit is twice the daily bag limit, except for snow geese for which there is no possession limit.

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

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

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

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



Waterfowl zone description. The state will be divided by a line beginning on the Nebraska-Iowa border at State Highway 175, east to State Highway 37, southeast to U.S. Highway 59, south to I-80 and along I-80 east to the Iowa-Illinois border. A portion of the north zone east of Iowa Highway 63 will be closed to Canada goose hunting Sept. 11-12. **Nontoxic shot only.** You can only use nontoxic shot approved by the United States Fish and Wildlife Service (USFWS) (including steel shot, copper-coated or nickel-coated steel shot, bismuth-tin shot, or tungsten, polymer and matrix-iron shot) to hunt any migratory game birds except woodcock. You cannot have in your possession any shotshell loaded with other than nontoxic shot approved by the USFWS when hunting any migratory game birds, except woodcock, on any land or waters of the state of Iowa. Approved nontoxic shot must be used to hunt any game animal or furbearer, except deer and wild turkey, on selected public hunting areas in north-central and northwest Iowa. See the *1999 Hunting and Trapping Regulations* for details.

Migratory game bird stamps and fees required. If you are 16 years of age or older, you need to pay the **state migratory game bird fee** (\$5.50) and possess a **federal** (\$15) **migratory waterfowl stamp** (duck stamp) to hunt or take any migratory waterfowl within Iowa. The state migratory game bird fee box on your license must be marked and the federal stamp must be in your possession while hunting. Your signature must be written in ink across the face of the federal stamp. Federal stamps can be purchased at post offices.

Youth Waterfowl Day. Youth Waterfowl Day will be Oct. 9, 1999. Hunters 15 years of age or younger may hunt certain waterfowl in the state and are not required to have a hunting license, federal duck stamp or pay the habitat fee. The youth hunter must be accompanied by an adult 18 years of age or older. The adult must have a hunting license and habitat stamp if normally required to have these to hunt waterfowl, and have paid the state migratory game bird fee. The adult may not hunt ducks but may hunt other gamebirds if there is an open season. The bag limit is six ducks for the youth hunter only, with the same species restrictions as other duck seasons, two Canada geese and 15 coots.

by Da

Loc years of Iowa, it through lowa's s 1974, th three zo 1986, th zones, consiste and has 1999. Ove lowa's number as well. tially. I estimate lowa's estimate Likewis were iss turkey h than 46, issued a permits. The for lowa always | opportu hunting defined safely a ence fro method control | quotas e and seas of permi 3 (the st 2 and 3 by limit season i number Thi there we hunters. license

Did you shoot a banded duck or goose? Call 1-800-327-BAND (2263).



Reporting the harvest of banded waterfowl provides valuable information which helps sustain populations and hunting for the future.



POACHING is a CRIME! Turn In Poachers 1-800-532-2020



All migratory bird hunters must register with the U.S. Fish and Wildlife Service's Harvest Information Program (HIP) each year and carry proof of registration while hunting. Information about the HIP program is contained in the 1999 Iowa Hunting and Trapping Regulations brochure. To register with HIP, call 1-800-WETLAND (938-5263).

Turkey Hunting in Iowa Changes Through Time

by Dale L. Garner

dlife

t, or

nave

iting

oxic

iting

ia.

pay

luck

YOUF

nust

nger

p or

dult

lave

here

18 28

rs

sh

est

ch

of

g,

IP

99

ng

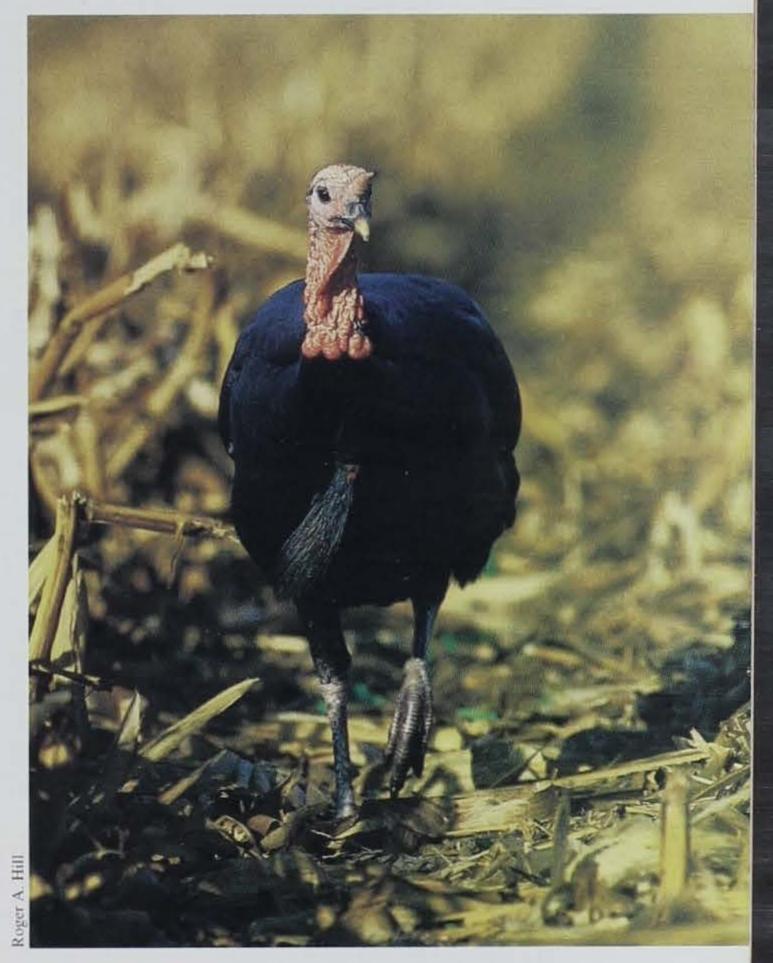
er

D

Looking back over the past 25 years of spring wild turkey hunting in Iowa, it's evident one program has gone through a myriad of changes. When Iowa's spring turkey season began in 1974, there were only two seasons in three zones. Twelve years later, in 1986, there were four seasons in 15 zones. In 1994, Iowa's spring season consisted of four seasons in four zones and has remained that way through 1999.

Over that same 25-year period, Iowa's wild turkey population and the number of turkey hunters have changed as well -- both have grown substantially. In 1974, turkey numbers were estimated at 3,000 statewide. Today, Iowa's wild turkey population is estimated at more than 130,000 birds. Likewise, in 1974, only 300 permits were issued to Iowa residents for spring turkey hunting. This past spring, more than 46,000 resident permits were issued along with 2,000 nonresident permits. The DNR's management objective for Iowa's spring turkey season has always been to maximize hunting opportunity while maintaining a quality hunting experience. Quality hunting is defined as the chance to hunt turkeys safely and reasonably free of interference from other hunters. The primary method used to reduce interference is to control hunter densities through license quotas established for multiple zones and seasons. For example, the number of permits available for zones 1, 2 and 3 (the state forest zones) and seasons 1, 2 and 3 in zone 4 have been restricted by limited quotas and only the 4th season in zone 4 has had an unlimited number of permits available.

expanded, allowing most hunters to receive a license every year. Increasingly, however, the number of permits available during the first three seasons, especially the 2nd season, has been oversubscribed. Therefore, more and more hunters began taking advantage of the unlimited 4th season to ensure getting a license. By 1999, more than 25,000 licenses were issued for the 4th season in zone 4, but just over 7,000 were issued for each of the first three seasons. In spite of this great disparity, there have been few complaints about hunter crowding and a remarkably good safety record in all seasons. Because of the increase in demand for licenses, the lack of substantial hunter complaints and because Iowa's wild turkey population is so plentiful, hunters will see dramatic changes in Iowa's turkey program beginning next year. In spring 2000, Iowa's resident turkey hunters will no longer have to base their choice of season on the number of licenses available. Next spring, a resident hunter will be allowed to purchase a permit for the season of



This system worked well when there were fewer turkeys and far fewer hunters. The DNR gradually increased license quotas as turkey populations

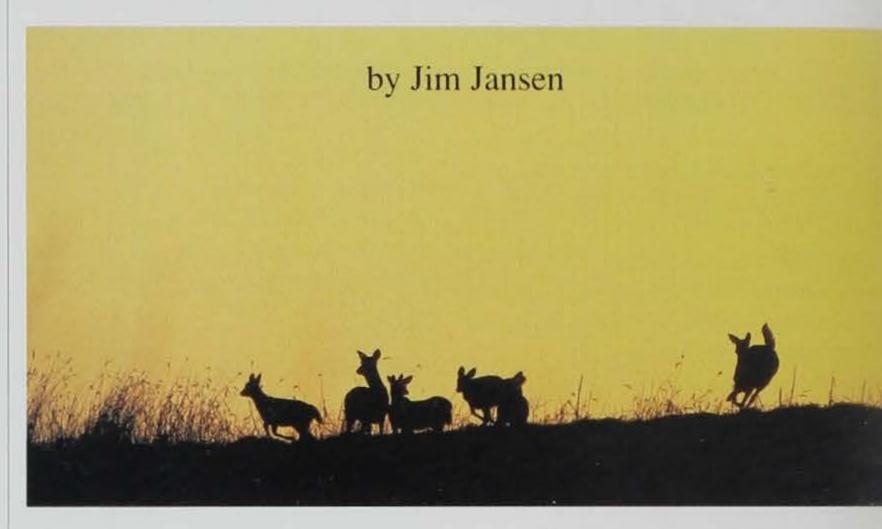
Spring Turkey Zones

his or her choice, providing they hunt in zone 4. Turkey hunters will still be allowed to obtain up to two permits, providing one of the permits is for zone 4, season 4. Only the three state forest zones (Stephens, Shimek and Yellow River) will have a restricted number of permits available, and beginning next year, a hunter obtaining a permit for one of the state forest zones will no longer be able to hunt outside of that zone.

Another major change effective next spring is that season 4 will be extended by one week. Instead of being 12 days long, season 4 will be 19 days long. The first three seasons will remain at 4, 5 and 7 days, respectively.

Changes will also be made for the fall turkey season next year. Limited quota restrictions will remain for all zones during the fall 2000 season. Fall turkey hunters will be allowed to obtain no more than two turkey permits. Hunters may obtain one archery-only permit and apply for one gun/bow permit during the first application period. Firearms hunters wishing to obtain a second gun/bow permit can only apply for the second permit during the last application period, providing quotas do not fill and permits are still available. If turkey production is good, the DNR may announce quota increases later in the year, giving more hunters the opportunity to get licenses. Quotas will not be increased if production of young turkeys is not good. The changes in next year's turkey program are designed to benefit turkey hunters by providing additional recreational opportunity with fewer restrictions. The welfare of the turkey population remains the primary concern of the DNR, however, and should dramatic declines be observed in Iowa's wild turkey resource, quota restrictions may need to be reinstated.

Just Say Doe!



Antlerless deer hunting is rapidly becoming Iowa's primary tool for promoting quality deer management and aiding landowners' control of highdensity deer populations. The benefits of antlerless deer hunting, as explained later in this article, exceed the obvious by providing hunters with additional opportunities and more food for the freezer.

Help Landowners "Save A Buck"

does, local deer populations can
increase rapidly. Eventually, significant
row crop or ornamental crop damage
may occur and farmers in some situations can incur large financial losses.
Failing to help control deer numbers is
not a very good way to thank a landowner who granted permission to hunt.

Hunters need to help landowners manage the deer population through the harvest of antlerless deer. "Antlerless," of course, refers to any deer without antlers, however, 50 percent of the antlerless fawns are actually bucks. Hunters often find it difficult to distinguish between a buck and doe fawn while deer are moving. Carefully selecting a larger bodied adult doe will yield an extra 15 pounds of meat, protect the young buck and produce the greatest impact on herd size. The Department of Natural Resources currently issues any-sex licenses to all deer hunters for the major deer seasons. This can give farmers ultimate control of deer populations on their property by requiring their hunters to use any-sex licenses on does. In fact, a farmer committed to having hunters shoot antlerless deer and experiencing at least \$1,000 in crop damage can qualify for extra "depredation" deer licenses. The purpose of depredation licenses is to reduce deer populations on a specific farm or a group of neighboring fai deprece resulti Lando can ca one of dedica wildlift 886-37 8563 i

Addi and R freeze antler In add licens hunte antler secon specia Antle of 21 hunts In var urban page A a supp curren appro comp

Dale L. Garner is the forest wildlife research biologist for the department in Boone. "Saving a buck" can have a double meaning. Shooting antlerless deer is beneficial to both the hunter and the farmer. Farmers save a "buck" by reducing their crop losses and increasing their profits. Hunters save a "buck" by using their licenses on does. This allows younger bucks to become older and eventually leads to more trophy bucks, a concept commonly called "quality deer management."

Most deer hunters dream of shooting a big-antlered trophy buck. Unfortunately many hunters believe taking any buck, even a small-antlered yearling, is better than shooting a doe. Year-and-a-half-old bucks make up 60 to 70 percent of the antlered deer harvest in Iowa. Shooting young bucks eliminates their chance to become the stuff of hunters' dreams. By protecting ing farms. Last year, 904 antlerless depredation licenses were issued resulting in 575 deer harvested. Landowners with damage to row crops can call their local wildlife biologist or one of two depredation biologists dedicated specifically to alleviating wildlife damage problems (call 319-886-3767 in eastern Iowa; 515-774-8563 in western Iowa).

Additional Hunting, More Food and Healthier Lives!

Resident deer hunters are filling freezers by taking advantage of many antlerless deer hunting opportunities. In addition to regular any-sex deer licenses and depredation permits, hunters can purchase up to four antlerless licenses valid in the bow, second shotgun, late muzzleloader or special late (January) seasons. Antlerless licenses are restricted to one of 21 counties in southern Iowa. Special hunts for antlerless are also being held in various state or county parks and urban areas (See special hunt list on page 18).

Many hunters rely on deer meat as a supplement to their food budget. The current boned-out price of beef is approximately \$2.50 per pound. By comparison, a late-season bonus hunt this January included 10 hunters taking 10 antlerless deer yielding 450 pounds of boned-out meat. After accounting for license fees (\$25.50 for the first antlerless license and \$10 for each additional one), two nights lodging, food and fuel, the price-per-pound came to \$1.70. Even if the price was equal, a value cannot be extended to the camaraderie and memories associated with the hunt.





m lancen

to distine fawn fully It doe will neat, roduce the

can

, significant

damage

ne situa-

] losses.

umbers a

a land-

on to hum.

downers

hrough the

Antlerless

withoul

of the

bucks.

ral Resex license jor deer ers ultimation in their inters to In fact, i hunters eriencing ge can n' deer oredation pulations on neighbor-

Consumption of deer meat has other benefits as well. Nutritionally, venison ranks lower than beef, pork or poultry in total fat (see nutrition table at right). Plus, a strenuous workout can always be expected when driving and dragging large animals over rough terrain in harsh lowa winter conditions.

Try antlerless deer hunting. Take a doe. Assist quality deer management by saving the buck that could be the trophy you harvest in future years.

Meat	Total Fat	Saturated Fat
Deer	3.2 g	1.3 g
Lean Pork	9.6 g	3.5 g
Lean Beef	14.4 g	5.6 g
Chicken (skinless)	3.6 g	1.0 g

3-ounce portions, cooked/roasted USDA Nutrition Database, 1998.

Enjoy the additional hunting opportunity. Put more and healthier food in your freezer. And, secure a hunting privilege for the future by helping farmers reduce crop loss and manage deer populations at a tolerable level.

Jim Jansen is a depredation biologist for the department in eastern Iowa. Landowner with deer-damaged corn around him (top). Same landowner with 10 antlerless deer taken from his farm in the late bonus season.

Some farmers are looking for additional hunters to take antlerless deer on depredation permits (call the DNR depredation biologists for information -- 319-886-3767 in eastern lowa; 515-774-8563 in western lowa).

1999-2000 SPECIAL DEER HUNTS

Area	Season Dates	# Licenses	Where to Apply	Туре
Dubuque County Zone 319-589-4181 or 4263	All seasons (except youth)	290 antlerless 10 any-sex	Dubuque Co Recorder	Firearms & Archery
Backbone Park 319-924-2527	Dec. 4-5/Dec. 11-12	60 antlerless each	Park Office	Firearms
Black Hawk County Zone 319-277-2187	Oct. 4-Jan. 10	190 antlerless 10 any-sex	Hartman Reserve	Archery Only
Scott County Park 319-285-9656	Dec. 4-5/Dec. 11-12	90 antlerless total	Scott Co Park	Firearms
Linn County Zone 319-398-3441	All seasons (except youth)	300 antlerless	Linn Co Recorder	Firearms & Archery
Marion (City) 319-377-1511	Oct. 1-Jan. 10	75 antlerless	Marion Police Dept	Archery Only
Squaw CreekPark 319-398-3505	Oct. 1 - Jan. 10	100 antlerless	Linn CCB	Archery Only
Kent Park 319-645-2315	Dec.4-5/Dec. 11-12	60 antlerless each	Kent Park Office	Firearms
Ammunition Plant 319-753-7903	All seasons (except youth)	400 antlerless	IAAP Plant Office	Firearms & Archery
Elk Rock Park 515-842-6008	Dec. 4-5	50 antlerless	Park Office	Firearms
Polk County Zone 515-999-2557	Varies by location	500 antlerless	Polk Co Recorder, Polk CCB, Des Moines Waterworks	Firearms & Archery (varies by location

Lake Panorama 515-755-3101

Lake Manawa Park 712-366-0220 Hitchcock Nature Area 712-545-3283 Oct.1-Jan. 10/ Oct. 16-24

Oct. 1- Dec. 3 Nov. 20-24/ Nov. 29-Dec. 3/ Dec.4-5 50 antlerless/ 25 antlerless

30 antlerless

25 antlerless total/ 30 antlerless Members and guests only

and some local sporting goods stores

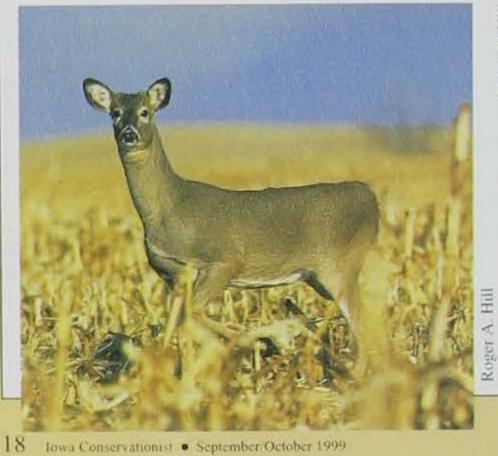
Park Office

Hitchcock Nature Center

Archery Only/ Muzzleloader

Archery Only

Archery Only/ Archery Only/ Firearms



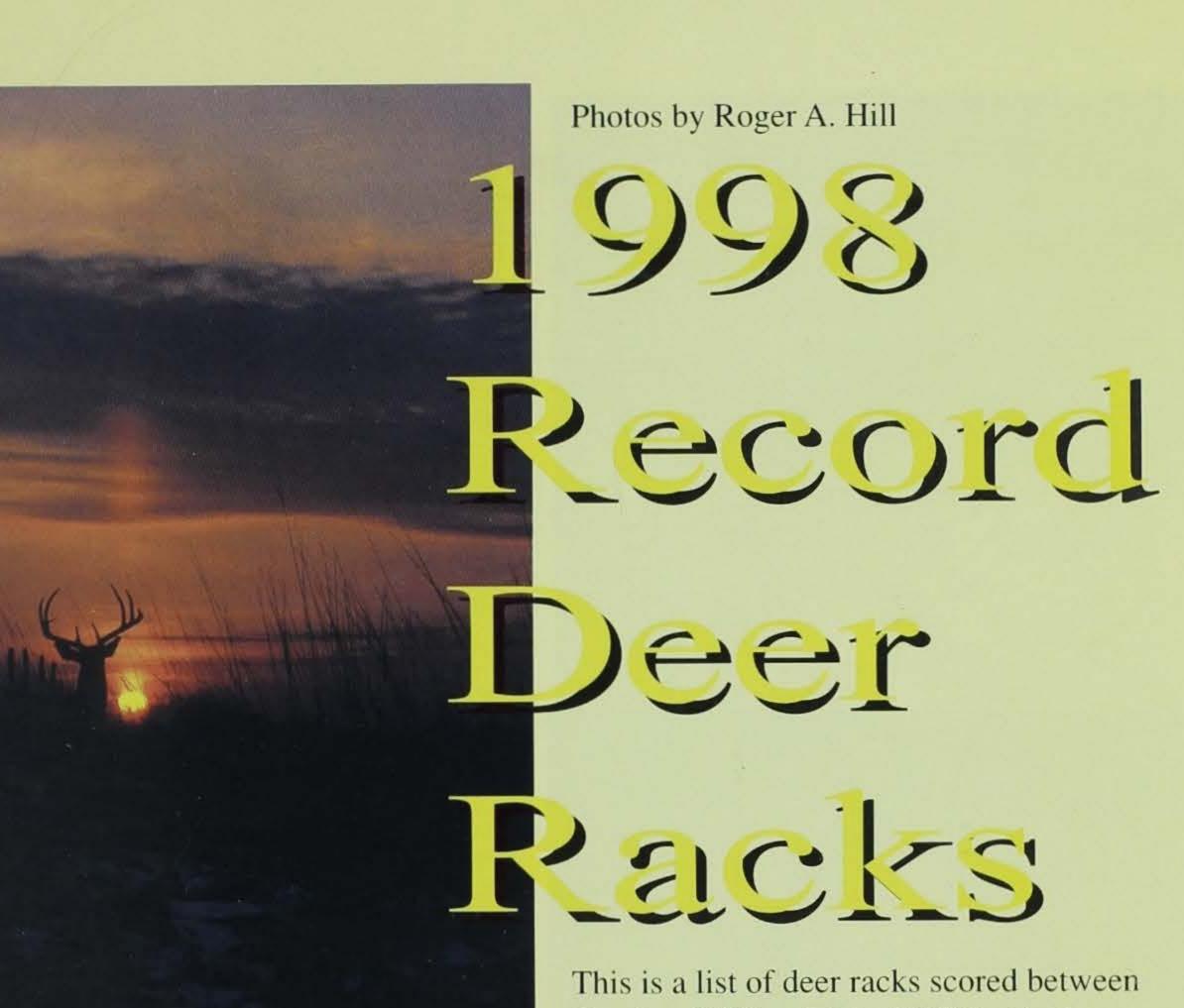


Bow Minim

14

name

Merie / Greg A Howard Kody V Craig F Shane Lewis I Joe Big John V Randy C Bandy Chad J Jeff Ot Ron Bi Kevin I Jeff rey Joe Lie Kevin I



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

This is a list of deer racks scored between October 1998 and July 1999 for the Iowa trophy deer record program.

Bow - Non-Typical

n

Inly

Dnly

Duly

(location)

miy

ader

)nly

)nly

Inly

in the

Minimum Qualifying Score - 155 pts.

Bow - Typical

Minimum Qualifying Score - 135 pts.

, ,		county	total				county	total	
name	city	taken	score	year	name	city	taken	score	year
Merle Allen	Norwalk	Madison	2134/8	1998	*Daniel Kauffman	Wapello	Louisa	205 3/8	1984
Greg Andrews	Corning	Adams	2097/8	1998	Joseph C Laird	Knoxville	Marion	1764/8	1998
Howard Schmitz	Janesville	Bremer	202 4/8	1998	Brad Baumler	Urbandale	Boone	1740/8	1998
Kody Wohlers	Missouri Valley	Harrison	1990/8	1998	Joe Lieb	Dubuque	Allamakee	1736/8	1998
Craig R Belknap	Ames	Des Moines	1985/8	1998	Chris Borcherding	Strawberry Point	Clayton	1715/8	1997
Shane W. Helmich	Dickens	Clay	1947/8	1998	Clarence Mincks	Decorah	Howard	1703/8	1991
Lewis Byers	Pierson	Woodbury	1902/8	1998	Nicholas Romano	Golden Valley	Warren	1690/8	1997
Terry Mc Duffey	Pleasant Hill	Appanoose	1892/8	1998	Dave Freihage	Pisgah	Monroe	1687/8	1998
Joe Biggerstaff	Sioux City	Monona	1832/8	1998	Greg Nelson	Cedar Rapids	Fayette	1657/8	1996
John W Shumate	Glenwood	Harrison	1811/8	1996	Drew Purcell	Ankeny	Union	164 0/8	1998
Randy Manuel	Swan	Warren	1771/8	1998	Matthew J Ewing	Alpena	Guthrie	163 4/8	1996
Andy C Decker	Corydon	Wayne	1712/8	1998	Joe Goodell	Brighton	Washington	163 0/8	1997
Ed Vokaty	Protivin	Winneshiek	1701/8	1998	Dave Madsen	Granger	Guthrie	1626/8	1998
Chad Johnston	Knoxville	Marion	1697/8	1998	Steve Fenley	Knoxville	Lucas	1621/8	1998
Kevin Brustkern	Walker	Black Hawk	168 1/8	1998	Ron Tuttle	Center Point	Benton	162 0/8	1998
Jeff Otto	W. Des Moines	Taylor	1626/8	1998	Steve Reetz	Arcadia	Harrison	1607/8	1995
Ron Brown	Cedar Falls	Butler	1607/8	1998	Clifford Kippack	Neola	Pottawattamie	1597/8	1998
Mike Reittinger	Dyersville	Clayton	1585/8	1998	Richard Glaspie	Essex	Page	1596/8	1964
Jeffrey Otto	W. Des Moines	Taylor	1583/8	1998	James L Reiser	Washburn	Des Moines	159 4/8	1996
Joe Lieb	Dubuque	Dubuque	1582/8	1996	Richard L Myers	Strawberry Point	Clayton	1582/8	1998
Kevin L Mc Donald	Amana	lowa	1557/8	1998	Greg Nagle	Long Grove	Scott	158 0/8	1997

Dorr	Theres	inal /	ant	immed)
Bow -	Typ	icai (cont	inued)

			county	total		Stuart J Nitzschke	Hornick	Woodbury	1473/8	199
	name	city	taken	score	year	Jerry Simon	West Liberty	Cedar	1471/8	199
				1220000	1000	Gary Havlik	Cedar Rapids	Linn	147 0/8	199
	John T Theiler	Des Moines	Warren	157 4/8	1998	Robert Howard	Ankeny	Polk	147 0/8	199
	Justin Hoeppner	Elk Run Heights	Clayton	1573/8	1998	Aaron Scharf	Ames	Story	146 6/8	199
	Matt Henderson	Shenandoah	Page	1570/8	1998	Jerry Tokheim	Humboldt	Humbolt	1463/8	199
	Tom Norris	Des Moines	Guthrie	156 5/8	1998	Todd Fellows	Farmington	Van Buren	1463/8	199
	Ed Miller	Onawa	Monona	1563/8	1998	Kelly White	Des Moines	Ringgold	146 0/8	
	Darwin Goddard	Charles City		1562/8	1998	Terry Schulz	Duncombe	Webster	1455/8	199
	PatSheldon	Sidney	Fremont	1557/8	1998	Mike Then	Dyersville	Clayton	145 4/8	199
	PatOgden	Tiffin	Johnson	155 1/8	1998	Jack Sickles	Creston	Taylor	145 1/8	199
	Jeff Hoover	Norwalk	Warren	1543/8	1997	Jeff Wilson	Mediapolis	Des Moines	145 1/8	199
	Larry R Shondel	Centerville	Appanoose	1533/8	1998	Ken Van Lengen	Parkersburg	Butler	145 1/8	199
	Wayne Squires		Fayette	1531/8	1998	Dick Paul	Red Oak	Montgomery	1447/8	199
	Jim Jansen	Tipton	Cedar	1530/8	1998	Duane Boswell	Davis City	Decatur	1447/8	198
	Roger Bagg	Independence	Fayette	1530/8	1998	Henry Moore	Pella	Jasper	1447/8	199
	Charles Greg Arnold	Algona	Kossuth	1527/8	1998	Terry W Amling	Zwingle	Jackson	1447/8	199
	Darrin Embray	Knoxville	Marion	1526/8	1998	Mike Rolow	Grimes	Warren	1446/8	199
	Jeff Hoover	Norwalk	Warren	1526/8	1999	Dave Messner	Maryville	Taylor	144 5/8	199
	Rick Ray	Marshalltown	Tama	152 4/8	1998	Chad Patrick Brandel	Dubuque	Dubuque	144 2/8	199
	Robin Schneider	Calamus	Des Moines	1516/8	1997	Scott L Messamaker	Indianola	Warren	1442/8	199
	Jay Konzen	Dyersville	Dubuque	1515/8	1998	Jack Rush	Saint Charles	Warren	144 0/8	199
	Joseph T Digman	Cedar Rapids		151 3/8	1998	Michael A Owens	Blue Grass	Muscatine	1437/8	199
						Randy Templeton	Blue Grass	Scott	143 4/8	199
-				-		Robert Bengford	Ida Grove	Ida	143 4/8	199

name



	city	county taken	total score	year
ke	Hornick	Woodbury	1473/8	1998
	West Liberty	Cedar	147 1/8	1998
	Cedar Rapids	Linn	147 0/8	1998
	Ankeny	Polk	147 0/8	1997
	Ames	Story	146 6/8	1997
	Humboldt	Humbolt	1463/8	1998
	Farmington Des Moines	Van Buren Ringgold	1463/8 1460/8	1998
	Duncombe	Webster	145 5/8	1998
	Dyersville	Clayton	145 4/8	1998
	Creston	Taylor	145 1/8	1993
	Mediapolis	Des Moines	145 1/8	1997
Í.	Parkersburg	Butler	145 1/8	1998
	Red Oak	Montgomery	1447/8	1997
	Davis City	Decatur	1447/8	1988
	Pella Zwingle	Jasper Jackson	1447/8 1447/8	1998 1998
	Grimes	Warren	144 6/8	1993
	Maryville	Taylor	144 5/8	1998
andel	Dubuque	Dubuque	1442/8	1998
aker	Indianola	Warren	144 2/8	1998
	Saint Charles	Warren	144 0/8	1998
S	Blue Grass	Muscatine	1437/8	1997
n	Blue Grass	Scott	143 4/8	1994
	Ida Grove North Liberty	lda Johnson	143 4/8 142 6/8	1997 1997
	Clinton	Jackson	142 6/8	1998
	Dubuque	Van Buren	142 5/8	1998
	Wheatland	Clinton	1422/8	1998
	Centerville	Appanoose	1421/8	1995
	Fairfield	Van Buren	141 4/8	1998
	Kalona	Washington	141 4/8	1998
	Blue Grass	Des Moines	141 3/8	1997 1998
	Decorah Norwalk	Winneshiek Warren	141 3/8 141 1/8	1995
	Indianola	Warren	141 0/8	1998
	Dallas Center	Polk	1410/8	1996
	Le High	Webster	1406/8	1998
	Letts	Louisa	1406/8	1998
	Decorah	Winneshiek	1406/8	1998
l.	Rock Valley	Sioux	140 4/8 140 4/8	1998 1997
	Red Oak Clinton	Montgomery Clinton	140 3/8	1998
	Marshalltown	Marshall	140 3/8	1998
	Bellevue	Jackson	1403/8	1998
	Decorah	Winneshiek	140 3/8	1998
1	Holts Summit	Crawford	140 2/8	1998
ť.	Oelwein	Fayette	140 2/8	1998
	Mount Pleasant	Henry	140 1/8	1998 1995
	Holstein Davenport	Woodbury Muscatine	140 1/8 139 7/8	1995
	Blue Grass	Des Moines	139 5/8	1998
	Dubuque	Dubuque	1393/8	1998
	Muscatine	Muscatine	139 1/8	1997
	Burlington	Des Moines	139 0/8	1997
	Delta	Keokuk	138 7/8	1998
	Centerville	Appanoose	1385/8	1996 1998
or	Dubuque Sioux Center	Dubuque Sioux	138 5/8 138 4/8	1998
er	Hillsboro	Van Buren	138 3/8	1998
	Ida Grove	Pottawattamie		1996
	Moville	Monona	138 2/8	1998
	Ryan	Delaware	138 1/8	1997
	Des Moines	Clarke	138 0/8	1998
g	Waukon	Allamakee	1377/8	1998 1998
	Sioux City Le Mars	Woodbury Monona	1377/8 1377/8	1998
	Waverly	Fayette	137 6/8	1998

name

Douglas Mike Eric Tracy Ter Brandon Daniel W Don Hous Joe Hake Lynn Hug James L Terry J M Dennis P Marc Hei Mike P K TomCarr Andy Lud Bruce Hu RandallL Steve Se Jim Matti MattKoei Mike Car Terry W/ Dick Pau Duane Ba

Doug Ch

Michael (

Dennis B

Brant Nol

Larry Stil

David E

Bob Boro

Francisco

Muz7

Minimun

name

Jeremy

Dave But

Richard F

Muzz

Minimun

name

'Ron Mur

'Ben Put

Jason Ja

Carey A

Ted Scha

Steve Se

Richard H

Rick L Al

Barb Old

Clark Ha

Pistol

Minimur

name

Dave H

Lloyd H

Jeff Kimmel Warren E Jensen Shawn Bartz Randy Templeton David J House Gary Sefert Milo Fred Brown Jr **Rick Piel** Jeff Pabst James E Quinn Christopher J Swanke John P Tigges Kevin Bradley Les Nelson Jason Tapken Mark Thomson Dean Reiter Bruce Cox **Rodney Dudley**

Burlington Des Moines 151 0/8 1506/8 Soldier Monona 150 5/8 Waterloo Winneshiek 150 3/8 Blue Grass Scott West Union Fayette 150 2/8 1502/8 Oelwein Fayette 150 0/8 Le CLaire Scott 1500/8 Creston Union Grundy Center 1497/8 Hardin 1492/8 Davenport Muscatine Cedar Rapids Linn 1490/8 1487/8 Dubuque Dubuque 1485/8 Carlisle Wayne Dallas 1483/8 Waukee Cedar Rapids Jones 1480/8 Des Moines 1480/8 Sperry Denver 1477/8 Bremer 1475/8 Logan Harrison 147 4/8 Walker Benton

Roger Quam **Owen Sandbulte** Travis Paul Dan Carlson Edward Albee Randy Steines Steve Daughton Dan Hollingworth Michael J Barker 1998 Clark Hays 1998 Steve E Klotz 1997 James E Quinn 1992 Craig A Owens 1997 Wayne A Briggs 1997 Gary Stauffer 1998 Stacy Fox 1998 **Troy Braden** 1998 Brent Thie 1994 Kevin A Schmidt 1998 Wayne O Vermee 1998 Jason Helling 1998 Ivan Sadler 1998 James Modrell 1998 Kyle Downs 1998 Jeff Jorgensen 1998 Randy Petersburg 1989 Steve Noel 1998 Tom Rohde Josh Buhrow

Jeffrey Jensen

Jerry R Mueller

David Riedesel

Ellsworth Cook

Craig A Owens Lyle Askelson

George Cline II

Brent Hines

John Flies Ed Vlicki

Jim Paul

Lee Whittman

Brent Thie

Mel Miller

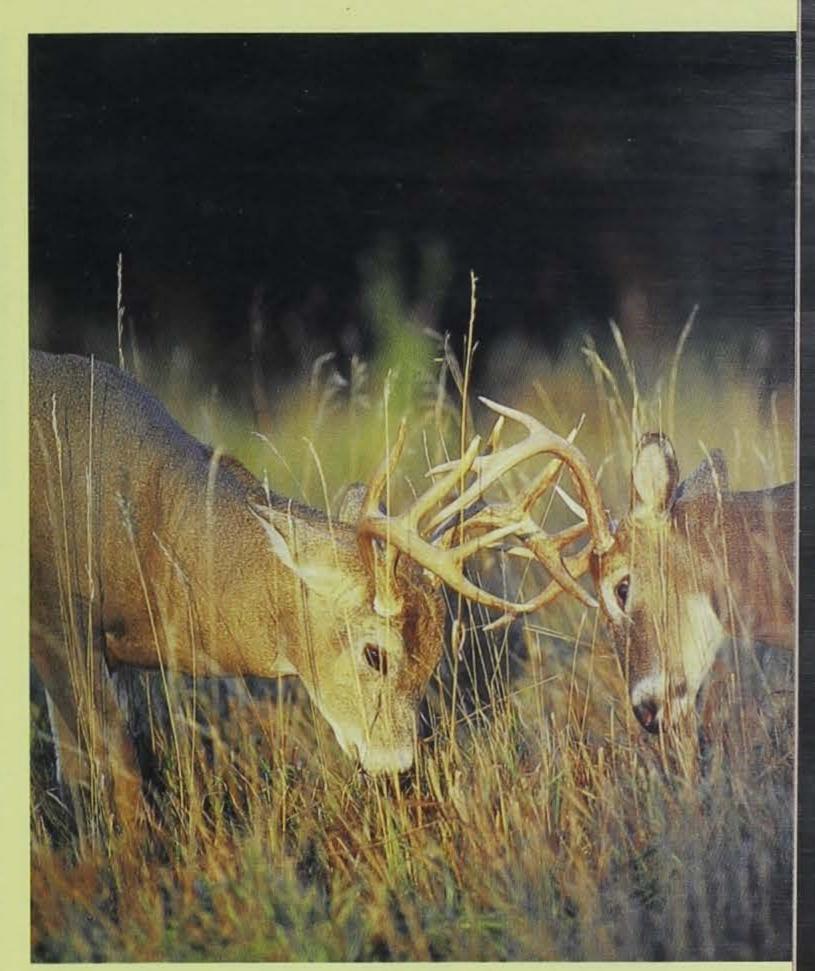
1		
Dre	Year	
3/8	1938	
1/8	193	
0/8	195	
0/8	1997	
6/8	1997	
3/8	1956	
3/8	1000	
0/8		
5/8	1998	
4/8	19%	
1/8	199	
1/8	1997	
1/8	1998	
7/8	1997	
7/8	1985	
7/8	1956	
7/8	1995	
6/8	1983	
5/8	1955	
2/8	1995	
2/8	1995	
0/8	1998	
7/8	1997	
4/8	1994	
4/8	1997	
6/8	1007	
6/8	1998	
5/8	1998	
2/8	191	
1/8	1995	
4/8	1998	
4/8	1998	
3/8	199T	
3/8	1995	
1/8	1995	
0/8	1998	
0/8	1996	
6/8	1998	
6/8	1996	

name	city	county taken	total score	year
Douglas Sweeney	Sioux City	Woodbury	137 5/8	1998
Mike Erickson	Des Moines	Guthrie	137 5/8	1998
Tracy Templeton	Bloomfield	Davis	137 5/8	1997
Brandon Moon	Latimer	Floyd	1373/8	1998
Daniel W Vermeer	Iowa City	Johnson	1372/8	1998
Don Houg	Winterset	Madison	137 2/8	1998
Joe Hakes	Cedar Rapids	Linn	1367/8	1998
Lynn Hughes	St Ansgar	Wright	1365/8	1998
James L Newman	Mount Vernon	Linn	1361/8	1998
Terry J Meyer	Dubuque	Dubuque	136 1/8	1998
Dennis Post	Dubuque	Jackson	136 0/8	1998
Marc Heien	Spencer	Clay	136 0/8	1998
Mike P Kramer	Earling	Shelby	136 0/8	1998
Tom Campbell	Marshalltown	Marshall	1357/8	1998
Andy Ludeking	Ridgeway	Winneshiek	1356/8	1997
Bruce Hupke	Carlisle	Warren	1356/8	1998
Randall Larson	Sheffield	Franklin	1356/8	1998
Steve Seibold	Hinton	Plymouth	1356/8	1998
Jim Matthews	Baxter	Jasper	135 4/8	1998
Matt Koenighain	Parnell	Iowa	135 4/8	1997
Mike Carter	Bellevue	Jackson	135 4/8	1999
Terry W Amling	Zwingle	Jackson	135 4/8	1997
Dick Paul	Red Oak	Page	1353/8	1997
Duane Baumler	Decorah	Winneshiek	1353/8	1999
Doug Chafa	Wapello	Adams	1352/8	1997
Michael G Cornwall	Estherville	Emmet	1352/8	1998
Dennis Boeding	Springville	Delaware	1351/8	1998
BrantNobig	Rochester	Winneshiek	1350/8	1998
Larry Still	Bronson	Plymouth	1350/8	1998
David E Schenck	Monticello	Jones	1317/8	1997
Bob Borowiak	Houston	Allamakee	131 3/8	1998
Francisco O. Estrada	Cedar Rapids	Benton	1301/8	1994

Muzzleloader - Non-Typical

Minimum Qualifying Score - 170 pts.

name *Jeremy Williams	city	county taken	total score	year
*Jeremy Williams	Clarinda	Page	202 5/8	1998
Dave Button	Indianola	Warren	186 5/8	1998
Richard E Floss	Baxter	Jasper	1853/8	1998



Pistol - Non-Typical Minimum Qualifying Score - 170 pts.

00	1350
14/8	1995
4/8	1997
3/8	挪
3/8	1998
3/8	1938
3/8	1998
2/8	1驟
2/8	1990
11/8	1998
1/8	1991 1995
7/8	1994
5/8	1996
3/8	1995
1/8	1997
0/8	1997
37/8	1998
35/8	1996
35/8	1998
34/8	1998
33/8	1996
32/8	1995
32/8	1998
31/8	199
30/8	1998
77/8	1996
7/8	1998
7/8	1958
76/8	1998
0	

1995

6/8

Muzzleloader - Typical

Minimum Qualifying Score - 150 pts.

		county	total	
name	city	taken	score	year
*Ron Murray	Missouri Valley	Harrison	178 1/8	1998
*Ben Puttmann	Washuta	Cherokee	170 0/8	1998
Jason Jacobsen	Urbana	Linn	166 6/8	1996
Carey A Banks	Westfield	Plymouth	160 4/8	1999
Ted Schabaker	Spragueville	Jackson	1603/8	1997
Steve Seipp	Dubuque	Dubuque	160 1/8	1998
Richard Heckethorn	Brighton	Jefferson	1594/8	1998
Rick L Allely	Panora	Fremont	1563/8	
Barb Olds	Monona	Clayton	154 2/8	1998
Clark Hays	Mount Pleasant	Henry	150 3/8	

Pistol - Typical

Minimum Qualifying Score - 150 pts.

ore	year
1 0/8	1998
0 1/8	1998
	ore 1 0/8 0 1/8

name	city	taken	score	year	
*Bob C Garside	Greenfield	Adair	2115/8	1998	

Shotgun - Non-Typical

Minimum Qualifying Score - 170 pts.

		county	total	
name	city	taken	score	year
*Donny Grant	Turin	Monona	240 0/8	1996
Don Houg	Winterset	Madison	2037/8	1998
Bill Brockert	Fruitland	Muscatine	2007/8	1998
Michael Ealy	Williamsburg	Iowa	200 5/8	1998
Chad Hesseltine	Crawfordsville	Washington	200 1/8	1998
Shane Hass	Mc Gregor	Clayton	1992/8	1998
Scott Busch	Macksburg	Madison	1977/8	1998
ClairMalanaphy	Decorah	Winneshiek	195 4/8	1998
Jim Ruggeberg	Davenport	Jackson	1932/8	1997
Brent Pladna	Clinton	Clinton	1922/8	1998
Dave Mosman	Carroll	Audubon	1917/8	
Daniel Bell	Burlington	Louisa	191 5/8	1998
Randy Snell	New Albia	Allamakee	190 4/8	1971
Pat Ryan	Waukon	Allamakee	1893/8	1961
Ted Halls	Murray	Clarke	1890/8	

Shotgun - Non-Typical (continued)

name	city	county taken
Virgil Terpstra	Pella	Mahask
Greg Collins	Logan	Harrison
Dick Hansmeier	Waukon	Allamak
John Hyde	New Albin	Allamak
Calvin Sams	Mitchellville	Monroe
Darin Vorwald	New Vienna	Clayton
Jerry Futer	Des Moines	Warren
Jill Shepperd	Atlantic	Cass
Jason Sullivan	Waukon	Allamak
Ed Rowan	Bellevue	Jackson
Dennis Weymiller	Harpers Ferry	Allamak
Michael John	West Burlington	DesMo
Stephen C Lalk	Albia	Appano
Chuck Cota	Harpers Ferry	Allamak
Dave Nelson	Exira	Audubo
Davin Vorwald	New Vienna	Clayton
Andy Mellecker	Riverside	Monroe
Scott Batterson	Drakesville	Davis
Charles Hopkins	Shenandoah	Fremon
Dave Reed	Maquoketa	Jackson
Lee Huntrods	Melbourne	Marshal
Oleg Cherko	Glenwood	Mills
Brian Wysong	Carlisle	Warren

Shotgun - Typical

Minimum Qualifying Score - 150 pts.

name	city	taken	score	year	
*John Chase	Glenwood	Mills	192 2/8	1997	
Milo Rolfe	Guttenburg	Clayton	180 5/8	1998	
Mark Heiar	Bellevue	Jackson	178 5/8	1998	
Mark Funk	Cumberland	Cass	178 4/8	1997	
Lyle Palmer Joe Hakes &	Manchester	Marion	178 3/8	1998	
Roger Carnicle	Cedar Rapids	Linn	178 2/8	1978	



			county	total	
na	ame	city	taken	score	year
R	udolph C. Ashbacher	Hiawatha	Linn	176 1/8	1998
Ja	imes Edward Beecher	Dubuque	Dubuque	174 1/8	1998
R	obert L Lundquist	Cherokee	Cherokee	1736/8	1998
Ri	ick Taylor	Clermont	Fayette	1724/8	1998
W	illiam Runkle	Spencer	Clay	1711/8	1953
St	eve Philby	Red Oak	Montgomery	1706/8	1997
Da	ave Phillips	Zwingle	Jackson	170 2/8	1998
LI	oyd Griffith	Lansing	Allamakee	170 0/8	1998
A	aron Atkinson	Colesburg	Clayton	169 0/8	1997
G	regg Davison	Des Moines	Taylor	168 5/8	1998
Pa	atRyan	Waukon	Allamakee	167 6/8	1979
R	andy Sheffler	La Porte City	Monroe	167 0/8	1993
Ja	acob S Clark	Monroe	Marion	1667/8	1998
De	enny Benbow	Woodward	Polk	165 3/8	1995
La	arry Moritz	West Union	Fayette	165 3/8	1983
C	harles Cota	Harpers Ferry	Allamakee	165 2/8	1992
H	erbert C Wester Jr	Mount Union	Van Buren	164 7/8	1998
D	ouglas M Miller	Bridgewater	Adair	164 2/8	1997
	ames H Durian	Cedar Rapids	Van Buren	164 2/8	1998

name

Dan Gotto jeff Butte Branch C Douglas PatCola Willard E Dean Mc Kevin Vol Brian Mah Craig DT PaulECa **RussKet** Jack Sick RodCarr Stoney L& John Sno Dwayne Kevin Mil Charlie S Doug Ho Ken Herr Dale HL John Mc Jeff Deet Glen Dol **Bill Koeh** Daniel A Jared La AlbertJE Craig Thi **EncHuff** Kevin Tu James H Larry Sup James W Dan Gam **RickHen** Dan Rya Dennis I Gary Gro Nick Ben Robert D Paul Ols Brian Wy **Timothy** Danny M DenverH Todd Per Aaron W Chris Ne: Ryan Ber Ryan Bre Dan Prue Wade Te Lonnie Ki Mike Chic **Bill Taylo** Mike She Dave Ma Aric Reic Jason Ho RobertL Scott J T Tim Devi Scott" k Gary Mat

Matt Mor

Tuger Carrin

total

score

188 0/8

187 7/8

1876/8

1862/8

1832/8

1831/8

181 1/8

181 1/8

180 1/8

1796/8

1785/8

1784/8

176 1/8

175 5/8

1750/8

1750/8

1746/8

173 1/8

1713/8

170 5/8

1703/8

1702/8

153 4/8

(a

n

kee

kee

kee

kee

ines

ose

kee

n

year

1979

1997

1997

1998

1998

1988

1998

1997

1998

1998

1998

1998

1997

1997

1995

1989

1997

1997

1998

1997

1998

1992

1997



Ray Gardner Gaylin Duryee Larry Putman Galen F Bollig Joe Frederick Steve Nieuwsma Brandon S Youngstrom Jason Carter **Rush Brentlinger** Randy J Hoy **Bob Bleymeyer** John Derga John Groves Mark Menne Matthias J Wagner **Russ Melby** Jeffrey D Mc Kinney Patrick T Mc Laughlin Trent Howland Sam Jones Dan Dunsbergen Heath Elliott William Greenwalt Lloyd Teff Chris Schoh Dan Terpstra Jay Lindenmaye Randall J Hulett

Albia Newton Bellevue Sioux City Durango Pella Sioux City Knoxville Iowa City Adel Dubuque Worthington Davenport Ciermont Aplington Castana Cedar Rapids Burlington Mapleton Luana Sully Boone Creston Decorah Grinnell New Sharon Marengo Eagleville

1997 164 2/8 Monroe 1998 164 1/8 Fayette 1998 Jackson 164 1/8 Woodbury 1637/8 1998 1998 163 5/8 Dubuque 1987 163 0/8 Marion 1627/8 1998 Plymouth 1997 1626/8 Marion 162 4/8 1993 Washington 1623/8 1997 Dallas 162 2/8 1961 Allamakee 162 0/8 1993 Dubuque 1998 161 5/8 Muscatine 161 4/8 1997 Fayette 1998 Jefferson 161 4/8 1998 1614/8 Monona 1997 1612/8 Louisa 1966 161 1/8 **Des Moines** 161 1/8 1998 Monona 1996 Allamakee 1610/8 160 6/8 1998 Jasper 1997 160 6/8 Boone 160 6/8 1998 Cass 1979 Allamakee 160 2/8 1997 160 1/8 Allamakee 1995 159 4/8 Marion 1594/8 1986 Van Buren 1996 1594/8 Decatur

	name	city	county taken	total score	year	- Allen	A		1		
8	Dan Gotto	Peosta	Dubuque	159 1/8	1997	CELLSA.	111	1	- the	post "	
	Jeff Butler	Albia	Monroe	159 1/8	1998			A T M	16	A FL	
	Branch Clinton	Littleport	Clayton	159 0/8	1998			P. martin	2	F 3.	
	Douglas R Wirth	Marshalltown	Decatur	1587/8	1998	100 000 30	STAT 6	1		at it	
	PatCota	Harpers Ferry	Allamakee	158 5/8	1990		1 1 5	1 1	1	12.	
	Willard Ehlers	Norway	Monroe	158 5/8	1998	E. J		10.00		1 2 1	5
	Dean Mc Kee	Waukon	Allamakee	158 4/8	1992			1 6		1	Ľ
	Kevin Votrobeck	Clutier	Tama	158 4/8	1998	Pr	11	11 2		24	ł
F	Brian Mahoney	Waukon	Allamakee	158 3/8	1996	V-	17 11	Y			Ł
	Craig D Turner	Oakland	Pottawattamie		1997					1-14	
	Paul E Carnicle	Cedar Rapids	Clayton	158 3/8	1994					5 19	
	Russ Kettmann	Bellevue	Jackson	158 3/8	1998	L A RIG	C Malende				3
	Jack Sickles	Creston	Ringgold	158 1/8	1997		10,121			2 14	2
	Rod Carroll	Greenfield	Adair	158 0/8	1997	1.4	0			In the last	-
	Stoney Leonard	Ladora	lowa	158 0/8	1997 1997	Same Free State	and the second s		(T ())	Ser. 1	ø
	John Snodgrass	Indianola	Warren	157 7/8 157 6/8	1997	The second second	The second s			an and	10
	Dwayne Kumpf Kevin Miles	New Albin Honkinton	Allamakee Jones	157 3/8	1998	PA E K					
	Charlie Sheets	Hopkinton Montezuma	Van Buren	157 3/8	1990	1 1 9.	A Star	A Partie of 1979			
	Doug Hodgins	Sioux City	Plymouth	157 1/8	1998	24 6 7 9 1	and the second	Web-station			
	Ken Herring	Earlham	Guthrie	157 0/8	1998	RE			A DEBANCED		
	Dale H La Rue	New Sharon	Mahaska	156 6/8	1998		Ser and a series of the	The second second			
	John Mc Millan	Elgin	Fayette	156 3/8	1985	- A - > 2	1	Same State	E and a	1 and 1	
	Jeff Deeth	Wyoming	Dallas	156 2/8	1997	The main of the	Soft I	- Tel	1 41 m	1 31	
	Glen Dolch	Atlantic	Cass	156 0/8	1998	Her war	- TUT				4
1	Bill Koehrsen	Council Bluffs	Harrison	155 5/8	1996	110000	- Any	211	1.	and and	1
	Daniel A Bell	Burlington	Des Moines	1553/8	1998	Carrier	18 10	1 1 1	1	100	
	Jared Landy	Orient	Adams	155 3/8	1997	1 3 200	A	20 7	ES po	178 L	and in
	Albert J Bellington	Fort Dodge	Webster	1552/8	1998	Carl Light		1 - 1-1	ber .	-	
	CraigThorn	Cedar Rapids	Marshall	155 2/8	1998	the second second	and with	1 mar	1.		15
	Eric Huffman	Glenwood	Mills	155 2/8	1997	Million and and and			and the		
		D	10 million in the	AFFOR	4007		the second se			had a	
	Kevin Turpen	Batavia	Keokuk	155 2/8	1997	The a water			A		
4	Kevin Turpen James Haworth	Des Moines	Poweshiek	155 1/8	1998	P	the same	-	4		
+	Kevin Turpen James Haworth Larry Supernaw	Des Moines Farragut	Poweshiek Fremont	155 1/8 155 1/8	1998 1997	7			int.	-	
Carlo Carlo	Kevin Turpen James Haworth Larry Supernaw James Wilmot	Des Moines Farragut Denver	Poweshiek Fremont Bremer	155 1/8 155 1/8 154 7/8	1998 1997 1998	county	total		int .	-	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman	Des Moines Farragut Denver Cedar Rapids	Poweshiek Fremont Bremer Henry	155 1/8 155 1/8 154 7/8 154 6/8	1998 1997 1998 1997	county	total	taken	score	vear	
X J L J D F	evin Turpen ames Haworth arry Supernaw ames Wilmot Dan Garman Rick Hergert	Des Moines Farragut Denver Cedar Rapids Amana	Poweshiek Fremont Bremer Henry Iowa	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8	1998 1997 1998 1997 1998	county name	total city	taken	score	year	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan	Des Moines Farragut Denver Cedar Rapids Amana Waukon	Poweshiek Fremont Bremer Henry Iowa Allamakee	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8	1998 1997 1998 1997 1998 1994	and the second		taken Allamakee	score 151 5/8	year 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8	1998 1997 1998 1997 1998 1994 1998	name	city			1	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote	Des Moines Farragut Denver Cedar Rapids Amana Waukon	Poweshiek Fremont Bremer Henry Iowa Allamakee	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8	1998 1997 1998 1997 1998 1994	name Brent Berns	city Waukon	Allamakee	151 5/8	1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8	1998 1997 1998 1997 1998 1994 1998 1998	name Brent Berns Brent Van De Maat	city Waukon Wapello	Allamakee Louisa	151 5/8 151 5/8	1997 1998	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8	1998 1997 1998 1997 1998 1994 1998 1998 1997	name Brent Berns Brent Van De Maat Richard Hesseltine	city Waukon Wapello Iowa City	Allamakee Louisa Washington	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8	1997 1998 1994 1998 1998	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 154 0/8	1998 1997 1998 1997 1998 1994 1998 1998 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels	city Waukon Wapello Iowa City Durant	Allamakee Louisa Washington Decatur Clayton Washington	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8	1997 1998 1994 1998 1998 1998	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 154 0/8 154 0/8 153 5/8	1998 1997 1998 1997 1998 1994 1998 1998 1997 1997 1994	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner	Allamakee Louisa Washington Decatur Clayton Washington Winneshiek	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8	1997 1998 1994 1998 1998 1998 1998	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 154 0/8 153 5/8 153 4/8	1998 1997 1998 1997 1998 1994 1998 1998 1997 1997 1997 1994 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point	Allamakee Louisa Washington Decatur Clayton Washington Winneshiek Clayton	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 3/8	1997 1998 1994 1998 1998 1998 1998 1998	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Warren	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 154 0/8 153 5/8 153 5/8 153 3/8	1998 1997 1998 1997 1998 1994 1998 1998 1997 1997 1997 1994 1997 1998 1997 1998	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora	Allamakee Louisa Washington Decatur Clayton Washington Winneshiek Clayton Delaware	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 3/8 151 2/8	1997 1998 1994 1998 1998 1998 1998 1984 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Warren Marion Allamakee Montgomery	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 5/8 153 5/8 153 3/8 153 2/8 153 2/8 153 2/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1997 1998 1997 1995 1995	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo	Allamakee Louisa Washington Decatur Clayton Washington Winneshiek Clayton Delaware Warren	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 3/8 151 2/8 151 2/8	1997 1998 1994 1998 1998 1998 1998 1998 1984 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Warren Marion Allamakee Montgomery Winneshiek	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 5/8 153 5/8 153 3/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1998 1997 1995 1997 1995 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGIen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock	Allamakee Louisa Washington Decatur Clayton Washington Winneshiek Clayton Delaware Warren Butler	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 3/8 151 2/8 151 2/8 151 2/8	1997 1998 1994 1998 1998 1998 1998 1998 1984 1997 1997 1954	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Marion Allamakee Montgomery Winneshiek Wayne	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 0/8 153 5/8 153 3/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1998 1997 1995 1997 1995 1997 1998 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGIen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel	Allamakee Louisa Washington Decatur Clayton Washington Winneshiek Clayton Delaware Warren Butler Audubon	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 3/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8	1997 1998 1994 1998 1998 1998 1998 1984 1997 1997 1997 1954 1998	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 0/8 153 5/8 153 3/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1997 1997 1998 1997 1995 1997 1995 1997 1998 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester	Allamakee Louisa Washington Decatur Clayton Washington Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 5/8 153 5/8 153 3/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1998 1997 1995 1997 1995 1997 1998 1997 1998	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGIen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines	Allamakee Louisa Washington Decatur Clayton Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Madison Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Monona	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 0/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1998 1997 1995 1997 1995 1997 1998 1997 1998 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGIen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison	Allamakee Louisa Washington Decatur Clayton Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold Lee	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8	1997 1998 1994 1998 1998 1998 1998 1998 1998	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Saint Charles Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Warren Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 0/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1997 1995 1997 1995 1997 1998 1997 1998 1997 1997 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGIen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia	Allamakee Louisa Washington Decatur Clayton Washington Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8	1997 1998 1994 1998 1998 1998 1998 1998 1998	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Saint Charles Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine Webster	155 1/8 154 7/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 5/8 153 5/8 153 3/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 153 0/8 153 0/8 152 6/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1995 1997 1998 1997 1998 1997 1997 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass	Allamakee Louisa Washington Decatur Clayton Washington Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 6/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller Mike Chiovaro	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha Urbandale	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Madison Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine Webster Warren	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 0/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 153 0/8 152 6/8 152 5/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1995 1997 1995 1997 1998 1997 1997 1997 1997 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGIen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens John Havel	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass Calmar	Allamakee Louisa Washington Decatur Clayton Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren Winneshiek	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 5/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller Mike Chiovaro Bill Taylor	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Saint Charles Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha Urbandale Grant	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Madison Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine Webster Warren Montgomery	155 1/8 154 7/8 154 7/8 154 6/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 5/8 153 5/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 153 0/8 152 6/8 152 5/8 152 5/8 152 4/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1995 1997 1995 1997 1998 1997 1997 1997 1997 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens John Havel Richard Schlater	city Waukon Wapello Iowa City Durant Oelwein Swisher Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass Calmar Lowden	Allamakee Louisa Washington Decatur Clayton Washington Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren Winneshiek Jones	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 5/8 150 5/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller Mike Chiovaro Bill Taylor Mike Shebetka	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Saint Charles Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha Urbandale Grant Solon	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Montgomery Waster Webster Warren Montgomery Johnson	155 1/8 154 7/8 154 7/8 154 5/8 154 5/8 154 3/8 154 0/8 154 0/8 154 0/8 153 5/8 153 5/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 153 0/8 152 6/8 152 5/8 152 4/8 152 4/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1995 1997 1998 1997 1998 1997 1997 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens John Havel Richard Schlater David Bahr	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass Calmar Lowden Waukon	Allamakee Louisa Washington Decatur Clayton Washington Washington Washington Warren Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren Winneshiek Jones Allamakee	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 5/8 150 5/8 150 5/8 150 4/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller Mike Chiovaro Bill Taylor Mike Shebetka Dave Martin	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha Urbandale Grant Solon Waukon	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Madison Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine Webster Warren Montgomery Johnson Allamakee	155 1/8 155 1/8 154 7/8 154 7/8 154 6/8 154 5/8 154 0/8 154 0/8 154 0/8 153 0/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 153 0/8 152 6/8 152 5/8 152 4/8 152 3/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1995 1997 1998 1997 1997 1997 1997 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens John Havel Richard Schlater David Bahr Robert Huntrods	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass Calmar Lowden Waukon River Falls	Allamakee Louisa Washington Decatur Clayton Washington Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren Winneshiek Jones	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 5/8 150 5/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller Mike Chiovaro Bill Taylor Mike Shebetka Dave Martin Aric Reicks	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha Urbandale Grant Solon Waukon Lawler	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine Webster Warren Montgomery Johnson Allamakee Chickasaw	155 1/8 155 1/8 154 7/8 154 6/8 154 5/8 154 0/8 154 0/8 154 0/8 153 0/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 153 0/8 152 6/8 152 5/8 152 2/8 152 3/8 152 3/8 152 3/8 152 3/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1995 1997 1995 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens John Havel Richard Schlater David Bahr Robert Huntrods Bill Grothoff	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass Calmar Lowden Waukon River Falls Eldora	Allamakee Louisa Washington Decatur Clayton Washington Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren Winneshiek Jones Allamakee Story	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 5/8 150 5/8 150 5/8 150 4/8 150 4/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller Mike Chiovaro Bill Taylor Mike Shebetka Dave Martin Aric Reicks Jason Howe	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Saint Charles Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha Urbandale Grant Solon Waukon Lawler	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine Webster Warren Montgomery Johnson Allamakee Chickasaw Allamakee	155 1/8 155 1/8 154 7/8 154 7/8 154 6/8 154 5/8 154 0/8 154 0/8 154 0/8 153 5/8 153 5/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 153 0/8 152 6/8 152 5/8 152 2/8 152 2/8 152 2/8 152 2/8 152 2/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1995 1997 1995 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens John Havel Richard Schlater David Bahr Robert Huntrods	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass Calmar Lowden Waukon River Falls	Allamakee Louisa Washington Decatur Clayton Washington Washington Washington Washington Washington Washington Washington Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren Winneshiek Jones Allamakee Story Hardin	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 5/8 150 5/8 150 5/8 150 4/8 150 4/8 150 3/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller Mike Chiovaro Bill Taylor Mike Shebetka Dave Martin Aric Reicks Jason Howe Robert Ludeking	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha Urbandale Grant Solon Waukon Lawler Waukon Decorah	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine Webster Warren Montgomery Johnson Allamakee Chickasaw	155 1/8 155 1/8 154 7/8 154 7/8 154 6/8 154 5/8 154 0/8 154 0/8 154 0/8 153 0/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 153 0/8 152 6/8 152 5/8 152 5/8 152 2/8 152 2/8 152 2/8 152 1/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1995 1997 1995 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens John Havel Richard Schlater David Bahr Robert Huntrods Bill Grothoff Charles E Norton	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass Calmar Lowden Waukon River Falls Eldora Burlington	Allamakee Louisa Washington Decatur Clayton Washington Washington Washington Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren Winneshiek Jones Allamakee Story Hardin Van Buren	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 6/8 150 5/8 150 5/8 150 5/8 150 4/8 150 3/8 150 3/8 150 2/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller Mike Chiovaro Bill Taylor Mike Shebetka Dave Martin Aric Reicks Jason Howe Robert Ludeking Scott J Taylor	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha Urbandale Grant Solon Waukon Lawler Waukon Lawler Waukon	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Madison Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine Webster Warren Montgomery Johnson Allamakee Chickasaw Allamakee Winneshiek	155 1/8 155 1/8 154 7/8 154 7/8 154 6/8 154 5/8 154 0/8 154 0/8 154 0/8 153 0/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 152 6/8 152 5/8 152 5/8 152 2/8 152 2/8 152 2/8 152 1/8 152 1/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1995 1997 1998 1997 1997 1997 1997 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens John Havel Richard Schlater David Bahr Robert Huntrods Bill Grothoff Charles E Norton Erv Rickels	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass Calmar Lowden Waukon River Falls Eldora Burlington Anamosa	Allamakee Louisa Washington Decatur Clayton Washington Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren Van Buren Winneshiek Jones Allamakee Story Hardin Van Buren Jones	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 5/8 150 5/8 150 5/8 150 5/8 150 4/8 150 3/8 150 2/8	1997 1998 1994 1998 1998 1998 1998 1997 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller Mike Chiovaro Bill Taylor Mike Shebetka Dave Martin Aric Reicks Jason Howe Robert Ludeking	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha Urbandale Grant Solon Waukon Lawler Waukon Decorah	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Madison Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine Webster Warren Monona Muscatine Webster Warren Monona Muscatine Webster Warren Montgomery Johnson Allamakee Chickasaw Allamakee Winneshiek	155 1/8 155 1/8 154 7/8 154 7/8 154 6/8 154 5/8 154 0/8 154 0/8 154 0/8 153 0/8 153 2/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 153 0/8 152 6/8 152 5/8 152 5/8 152 2/8 152 2/8 152 2/8 152 1/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens John Havel Richard Schlater David Bahr Robert Huntrods Bill Grothoff Charles E Norton Erv Rickels Roland Linder Jr	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass Calmar Lowden Waukon River Falls Eldora Burlington Anamosa Monona	Allamakee Louisa Washington Decatur Clayton Washington Washington Washington Warneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren Van Buren Winneshiek Jones Allamakee Story Hardin Van Buren Jones Clayton	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 7/8 150 5/8 150 5/8 150 5/8 150 5/8 150 4/8 150 3/8 150 2/8 150 2/8	1997 1998 1994 1998 1998 1998 1998 1998 1997 1997 1997	
	Kevin Turpen James Haworth Larry Supernaw James Wilmot Dan Garman Rick Hergert Dan Ryan Dennis L Sparks Gary Grote Nick Berry Robert Dale Johnson II Paul Olson Brian Wysong Timothy Benge Danny Massick Denver Halverson Todd Pennock Aaron Wemark Chris Neal Ryan Becker Ryan Breitbach Dan Pruett Wade Terrill Lonnie Keller Mike Chiovaro Bill Taylor Mike Shebetka Dave Martin Aric Reicks Jason Howe Robert Ludeking Scott J Taylor Tim Devine	Des Moines Farragut Denver Cedar Rapids Amana Waukon Waterloo SiouxRapids Lake View Des Moines Saint Charles Carlisle Norwalk Knoxville Decorah Elliot Ridgeway Corydon Ossian Cedar Falls Onawa Letts Omaha Urbandale Grant Solon Waukon Lawler Waukon Decorah Estherville Siqourney	Poweshiek Fremont Bremer Henry Iowa Allamakee Benton Clay Decatur Warren Madison Warren Warren Marion Allamakee Montgomery Winneshiek Wayne Fayette Decatur Monona Muscatine Vebster Warren Monona Muscatine Vebster Warren Montgomery Johnson Allamakee Chickasaw Allamakee Keokuk	155 1/8 154 7/8 154 7/8 154 7/8 154 6/8 154 5/8 154 0/8 154 0/8 154 0/8 153 0/8 153 2/8 153 2/8 153 2/8 153 2/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 1/8 153 0/8 153 0/8 152 6/8 152 5/8 152 5/8 152 2/8 152 2/8 152 1/8 152 1/8 152 1/8	1998 1997 1998 1997 1998 1994 1998 1997 1997 1997 1997 1995 1997 1995 1997 1997	name Brent Berns Brent Van De Maat Richard Hesseltine Trent Mangels Chad Bushkofsky AGlen F Malmberg Richie Corcoran Kevin Baumgartner Delbert Hettinger Giles Seuferer Randy Ruth Bruce Vorm Ed Urell Ken Robertson Michael A Kempker Steve Reetz Craig A Owens John Havel Richard Schlater David Bahr Robert Huntrods Bill Grothoff Charles E Norton Erv Rickels Roland Linder Jr Larry Hook	city Waukon Wapello Iowa City Durant Oelwein Swisher Sumner Strawberry Point Aurora Milo Shell Rock Adel Dorchester Des Moines Fort Madison Arcadia Blue Grass Calmar Lowden Waukon River Falls Eldora Burlington Anamosa Monona	Allamakee Louisa Washington Decatur Clayton Washington Washington Winneshiek Clayton Delaware Warren Butler Audubon Allamakee Ringgold Lee Harrison Van Buren Van Buren Winneshiek Jones Allamakee Story Hardin Van Buren Jones Clayton Jefferson	151 5/8 151 5/8 151 5/8 151 5/8 151 4/8 151 4/8 151 4/8 151 2/8 151 2/8 151 2/8 151 2/8 151 0/8 151 0/8 151 0/8 151 0/8 151 0/8 150 7/8 150 6/8 150 5/8 150 5/8 150 5/8 150 5/8 150 4/8 150 3/8 150 2/8 150 2/8 150 2/8 150 2/8	1997 1998 1994 1998 1998 1998 1998 1997 1997 1997 1997	



James wilmot	Denver	Diemer	134 //0	1990					
Dan Garman	Cedar Rapids	Henry	154 6/8	1997	county	total			
Rick Hergert	Amana	lowa	154 5/8	1998	name	city	taken	score	year
DanRyan	Waukon	Allamakee	154 3/8	1994					
Dennis L Sparks	Waterloo	Benton	154 0/8	1998	BrentBerns	Waukon	Allamakee	151 5/8	1997
Gary Grote	SiouxRapids	Clay	154 0/8	1998	Brent Van De Maat	Wapello	Louisa	1515/8	1998
Nick Berry	Lake View	Decatur	154 0/8	1997	Richard Hesseltine	lowa City	Washington	1515/8	1994
Robert Dale Johnson II	Des Moines	Warren	154 0/8	1997	Trent Mangels	Durant	Decatur	1515/8	1998
Paul Olson	Saint Charles	Madison	153 5/8	1994	Chad Bushkofsky	Oelwein	Clayton	1514/8	1998
Brian Wysong	Carlisle	Warren	1534/8	1997	AGlen F Malmberg	Swisher	Washington	1514/8	1998
Timothy Benge	Norwalk	Warren	153 3/8	1998	Richie Corcoran	Sumner	Winneshiek	1514/8	1998
Danny Massick	Knoxville	Marion	153 2/8	1997	Kevin Baumgartner	Strawberry Point	Clayton	1513/8	1984
DenverHalverson	Decorah	Allamakee	1532/8	1995	Delbert Hettinger	Aurora	Delaware	1512/8	1997
Todd Pennock	Elliot	Montgomery	1532/8	1997	Giles Seuferer	Milo	Warren	1512/8	1997
Aaron Wemark	Ridgeway	Winneshiek	153 1/8	1998	Randy Ruth	Shell Rock	Butler	1512/8	1954
Chris Neal	Corydon	Wayne	153 1/8	1996	Bruce Vorm	Adel	Audubon	151 0/8	1998
Ryan Becker	Ossian	Fayette	153 1/8	1997	Ed Urell	Dorchester	Allamakee	1510/8	1996
Ryan Breitbach	Cedar Falls	Decatur	153 1/8	1997	Ken Robertson	Des Moines	Ringgold	1510/8	1993
Dan Pruett	Onawa	Monona	1530/8	1997	Michael A Kempker	Fort Madison	Lee	1510/8	1997
Wade Terrill	Letts	Muscatine	1530/8	1998	Steve Reetz	Arcadia	Harrison	1507/8	1994
Lonnie Keller	Omaha	Webster	1526/8	1997	Craig A Owens	Blue Grass	Van Buren	1506/8	1998
Mike Chiovaro	Urbandale	Warren	152 5/8	1990	John Havel	Calmar	Winneshiek	150 5/8	1994
Bill Taylor	Grant	Montgomery	152 4/8	1998	Richard Schlater	Lowden	Jones	150 5/8	1998
Mike Shebetka	Solon	Johnson	152 4/8	1998	David Bahr	Waukon	Allamakee	150 4/8	1998
Dave Martin	Waukon	Allamakee	152 3/8	1998	Robert Huntrods	River Falls	Story	150 4/8	199
Aric Reicks	Lawler	Chickasaw	152 2/8	1998	Bill Grothoff	Eldora	Hardin	150 3/8	1991
Jason Howe	Waukon	Allamakee	152 1/8	1997	Charles E Norton	Burlington	Van Buren	150 2/8	1997
Robert Ludeking	Decorah	Winneshiek	152 1/8	1971	Erv Rickels	Anamosa	Jones	150 2/8	1998
Scott J Taylor	Estherville	Guthrie	152 1/8	1993	Roland Linder Jr	Monona	Clayton	150 2/8	1998
Tim Devine	Sigourney	Keokuk	152 1/8	1998	Larry Hook	Brighton	Jefferson	150 0/8	1998
"Scott" Kurschinski	Des Moines	Clarke	152 0/8	1996	Mark Egan		Allamakee	150 0/8	1998
Gary Matthias	Waverly	Fayette	1517/8	1998	Mike Asanmacher	Preston	Clinton	150 0/8	1996
Matt Mc Nichols	Creston	Union	1517/8	1998	Robert Cota	Harpers Ferry	Allamakee	150 0/8	1985

ALL-TIME TOP 10 RECORD RACKS

Total Score

200-2/8

199-5/8

198-1/8 196-4/8

195-1/8

194-3/8

192-7/8

192 2/8

191-4/8

190-4/8

SHOTGUN, TYPICAL

City Name Harold Dickman, Sr. Woodbine Wayne A. Bills Des Moines Kenneth Tilford Lamoni Michael R. Edle Danville George L. Ross Ottumwa Forest N. Richardson New Virginia W Eugene Zieglowsky Washington Glenwood *John Chase Dennis Pollock Humeston Jeff Scott Mapleton

MUZZLELOADER, TYPICAL

County Taken Harrison Hamilton Decatur Des Moines Wapello Warren Van Buren Mills Wayne

Monona

Year

1996

SHOTGUN, NONTYPICAL

			County		Total
	Name	City	Taken	Year	Score
3	Larry Raveling	Emmetsburg	Clay	1973	282
3	Lyle Spitznoggle	Wapello	Louisa	1982	258-2/8
3	David Mandersheid	Welton	Jackson	1977	256-7/8
3	Carroll Johnson	Moorhead	Monona	1968	256-2/8
3	Larry J. Caldwell	Des Moines	Warren	1990	248-6/8
3	Don Boucher	Albian	Marshall	1961	245-3/8
Inter State	Carl Wenke	Oedar Rapids	Lee	1972	245
1.15	Robert Wonderlich	Oskaloosa	Monroe	1970	244-6/8
3	*Donny Grant	Turin	Monona	1996	240-0/8
3	Wendell R. Prottsman	Mt. Pleasant	Henry	1988	231-1/8

MUZZLELOADER, NONTYPICAL

MUZZELLUADI	ER, ITTICA	County	121-1	Total	ATTACK OF THE		County		Total	
Name	City	Taken	Year	Score	Name	City	Taken	Year	Score	
Jerry W. Conover	Sioux City	Monona	1990	1/182-7/8	Mike Moody	Hamburg	Fremont	1990	210-2/8	1
Ron Murray	Missouri Valley	y Harrison	1998	1781/8	Vincent P. Jauron	Harlan	Monona	1990	209-1/8	
John Russell	Blue Grass	Muscatine	1997	1172-4/8	Daniel Kaufman	Wapello	Louisa	1984	205-3/8	
Ric Bishop	Eldridge	Keokuk	1997	172-1/8	Jeff Tussey	Creston	Union	1995	205	
John S. Cook	Maquoketa	Jones	1997	170-6/8	Jeremy Williams	Clarinda	Page	1998	2025/8	
Bruce L. Hupke	Carlisle	Warren	1994	170-3/8	Denny Baum	Ottumwa	Wapello	1990	202-1/8 200 6/8	
Patrick G. Burkle	Earlville	Clayton	1990	170-2/8	Mike Garber	Eldon	Wapello Mitchell	1996 1991	200-5/8	
*Ben Puttmann	Washuta	Cherokee	1998	170.0/8	Dean Beyer Jim Évans	Osage Muscatine	Muscatine	1995	196	
Charles Hixson	Chariton	Lucas	1989	170	Steve Mundell	Ottumwa	Monroe	1991	196	
Kevin Burge	Hamburg	Fremont	1992 1995	167-7/8 167-7/8	Oleveniunden	Cuomina	In or not	pilan a	and the effective	
Darrel Orwig	Dana	Greene	1995	10/FAID	1 Jack Street					
PISTOL, TYPICAL				PISTOL, NON-7	TYPICAL					
	9	County		Total /			County		Total	
Name	City	Taken	Year	Score	Name	City	Taken	Year	Score	
*Dave Hotz	Cedar Rapids		1998	161-0/8	*Bob C Garside	Greenfield	Adair	1998	211-5/8	
*Lloyd Hayes	Washington	Washington	1998	150-1/8						
BOW, TYPICAL	and the second		à.	13	BOW, NONTYP	ICAL				
AND MARKED STUDIES		County	4	Total	No. and State Market State		County		Total	
Name	City	Taken	Year	Score	Name	City -	Taken	Year	Score	
*Daniel Kauffman	Wapello	Louisa	1984	205 3/8	Russ Clarken	Desoto	Dallas	1994	236-7/8	
Lloyd Goad	Knoxville	Monroe	1962	197-6/8	Mike Hobart	Prole	Madison	1993 1995	229-5/8 229-4/8	
Robert Miller	Wyoming	Jones	1977	194-2/8	Terry M. Long	Des Moines	Polk Decatur	1995	229-4/0	
Steven E. Tyer	North Liberty	Johnson	1994	194	Jack Schuler Jr. Jerry M. Monson	Indianola Clear Lake	Cerro Gordo	1955	222-1/8	
Roy Allison	Knoxville	Monroe	1995	193-5/8	Ric Porske	Davenport	Scott	1996	221 6/8	
Jeffery L. Whisker	Clinton	Scott Polk	1993 1981	191	David Propst	Duncombe	Webster	1987	219-3/8	
Richard B. Swin	Des Moines	Allamakee	1996	189 1/8	Blaine R. Salzkorn	Sutherland	Clay	1970	218-1/8	
Randy Petersburg Kevin Peterson	Waukon Mediapolis	Des Moines	1998	188-1/8	George A. Smith	Monona	Allamakee	1991	217-4/8	
Dave Zima	Blair	Monona	1996	186-4/8	Chris Hackney	Allerton	Wayne	1983	215-5/8	
Davezina	Dian			122.02	ALL AND		and the first			

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

24 Iowa Conservationist • September/October 1999

lub ha f damn vers to lost ha was our project : ation Ar the mos valleys

Belva Deer Lake

The following is a recent article from the *Iowa Sierran* by Wally Taylor, former Sierra Club Chapter Chair, and response from former Natural Resource Commission member Tom Monroe.

> Photos of the Belva Deer Area by Clay Smith

Another

flooded by a 700-acre impoundment (a

can construction of an artificial im-

Total Score 211-58

Tetal

Score

2367 8 229-58 229-48 227 222-18 221-63

219-38 218-1/8 217-48

215-58

U

Total

Score

258-28 256-78 256-28 248-68

245-38

245

244-61

231-18

282

Dammed Lake

DNR Funding a Dam and Lake on Keokuk County's German Creek

by Wally Taylor

Throughout the years the Sierra Club has opposed the practice in Iowa of damming free-flowing creeks and rivers to make artificial lakes. Our most hard-fought battle on this issue was our effort to stop the dam and lake project at Brushy Creek State Recreation Area, in Webster County. One of the most beautiful and diverse stream valleys in Iowa was destroyed, to be more accurate description than "lake"). This was a project the Iowa Department of Natural Resources (DNR) was determined to build, no matter what.

And this building of artificial lakes doesn't stop. Most recently, a news article told of a project by the Keokuk County Conservation Board to build a dam on German Creek to create an impoundment being called Lake Belva Deer. This project will cost over a million dollars, the money coming partially from federal funds administered by the DNR and partially from the state's Resource Enhancement and Protection (REAP) Act.

The use of these funding sources is bad enough. The federal money, supposedly for fisheries restoration, is not restoring fish habitat. There never was a lake on German Creek, so how poundment be restoring what never existed? Rather, this dam will destroy the natural habitat flooded by the impoundment and severely alter the environment along the creek below the dam. This is a misuse of money that should be used to restore the natural stream habitats so fish can live and reproduce naturally.

And the REAP money used in this manner violates the spirit of the REAP law. REAP was to be used to preserve and restore Iowa's natural environment, not destroy it. In passing REAP, the Iowa Legislature noted that almost all of our prairies, wetlands and woodlands have been lost. Are we now going to destroy our rivers and streams, too?

It was noted in spring 1995 *Iowa Sierran* that over \$3.6 million from the REAP Open Spaces fund was being used to build the dam on Brushy Creek (FY1995-FY1997), and that another \$3.1 million from the same fund was to be used for dam- and lake-related facilities at the Brushy Creek site (FY1995-FY2000). Is REAP money going to continue to be used in this way to fund environmental destruction, instead of environmental protection?

In 1989, during debate on the Brushy Creek dam, The Des Moines Register quoted State Representative (now DNR Director) Paul Johnson:

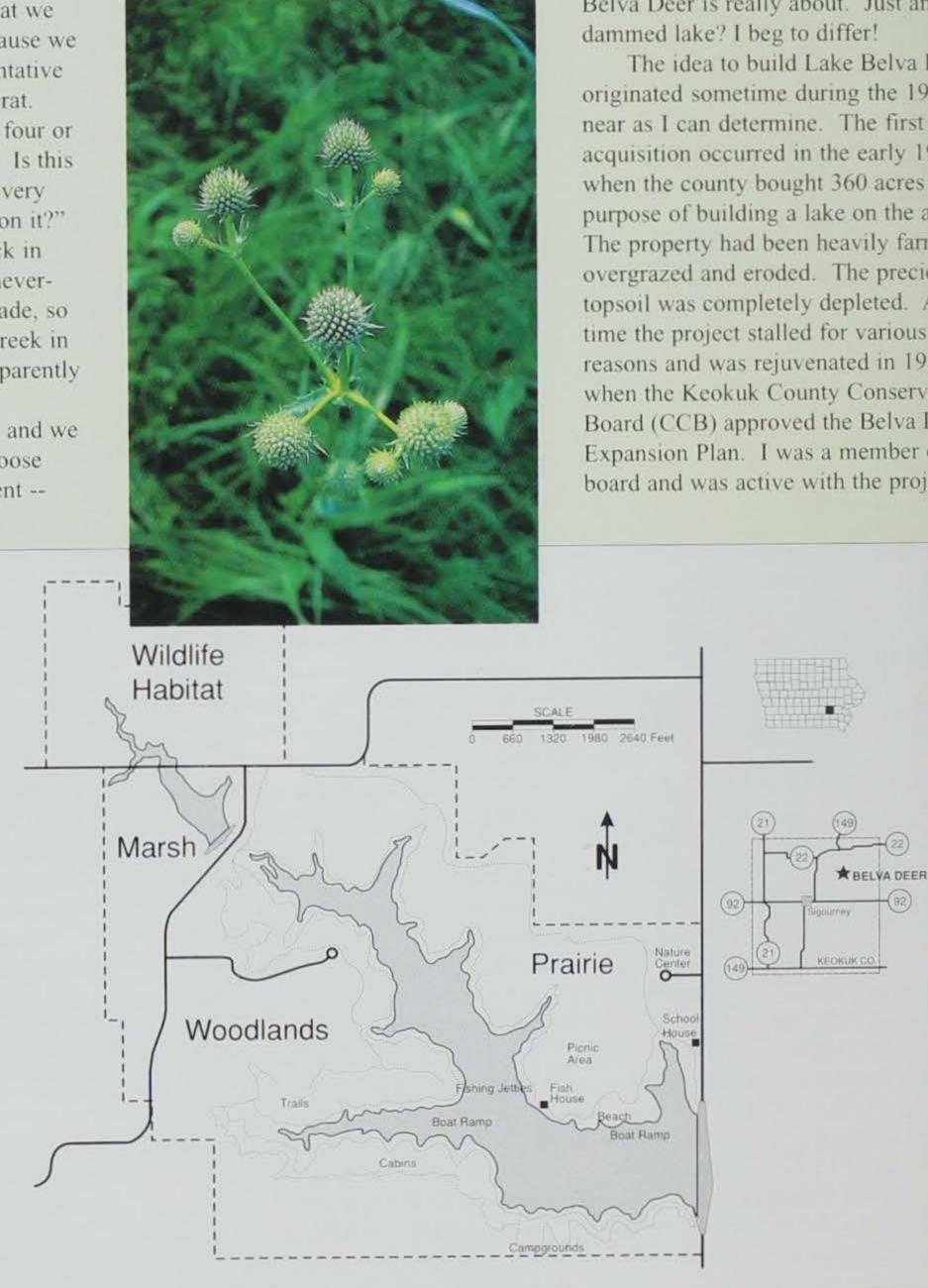
"I've heard over and over that we ought to build Brushy Creek because we promised to do it," said Representative Paul Johnson, a Decorah Democrat. "Now I'm hearing that there are four or five more lakes we've promised. Is this a never-ending promise so that every stream in Iowa will have a dam on it?"

Paul Johnson's question back in 1989 was very well put. Is it a neverending promise that the DNR made, so that eventually every river and creek in Iowa will have a dam on it? Apparently it 15.

But we live in a democracy, and we have elections so that we can choose new people to run our government -people who will change bad policies. That was why so many of us worked last year to elect Tom Vilsack to be Iowa's new governor. We were very unhappy with the way Gov. Terry Branstad and his appointee who ran the DNR were destroying state lands instead of protecting them. Branstad's misguided policies included allowing commercial logging in state parks and planning and promoting artificial lakes building on state lands. And that is why the most disappointing news in the article about Lake Belva Deer was that our new Lieutenant Governor, Sally Pedersen, spoke at a banquet recently celebrating this debacle. She

spoke in glowing terms about it. The Vilsack-Pedersen administration should be leading the state in a different direction. It is our responsibility as Sierra Club members to persuade them to do that.

Editor's Note: The German Creek dam funding was approved by the Natural Resources Commission before the appointment of Paul Johnson to be the new DNR director.



Belva Deer Lake Issue Revisited

by Tom Monroe

I feel compelled to set the record straight, lest readers of Taylor's article think they have a true picture of what Belva Deer is really about. Just another dammed lake? I beg to differ!

The idea to build Lake Belva Deer originated sometime during the 1950s, as near as I can determine. The first land acquisition occurred in the early 1970s when the county bought 360 acres for the purpose of building a lake on the area. The property had been heavily farmed, overgrazed and eroded. The precious topsoil was completely depleted. At this time the project stalled for various reasons and was rejuvenated in 1989 when the Keokuk County Conservation Board (CCB) approved the Belva Deer Expansion Plan. I was a member of that board and was active with the project.

The Soil seven pr 1.300 ad ers signi sell if th During 1 landown nately, 0 is now r dam for

Let has take years of Park. Thi

grade O attended chapero school o IS SPOILS and Wa Keokuk present archery. native A first aid shelters. event he teaches apprecia

The planted area. M by scho later to This year planted will be are a sm over all The from the has resto cropland forbes, project future. remnant be the p A3 directly trap sed home fo includin ducks, s insects. The Soil Conservation Service identified seven properties for acquisition, a total of 1,300 additional acres, and all landowners signed a letter of intent to willingly sell if the county would build the lake. During the ensuing nine years, six of the landowners sold willingly and, unfortunately, one was condemned. The county is now ready to proceed with building the dam for Lake Belva Deer.

te record or's article e of what ust another ! Belva Deet the 1950s, as e first land arly 1970s acres for the n the area. ly farmed, precious ted. At this

arious.

in 1989

nservation

lelva Deer

mber of that

e project.

Let's relate a little bit about what has taken place during the county's 29 years of stewardship with Belva Deer Park.

This year, the 21st annual sixthgrade Overnight Tent Campout was attended by 82 sixth graders and 26 adult chaperones. Campers came from all school districts in the county. The event is sponsored by the Keokuk County Soil and Water Conservation District, the Keokuk CCB and friends. Activities present included fire-starting, fisheries, archery, hunter safety, furs, casting, native American cultures, dog obedience, first aid, soils, boat safety, birds and shelters, and geology. This is a great event held every year, rain or shine, and teaches our young men and women an appreciation of our natural resources.

Thousands of trees have been planted over the years to help reforest the area. Many of these trees were planted by school children who come back years later to see how "their" trees are doing.



overgrazed pasture, full of thorns, thistles and multifora rose.

Many sediment ponds have been built to protect the main lake from siltation, and they are natural resource havens for a host of wild flora and fauna. The value of these structures cannot be measured in terms of dollars and cents. Instead, one could measure their value on a sunny Sunday afternoon filled with exploring and observation.

The use of REAP funds to help create Belva Deer is entirely justified. I was a supportive lobbyist in the Iowa Legislature when REAP was originally passed. As an elected delegate at the first REAP Congress, I know the intentions of REAP. You are correct when you say REAP is to be used to preserve and restore Iowa's natural environment. Belva Deer restores 35 acres of marshland, 300 acres of timber and more than 500 acres of prairie, thus fulfilling the mission of REAP. This project embodies REAP, and that is not just my opinion. Belva Deer had to be scored by a committee against a myriad of other worthwhile projects, and it has consistently received high marks! The monies received from REAP grants (\$574,027) and Wildlife Habitat Stamp grants (\$252,124) were essential to the success of this project.

located in a county, for every school to use. And, yes, a 260-acre dammed lake without which nothing else would have ever happened. Keokuk County is a poor, sparsely populated county that would never have been able to finance or justify this wonderful area without the presence of the lake.

Lt. Gov. Sally Pedersen cares deeply about our natural resources, as evidenced by the Governor's office recommendations for increases in natural resource funding (the highest budget received in years for the DNR). Lt. Gov. Pedersen thoroughly researched the Belva Deer project before giving it her stamp of approval.

Just another dammed lake? It certainly doesn't seem that way to me or to thousands of other Iowans who have pledged their dollars and support for the creation of Lake Belva Deer. It would be nice for natural resource groups to minimize their differences and maximize their efforts by working together to accomplish great things. It can be done.

This year alone, the Keokuk CCB planted thousands of trees. True, some will be inundated by the lake, but they are a small fraction of the total planted over all these years.

The Keokuk CCB, with assistance from the U.S. Fish and Wildlife Service, has restored approximately 530 acres of cropland to natural prairie grasses and forbes. This is an active phase of the project, and more will be done in the future. There are virtually no prairie remnants left in our county, so this will be the premiere prairie area.

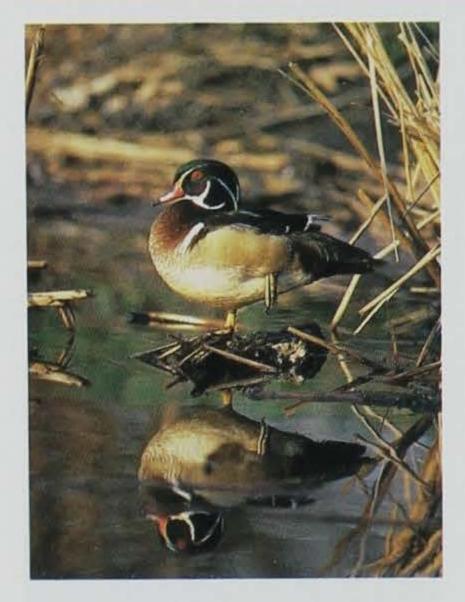
A 35-acre marsh will be established directly above the lake. The marsh will trap sediment for the lake, and will be home for a wide variety of inhabitants, including herons, muskrats, turtles, ducks, shorebirds, frogs and aquatic insects. The marsh was formerly an

Belva Deer Park, in short, is a natural resource manager's dream. Imagine 1,600 contiguous acres of timber, prairie and wetlands with a few flat crop fields interspersed. Imagine a natural outdoor classroom, centrally



Looking for a way to beat the mid-season, duck hunting doldrums? You might want to give local wood ducks a try. They're beautiful, abundant and best of all, they're available right now. From the top of its crested iridescent head to the tip of its deep-blue tail — there can be little doubt that the regal

Wood Duck Represents the Last Word in Elegance



Article and photos by Lowell Washburn



It was the third week in October and the mallard hunters were whining like babies. So were the local goose hunters. Although the early season gunning had been excellent for both ducks and geese, the survivors had headed south weeks ago and the northern flights of new migrants had yet to arrive. Of course, when it comes to Iowa waterfowling, that's not exactly a news flash. Regardless of what part of the state you live in, the "Third Week Doldrums" are as predictable as October frost. But that was their problem. As for myself, I was grinning from ear to ear. In fact, it was hard to keep the speedometer needle on 55 as I headed for one of my favorite duck ponds. If my calculations were correct, I would have just 20 minutes of legal shooting time when I arrived. But in spite of the compressed time budget, I felt confident that I'd have at least a few chances at bagging a duck dinner. tiently

bluster

flights

sands

alread

under

reach

Vegeta

Most

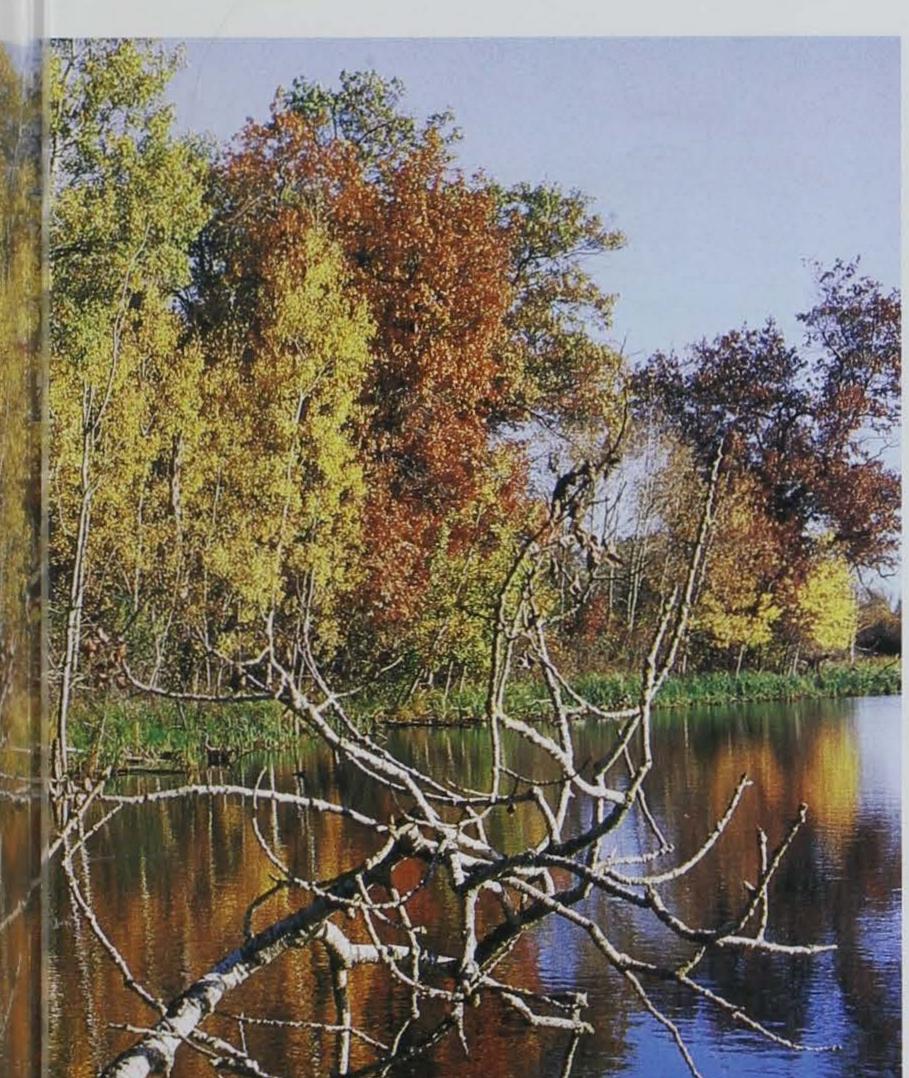
over s

sluggi

reside

D

The reason for my optimism was simple. I was hunting wood ducks. And while most waterfowlers impa-



Gabrielson Wildlife Management Area, Hancock County



the banks of river oxbows, secluded ponds or wooded stream banks. During late afternoon, the flocks conduct feeding forays often leading to upland oak timbers where the birds gorge on acorns. Once the harvest begins, woodies quickly switch to shelled corn.

At sunset, the gregarious birds gather at large communal roosting areas sometimes several miles from where they spend their daylight hours. Individual roosts often contain hundreds of birds and have the potential to provide some of the most high-octane waterfowling found anywhere.

The spot I was currently headed for was just such a roost. Until a couple of

years ago, this half-acre wood duck magnet didn't even exit. Instead, it was just an insignificant 3-foot-wide tributary of northern Iowa's Winnebago River. Today, however, the stream has

tiently waited for snow squalls and blustery weather to usher in northern flights of mallards or bluebills, thousands of plump wood ducks were already residing, undetected, right under their duck hunting noses.

em. As for

ear to eat.

the speed-

If my

aded for one

would have

oting time

elt confi-

few chances

mism was

ducks.

rs impa-

of the

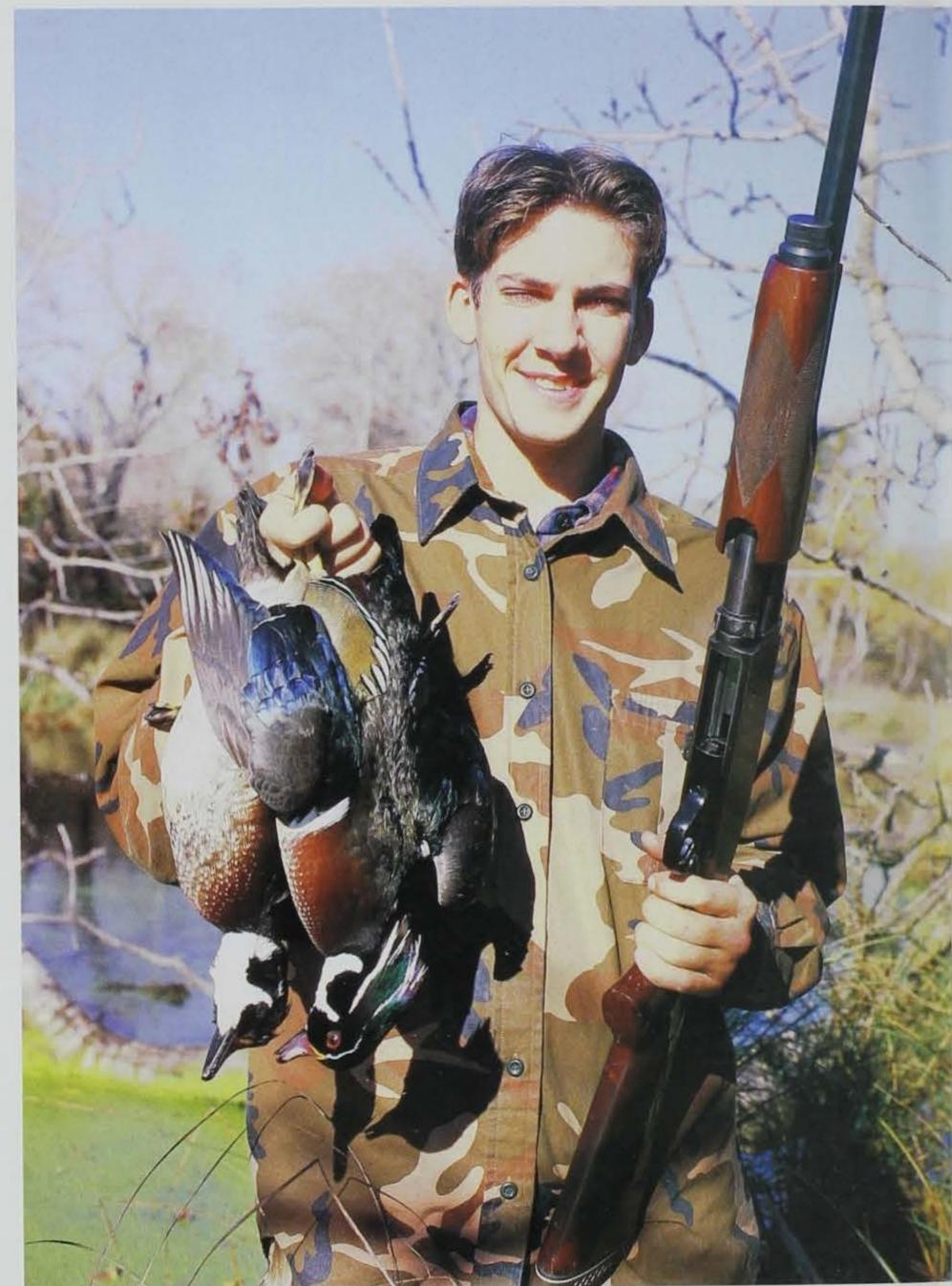
Notoriously secretive, wood ducks reach their highest abundance in thickly vegetated or wooded wetland habitats. Most are bagged on river float trips or over small spreads of decoys placed in sluggish river backwaters.

During the day, small flocks of resident woodies scatter to loaf along

been transformed into an oasis of flooded willows considered paradise to the wood ducks and to me. No bulldozers or surveyor's tools were needed to create this instant habitat. All of the improvements had been provided free-of-charge by an industrious family of beavers, recently immigrated from the Winnebago.

When I'd last visited the roost three days earlier, more than 750 woodies had pitched into the willows during the last 20 minutes of daylight. Although our October Iowa weather had remained seasonably mild, lows had been dipping regularly to below freezing across much of Minnesota. If anything, the wood ducks would be even more plentiful tonight.

At last, I reached my destination and eased the vehicle to the edge of the gravel. I quickly jumped into chest waders, shouldered the decoy bag and began slogging through the tangle of mud and thick vegetation leading to the pond. Upon reaching the sturdy earth-and-willow beaver dam, I paused to glance at my watch. Eighteen minutes of shooting time remained. There was no time to lose. Stepping into the knee-high water I hurried toward an opening in the center of the pond. The local cornfields were coming out fast. By now, the ducks should already be feeding and some might even be finished and headed for the roost.



overhead from sid As the a wings, I dear to t everywh me and The

The passing maintair erect, I took ain In an in range ar Yes

Yes but I did myself. pair had another approac locked t the pond and four with con finished and the surface. The

first bird plumage

with con

bean ba

discover

consiste

After a

fresh ac

in local

lowa we

table fa

drake, it

hunt wa

IWO WOO

langle, J

other sp

fly in ea

my bag

the beau

glanced

of shoot

Sur

The

As

The theory proved correct. I had only made a half dozen steps when I was frozen in my tracks by the unmistakable, screeching call of a female wood duck. I looked up just as the flock of eight cleared the willow tops. The ducks were standing on their tails — wings cupped, coming down hard. Dropping the decoy bag, I frantically searched for a drake. I found one and at the report of the shotgun he folded and splashed to the water a dozen feet away. The drake was in prime condition and full of corn. After admiring the bird, I carefully deposited him on the dry rim of the beaver dam.

Turning back, I made only three or four steps toward the decoy bag when a flock of 60 or more woodies suddenly appeared over the trees. At least a half dozen hens were sounding off, and as I crouched beside a partially submerged snag, I could feel the adrenaline building.

"Settle down, you're acting like an idiot," I thought to myself. "Relax. Take it easy. Pick out a single bird. Whatever you do, DON'T flock shoot."

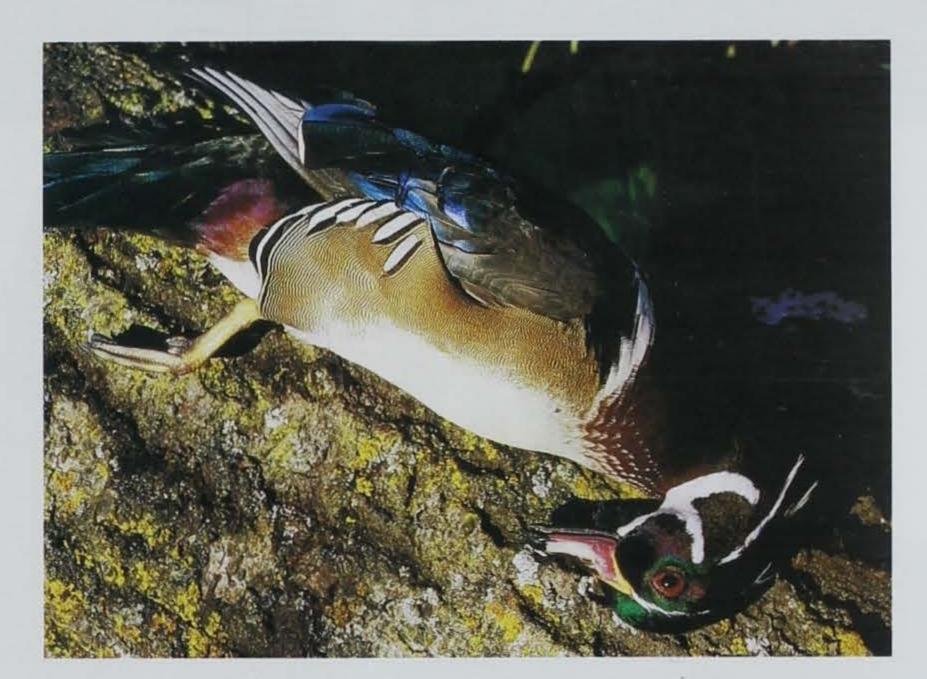
The woodies were almost directly

overhead now and the birds rocked from side to side as they lost altitude. As the air rushed through their set wings, I could hear the distinctive roar dear to the hearts of waterfowlers everywhere. The birds were all over me and it was now or never.

The lead birds were already passing in a blur, and I fought hard to maintain my composure. Standing erect, I shouldered the shotgun, calmly took aim and — well — I flock shot. In an instant, the ducks flared downrange and were gone.

Yes, it had been a stupid mistake, but I didn't have time to feel sorry for myself. Within seconds, an unseen pair had burned me from behind and another flock of about 20 birds was approaching head on. The flock of 20 locked their wings and descended to the pond. Again I searched for a drake and found a bird with a crop so bulged with corn it resembled a poorly finished taxidermy specimen. I fired and the duck splashed to the water's surface.

The drake was heavy and, like the first bird, was already in full winter plumage. Its crop was so distended with corn that it looked like a feathery



continued to pour in by the hundreds. Within minutes, these boisterous and colorful birds appeared to cover every square foot of the willow pond. I left when it was nearly too dark to see, and the ducks were still piling in. It had indeed been an evening to remember.

On the way home, I happened to pass by the house of a duck hunting

Sunset arrived, and the woodies continued to pour in by the hundreds. Within minutes, these boisterous and colorful birds appeared to cover

bean bag. Later that evening I discovered the duck's last meal had consisted of 172 kernels of field corn. After a month and a half of dining on fresh acorns, followed by daily gorges in local cornfields, it's little wonder Iowa wood ducks make such prime table fare.

As I continued to admire the hefty drake, it suddenly occurred to me my hunt was over. The daily bag limit is two wood ducks, and in this willow tangle, I wasn't likely to encounter any other species.

suddenly

least a half

ff, and as l

ubmerged

ting like an

"Relax.

gle bird.

lock shoot.

st directly

line

The woodies were beginning to fly in earnest now, and after retrieving my bag of unused decoys, I returned to the beaver dam to watch the show. I glanced at my watch. Eight minutes of shooting time remained.

Sunset arrived, and the woodies

friend. The yard light was on, and I could see his duck boat parked in front of the garage. The blind was rolled down and the oversized mallard decoys were neatly stacked in the front of the flat-bottomed rig — all waiting for that big blow from the North.

Myself? I was hoping the blustery weather would hold off for at least a few more days. I had two or three more willow ponds to check out before the season's "real" duck hunting arrived. In fact, as long as those thousands of wood ducks continued to use the area, I really didn't care if the weather ever turned.

every square foot of the willow pond.



six great reasons.

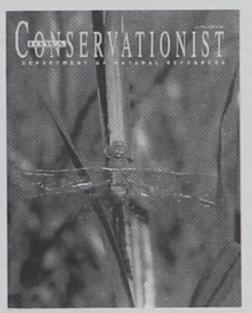
7 Parton F

(SHATIO

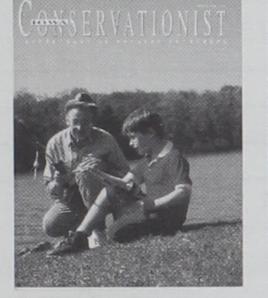
To order, see pull-out envelope.

STELL RYAI

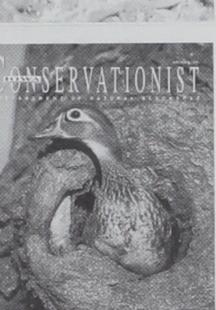
six great reasons













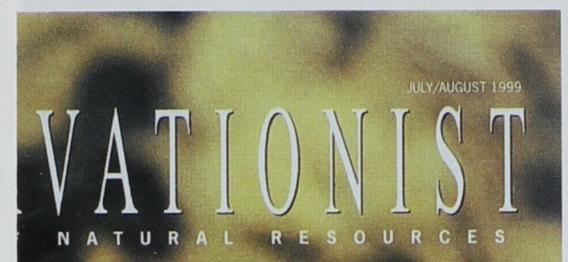
t gift? e in

ison, i for es six *nist.* ying

ır ecipi*va*ıdar low

each.

agazine





January

10 11 12 13 14 15

17===18 19 20 21 - 22

31

25 26 27 28 29

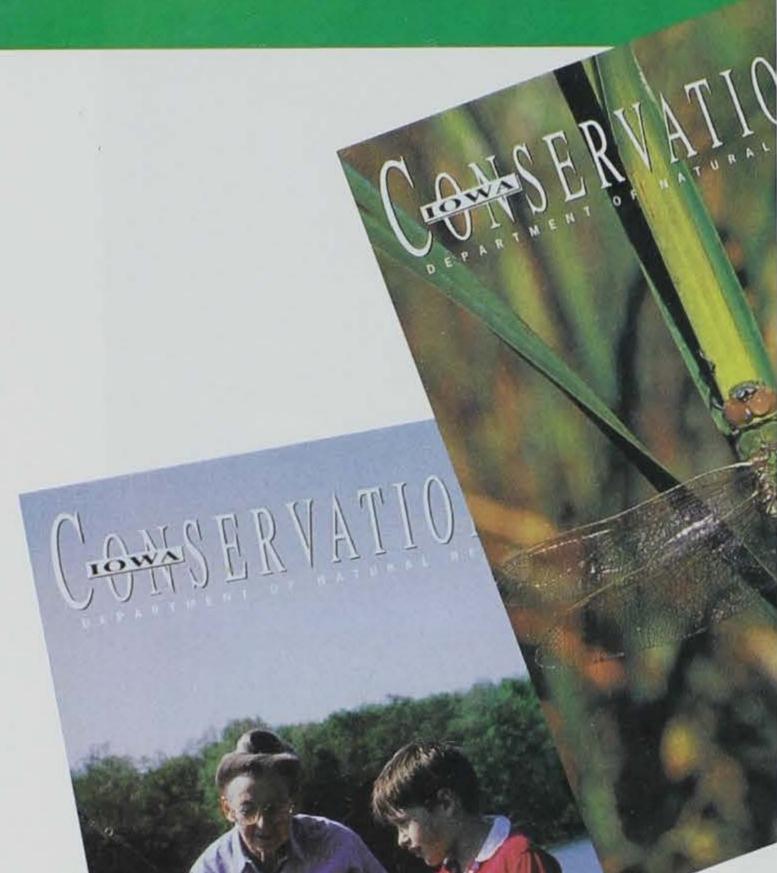
¥= 2 0 0 0



one great magazine

Order now and receive a free 2000 calendar.

six great



SEND GIFT SUBSCRIPTIONS TO: (please enclose \$9.97 for each)

Name	
Address	
City & State	ZIP
Gift is From	
□New □Renewal	
Name	
Address	
City & State	ZIP
Gift is From	
□New □Renewal	
Name	
Address	
City & State	
Gift is From	
□New □Renewal	

- □ Please enter the gift subscriptions above at \$9.97 each.
- □ Please send renewals for these subscriptions to me.
- Please add or renew my subscription at the same time. (Please include mailing label if possible.)

Name_

Address

	Address	
	City & State	ZIP
1 North Carlos	Phone	
	Gift is From	
	□New □Renewal	
	at \$3 each in ad	<i>mist</i> 2000 Calendar(s) Idition to the calendar subscription purchased.
CHARLER VA		F
To order, see pull-	-out envelope.	

Why is the *Iowa Conservationist* the perfect gift? We have six great reasons and they arrive in the mailbox every other month.

Just in time for the holiday gift-giving season, you can purchase a one-year subscription for only \$9.97. Give your friends and relatives six outstanding issues of the *Iowa Conservationist*. A card will be sent to each recipient notifying them of your gift.

Oh yes, we have one more reason why our magazine is the perfect gift . . . each gift recipient also receives the beautiful *Iowa Conservationist* Milestones at the Millennium Calendar — FREE! That's seven great issues at one low price.

You can order additional calendars for \$3 each.

Ordering is easy:

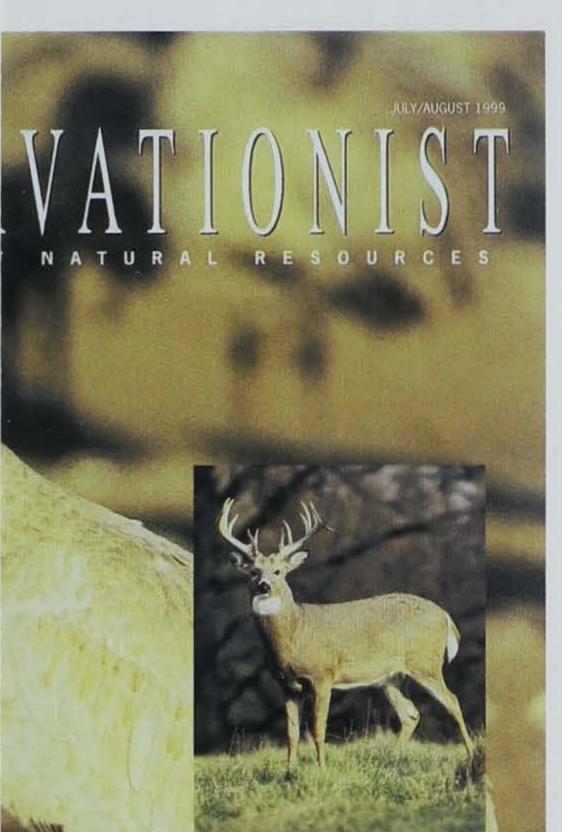
Fill in the gift subscription information.
 Additional gift orders may be included on a separate sheet.

Fill in your name and address.

Mark whether you are ordering gifts and/or a new or renewal subscription for yourself.

 Mark whether you are ordering additional calendars.

agazine



a n u a r y

13

27

17-18 19 20 21-22

14 15

28 29

12

25 26

16

30

\$9.97 each. is to me. same time

ar(s)

endar

rchased

TO:

1)

Enclose a check or money order, made out to the Iowa Department of Natural Resources, for the total amount. (Credit card orders call 515-281-3887.)

Mail today!

Please allow eight weeks for subscriptions to begin and to receive calendars. Calendar quantities are limited. Offer expires December 31, 1999.

GROEKVAI UNISI

Order now and receive a free 2000 calendar.

Before sealing envelope, be sure to include remittance.

FROM:



POSTAGE WILL BE PAID BY ADDRESSEE

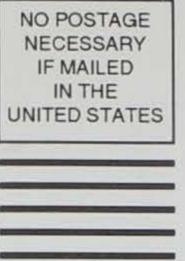
CONSERVATIONIST IOWA DEPT OF NATURAL RESOURCES STATE CAPITOL

1015 E GRAND DES MOINES, IA 50309-9656

hhilliondhiliohhiliohiliohiliohili



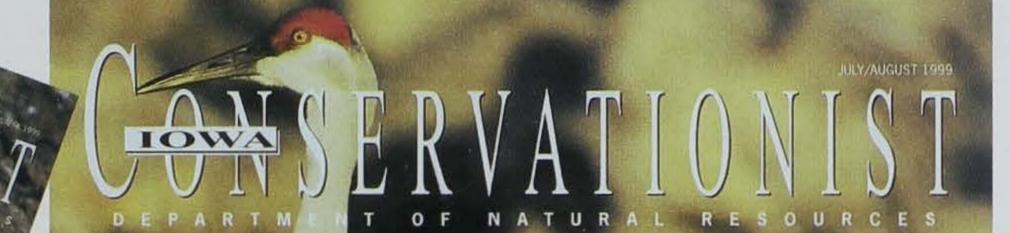




To order, see pull-our envelo

TT

one great magazine



January

3 4 5 6 7 8

10 11 12 13 14 15

16 17 18 19 20 21 22

Before sealing envelope, be sure to include remittand

-

RVATIONI

CHARVATIONIST

Order now and receive a free 2000 calendar.

Surfing for for Fish by Leo Schlunz

Want more information about the fish you caught, or how to clean it? How about a new place to fish or the hot spot of the week? Then, it's time to go surfing. That's, "surfing."

Not grab-your-surfboard-and-headfor-the-beach surfing (like every Iowan has a surfboard). We're talking get-onyour-computer-and-connect-to-the-Internet surfing. Instead of the beach, go to "www.state.ia.us/fish" -- the DNR's fisheries homepage. This page welcomes you to a host of information about fish and fishing. The information includes Fishing News, Fishes of Iowa, Regulations, Where to Fish, Programs, Education, Publications and Offices. There's also a link to what's new at our web site.

A bubbling animated bluegill greets you at Fishing News. Besides the most recent fishery news releases, fishing forecasts and fishing hotspots, you'll find useful information for planning your next trip. For the trout enthusiast the current trout stocking schedules are provided. If you are going to the Mississippi River for the weekend, this page provides a link to the U.S. Army Corps of Engineers river gauge data. Before you tow your boat from place to place, check out the exotic aquatic invaders waiting to hitch a ride with you. You don't want to be the person responsible for hauling one of these nuisances to your favorite lake. For your convenience, there are links to three weather services -- the National Weather Service, CNN Weather Coverage and the Weather Underground. If you don't like one forecast, try another. When you catch that "big one," you'll want to compare it to the current all-time record fish list. There have been a couple of new records this year. Although Iowa has only a couple of fish consumption advisories -- one for Cedar Lake in Cedar Rapids and one for Pool 15 on the Mississippi River near the Quad Cities -- all new advisories will be posted here.

If you think you know a lot about Iowa's fishery, take the fishing quiz. I'll bet you 20 feet of used line you can't get them all correct the first time.

The more you know about a fish the better chance you have catching it. The Fishes of Iowa section provides a comprehensive look at all fishes of Iowa. Most of the information comes straight from the DNR's book, Iowa Fish and Fishing. You'll get general information about a specific family of fish and all the types in it. Individual fish species are presented baseball-card style with a picture of the fish, general descriptive characteristics, distribution and food preferences. There is a link for each species with more in-depth information, including a distribution map, detailed physical description, plus spawning and feeding habits. For game fish there are links to pages of information on where and how to catch them. The "how" covers tackle, bait, angling techniques and when to go. This can be very informative for the beginner or weekend angler.

Not up-to-date on Iowa's fishing laws? Click on **Regulations** for a synopsis of the regulations. It is

what

Loop

This

man;

why.

hon

the s

calfi

for e

abou

prog

Fish

Insid

- pa

as ho

or th

You

Ther

table

SWA

designed to be only a guide for understanding some of the fishing regulations, not legal code, and answers some of the more frequently asked questions. It also explains the need for the laws and how they benefit both the angler and the aquatic resources.

If you're looking for a different lake to fish, check out the Where to Fish. Here, you'll find almost all the lakes managed by the Iowa DNR. The state is divided into four regions --Northwest, Southwest, Northeast and Southeast. Choose a region and click the lake you what to fish. Numbers on the map correspond to a list of lakes, their locations and surface areas. Many of the lakes have links to more detailed information including a brief discussion about the lake and its vital statistics. Also, a link to a contour map may be provided. These maps can be down-

MMM. State us Kisk

lot about g quiz. le you first time. it a fish tching it. rovides a les of n comes lowa general amily of dividual eball-card i, general stribution is a link -depth ibution ption, plus For game f informach them. , angling his can be iner or

fishing or a t is or underloaded to your printer so you can take them with you. If you have never been to a particular lake but want to know something about it, this is a good place to visit.

Northeast and southeast regions include information about the Mississippi River. Information for the Mississippi is given in detailed river maps that include locations of boat ramps, river access points, recreational beaches, marinas and other camping and recreational areas. All information is listed by river mile. These maps were provided by the U.S. Army Corps of Engineers.

Trout anglers will want to look at the northeast region's trout stream pages. The opening page gives a brief description of Iowa's trout program with links to special trout fishing regulations and stocking schedules. County maps show the locations of trout streams for all nine "trout" counties. These streams are numbered, corresponding to listed names. Each stream has a detailed map plus stocking and fishing information.

Do you know the five types of fishing resources available in Iowa, or what is being done to manage them? Look into Programs for the answers. This is where you'll find what fisheries management and research does and why. Programs will give you information about Iowa's nine hatcheries and the scoop on walleye and channel catfish aquaculture. The Education section isn't just for educators. Besides information about the DNR's aquatic education programs there is a Just for Kids page, Fish Terminology Glossary and the Fish Insider, The Fish Insider is the real surprise -- packed with helpful information such as how to care for and clean your catch, or the correct way to release a fish. Do you want to know how old that fish is? There is an age-length relationship table to help you age your fish by the SWAG method. You've never heard of

the SWAG method? Click here to find out. There is a habitat guide for the major game fish, a table of fish spawning periods, and when and where trophy-sized fish are caught.

The **Publications** page has a list and description of most DNR fisheries publications, as well as a printable form to use for ordering.

The **Offices** page lists the county location, address and responsibilities for all fisheries offices.

You'll find a lot of free fish information at this website. So, the next time you are on the Internet, or planning a fishing trip, surf over to www.state.us/fish and take a look. Like the ocean, it's always changing, so visit often and see if there is a new wave to catch.

Leo Schlunz is a fisheries biologist in Chariton.

regulawers some questions, he laws angler

fferent here to at all the NR. The ons -east and nd click mbers on f lakes, eas. Many e detailed discussion histics, may be

down-

www.score



36 Iowa Conservationist • September/October 1999

But if you're getting ready to hang up the fishing rod for another year — you might want to think again. The secon's fastest action might be just arc. nd the corner.

Summer's over.

With its handsomely striped face, blood-red eye and bronze and chocolate mottling, the smallmouth bass is just about as beautiful as a fish can get. Better yet, it's also about as aggressive as a fish can get. With its Fribute sleek design, wide tail and powerful fins, the smallie has more than enough muscle to back its attitude. First and foremost, anglers praise the smallmouth for its fight. Regardless to lowa's of whether you hook up over a North Country rock pile, a gravely cow pasture creekbed or a rushing northeastern Iowa river, the brawling bronze-back never fails to provide a major-league scrap. With an impressive repertoire of leaps, runs and tailwalks, it's no mistake of all the gamefish species in North America, this is the one personifying that old, familiar adage --- "ounce for ounce, pound for pound, the smallmouth bass is the fightingest fish around." And, although the often-used phrase may seem a bit worn these days, there's no disputing truer words were never spoken. No gamefish hits harder, fights longer or jumps higher than the regal bronze-back. Although the smallmouth is

SCPa

1121

easily capable of providing a thrill-aminute during most of Iowa's open water season, there is little question that fall fishing represents the best-ofthe-best. By mid-September, the effects of shorter days and cooler nights begin producing a feeding frenzy among smallmouths, outmatching all other species. As long as there is something to trigger a response, the rampage will last from dawn until dusk.

At this time of the year, there's no such thing as a bad time to be on the water. Fishing at high noon can be as productive as any. By the time early October arrives, smallmouth will have achieved peak body condition, and will be as fat and sassy as they'll ever get. Bursting with energy, even 11and 12-inchers become a thrill to catch. Tie into a 14- or 15-inch bass and you're in paradise. The opportunities to exploit Iowa's autumn smallmouths are almost as diverse as the anglers themselves. Abundant bass populations can be found in quality habitat across most of eastern, central and northern Iowa. With few exceptions, Iowa smallmouths are the inhabitants

Article and photos by Lowell Washburn



Whether imitation or the real thing, the crayfish is a popular food for autumn smallmouths. The Upper lowa River (below) -- premier smallmouth territory.

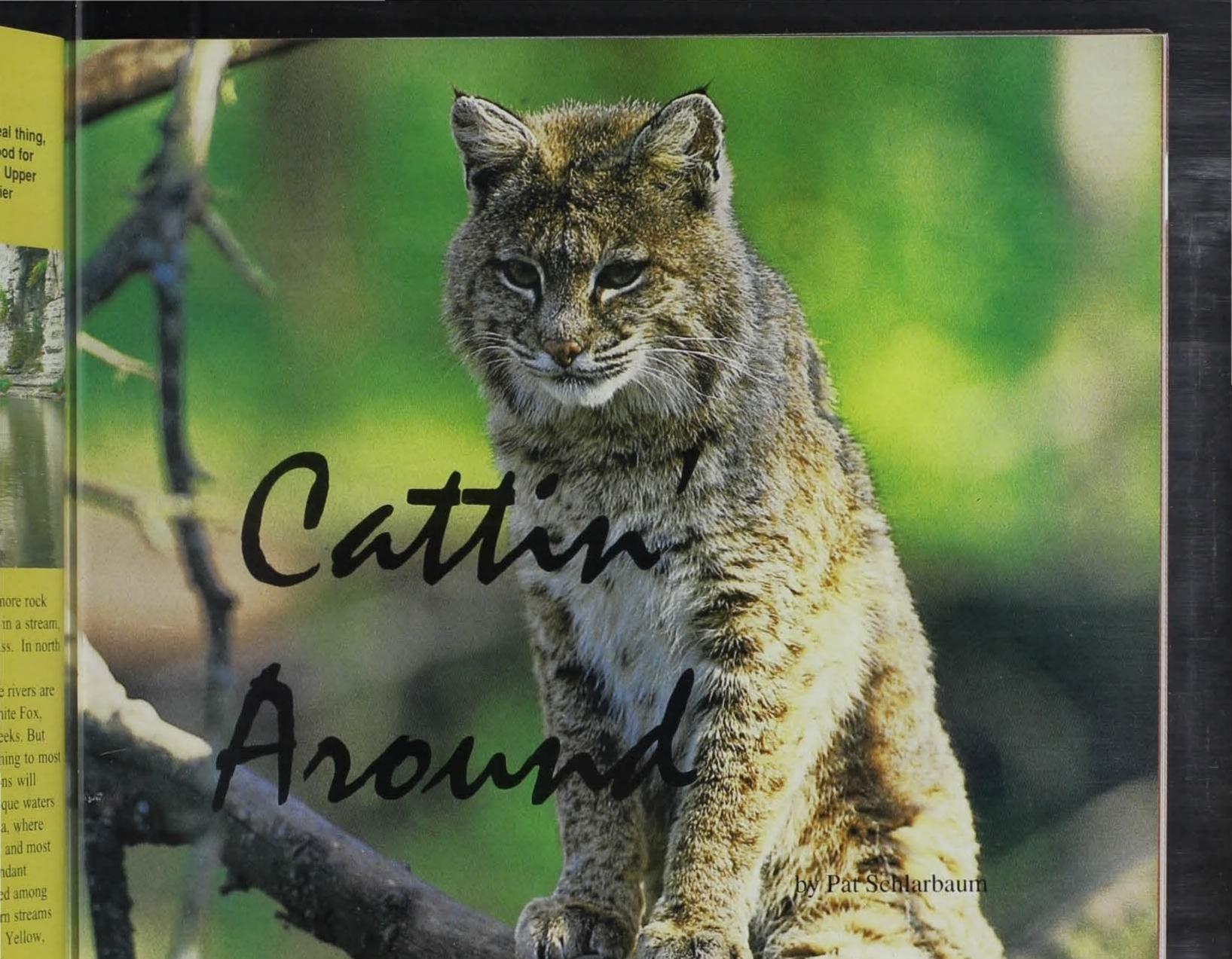


of streams and rivers. The more rock and gravel substrate present in a stream, the greater the number of bass. In north central Iowa, portions of the Winnebago, Iowa and Boone rivers are all good bets. So are the White Fox, Maynes and Beaver Dam creeks. But mention fall smallmouth fishing to most anglers and their imaginations will immediately turn to picturesque waters of extreme northeastern Iowa, where virtually every major stream and most of their tributaries hold abundant

populations of bass. Included among the more famous northeastern streams are the Upper Iowa, Turkey, Yellow, Volga and Maquoketa rivers.

At the more-favored waters, purists arrive armed with fly rods and Woolly Buggers. Most of the rest show up with ultra-light spinning rods and lures like i/16-ounce Panther Martins, 2-inch plastic grubs or floating minnow-shaped crankbaits.

In order to conform to popular smallmouth legend, crayfish imitations abound. In the end, however, it really doesn't seem to matter what you choose. After all, it's fall. The weather's gorgeous and the bass are in the mood. Before the afternoon is over, most folks will manage to find, catch and usually release, at least one or two hefty autumn bronze-backs. For my way of thinking, it just doesn't get much better than that.



h the distance, two glowing eyes at the roadsides sudenly darted through the beam of headlights and were gone. Was it real or an apparition? asked my passenger, Diana Sevin of Houma, La., "Was that what I think it was?" "That's a bobcat ...

iters, purists

nd Woolly

now up with

d lures like

now-shaped

, 2-inch

popular

1 imitations

r, it really

ther's

you choose

the mood.

most folks

nd usually

nefty autum

of thinking

ter than that

... we've got lots of those back home. Do you have them all over Iowa?"



the terrain like a puff of smoke. They move without weight or sound, a bundle of spring steel wrapped in gray that, seemingly, hates to be seen by humans. face a

the ea

ers, Ci

keen l

The ti

wood

most

Vere ;

of ma

bobca

mainta

lemito

relatio

female

males areas those is not

Finges

more |

large a

Therefore, bobcat tracks are commonly used to identify their whereabouts. Tracks are 1-3/4 inches by 1-7/8 inches, or somewhat larger than a silver dollar. The ball pad is distinct from a coyote's, in that the front edge is two-lobed. Also, tracks are more rounded than those of coyotes or dogs and show no claw marks. The bobcat's razor-sharp claws remain retracted until needed. Somewhere in the cat's home range will be scratched stumps or trees used in sharpening claws. Their scat is highly segmented and generally covered with dirt. Andrews observes, "It's unique that some fauna can mask themselves so well you seldom see them, but know they are present only by the 'sign' they leave." Similar to sandhill cranes reoccupying our wetlands, bald eagles nesting along numerous watersheds, river otters returning to Iowa streams, prairie chickens and sharp-tailed grouse dancing on their leks or the promise of trumpeter swans once again nesting in Iowa, bobcats are making their presence known in the woodland habitat of Iowa. A great deal of credit and thanks goes to organizations such as county conservation boards, Wild Turkey Federation, Trees Forever, Nature Conservancy, Iowa Natural Heritage Foundation, DNR foresters and others for their efforts to increase and improve forest lands in the state.

Cross the state, we have a few bobcat sightings annually, and according to Ron Andrews, DNR furbearer biologist, this species appears to be recovering in the woodland areas of western, southern and eastern lowa.

Bobcat sightings from southern Iowa have been reported for the past 20 years. Sightings stem from roadkills, animals caught incidentally during the trapping season and animals people are lucky enough to observe in the wild. The bobcat I saw along the road was the

Although bobcat sightings are rare in lowa, a few are reported every year and it appears the species is recovering.

Page 39 photo by Ty Smedes

first one I had ever seen. In many hours of tramping lowland riversides and steep hillsides, I have not seen another.

Cat experts believe seeing even one bobcat in a lifetime is above average. Most Americans — campers, hikers, birdwatchers, hunters and trappers included — never catch a glimpse of these elusive, nocturnal native cats. Like all wild felines, they are extremely secretive and possess intense vitality. Considered one of the world's finest hunters, bobcats have been described as moving like a wraith, or ghost, on padded feet. Few animals have the bobcat's gifts of keen eyesight and hearing. At the distant approach of human or dog, bobcats will fade into

Mature bobcats average 3 feet in length with a 6-inch tail, stand 15 to 18 inches high and weigh between 15 and 25 pounds when mature. Some individuals are larger, but they seldom weigh more than 40 pounds.

A bobcat's winter coat is more grayish in color than the black-spotted rufous fur it wears in summer. It has a distinctive ruff, or sidewhiskers, on its face and tufts of antennae-like hair on the ear points. According to researchers, captive bobcats lose some of their keen hearing if these hairs are snipped. The tip of a bobcat's tail is black only on the top and noticeably white underneath, whereas its larger cousin to the north — the lynx, has an all-black tip on its tail. Also, lynx paws are like furry snowshoes for traversing winter woodlands.

Bobcats, like most felines, are nocturnal. During the day, they lurk in the shadows, lying motionless, watching - ever-watching- as woodland inhabitants move about, sometimes within feet of the rocks or brush piles concealing them. Where they are found, bobcats are sparsely distributed upon the land.

acks are

1-3/4

r. The ball

vole's, in

i-lobed.

and show

n remarted

scratched

harpening

vered with

ly seg-

TES.

an mask

eldom see

river ottens

romise of

eir pres-

habitat of

and thanks

county

urkey

ature

leritage

nd others

nd improve

feet in

6 15 10 18

en 15 and

raine

e in the

beat's

Researchers spent

niques to establish their territorial boundaries. Using feces, urine or a secretion from anal glands, bobcats mark earth, rocks, bushes or snow, signalling other cats to keep their distance. These arrangements minimize energy-robbing conflicts. Every bobcat's life is structured by its relation to all other bobcats in the area. "They are highly social yet extremely territorial," says Doug Crowe of the Wyoming Game and Fish Department.

Researchers do not yet know whether the size of a bobcat's territory changes with the abundance or scarcity of food and whether bobcats can live closer together if food supplies permit. In the West, older animals occupying ranges undisturbed by hunting and trapping are the most successful hunters. They also may be the most successful parents. Their strength lies in the fact they control territories that are defined, marked, and therefore, off limits to other bobcats.

Bobcats are solitary hunters. They are opportunists, but when given a choice, they prefer rabbits, tree squirrels and ground squirrels. Partly because of their dependency on rabbits, bobcats spend much of the day at rest and hunt during the evening hours when cottontails become active. This.



three years studying these predators along the Snake River in southeastern Idaho. Using telemetry, they were able to determine the home range of male and female bobcats. Females maintained exclusive territories (about 5 square miles) in relation to other females, whereas males sometimes used areas that overlapped those of females. This is not surprising since ranges of males were more than twice as large as the females. Bobcats use scent-marking tech-

Mature bobcats average 3 feet in length with a 6inch tail and stand 15 to 18 inches high. They weigh between 15 and 25 pounds when mature, although some have been known to grow as large as 40 pounds. A female bobcat will typically raise one litter of kittens per year. <image>

September October 1999
 lowa Conservationist 41

perhaps, explains why bobcats have evolved such excellent nighttime vision. Whereas their daytime pupils are elliptical, after dark they grow round and expand to nearly fill the entire eye. In addition, at the back of each eye a reflective membrane, called a tapetum, gathers stray light and enhances vision.

Bobcats have been elegantly designed to play their part in the scheme of life. Their fate and the fate of rabbits have intertwined during 40 million years of evolution. Predator and prey alike depend on one another for their long-term well-being. Rabbits serve to feed bobcats, and the bobcat's role is to weed out rabbits, suppressing that population.

The balance between these animals is a dynamic one. When the rabbit population crashes as it normally does on a cyclical basis, particularly in the West, it is the rabbit that regulates the bobcat population. Without this food source, bobcats have a difficult time raising their young. It's highly possible the Conservation Reserve Program played an important role in rabbit and rodent production that will benefit bobcats in future years.

Other foods taken by bobcats include songbirds, grouse, rats, mice, grasshoppers, beetles and reptiles. However, bobcats are not limited to small and easily taken prey. They have been known to stalk into a turkey hunter's range when the hunter is actively calling. Apparently, birds big and small are considered fair game for bobcats, although it's fascinating to consider the prospect of a bobcat's ability to stalk or ambush a wary old tom turkey. A female bobcat raises one litter of kittens a year. As spring approaches and she is heavy with young, she searches for a den site among the rocks of a cliff or beneath the upturned roots of a downed tree. In the less-rugged terrain of Iowa, aside from rocks and cliffs of northeast Iowa, she may find an abandoned building to make her den. During the last weeks of her pregnancy, she spends most of the daylight hours in hiding and comes out to hunt at night. When spring comes, she gives birth to



Keen eyesight, good hearing and the ability to stalk silently makes the bobcat an effective, efficient hunter.

two or three fur-covered, helpless kittens. At this stage, their magnificent eyes are sealed and their hearing is nonfunctional.

The mother must hunt for her litter - the male is long gone - and the little spotted kittens steadily grow more demanding. By June, kittens are on a meat diet. Although the female weans her kits, she does not abandon them because they must first learn the ways of survival in the wild. Even when very young and unskilled, bobcats instinctively try to kill. Joe Van Wormer, in his book The World of the Bobcat, tells of a litter of bobcats born in captivity that were still on a milk diet when a white rabbit was placed among them to test their reaction. The kittens had never seen such an animal before, but one of them pounced and took a grip on the back of the rabbit's neck. Newly weaned kittens tag along with their mother on nightly hunts. Following a circuit, they roam from sunset to sunrise, often returning to the tarting point by dawn. Hunts are not

for fun or careless expenditure of energy. The mother bobcat moves slowly and methodically, a spotted shadow in the darkness. She is a thorough hunter, constantly alert for movement and signs of prey. She lifts her feet high to touch the ground gently and noiselessly like a moccasined ghost. If you have watched a cat/ stalking a bird, you have witnessed the bobcat's technique in stalking prey. When the bobcat is close enough. she makes one or two bounding leaps and the hunt is over, whether she is successful or not. The bobcat is not equipped for long or swift pursuit like its cousin the cheetah, and does not waste energy attempting to run down missed prey. Instead, it goes off in search of another victim. This is a lesson young bobcats must learn. It can be a hard lesson to learn, and many of them learn it too late. As autumn arrives, so does the breeding season for adult bobcats. Their training ended, the young are abandoned by the mother. Young bobcats now wander the land, often

ALTELS

Males

year of

breed t

will an

young

and ha

vinter.

W L IN

and in

G

42 Iowa Conservationist

September/October 1999

staying together into the winter. This critical time in their lives tests their ability to survive. Life is good for bobcats if rabbit populations are increasing.

Crowe also studied the age bobcats first enter the breeding population. Males do not produce sperm the first year of their lives, but females can breed the first year. However, if a female breeds after February, her young will arrive late in the spring. These young kittens will be less experienced and have a reduced chance of surviving winter. Little is known about how successful young females are in producing young to supplement the population.

During severe winter storms, bobcats hole up and wait out the weather. Country people may awaken on a winter night to the courting serenade of bobcats in distant woods or ravines. The "caterwauling" resembles the snarling, hissing, squalling, deepthroated growling and high-pitched squeals of domestic cats during mating. but with the volume turned up. Bobcat pairs separate after mating,

bobcat an

oves

Mied

S II

ned

prey

enoug

g leap

isuit like

m. it can

many of

s the

III.

often

TRIS

nd gently

and in 63 to 70 days, the female bears her new kittens. This continues year

after year as long as the female lives. which may be 12 to 15 years.

According to Jim Dinsmore, in hisbook A Country So Full Of Game. bobcats occurred over most of the United States, southern Canada and Mexico when Europeans first arrived. Bounties for killing wild cats date back to 1817, when Iowa was still part of the Missouri Territory. At that time, a bounty of 50 cents was paid for each bobcat killed. In 1858, the state of Iowa established a bounty of \$1.50 per bobcat. The bounty was reduced to \$1 in 1860 and remained at that level until it was changed to 50 cents in 1933. Later it was dropped as the predator's role in nature was understood.

A study done in Illinois by Woolf in 1998 indicated hunting and trapping exploitation likely contributed to the demise of bobcats in America, but loss of habitat was a paramount factor.

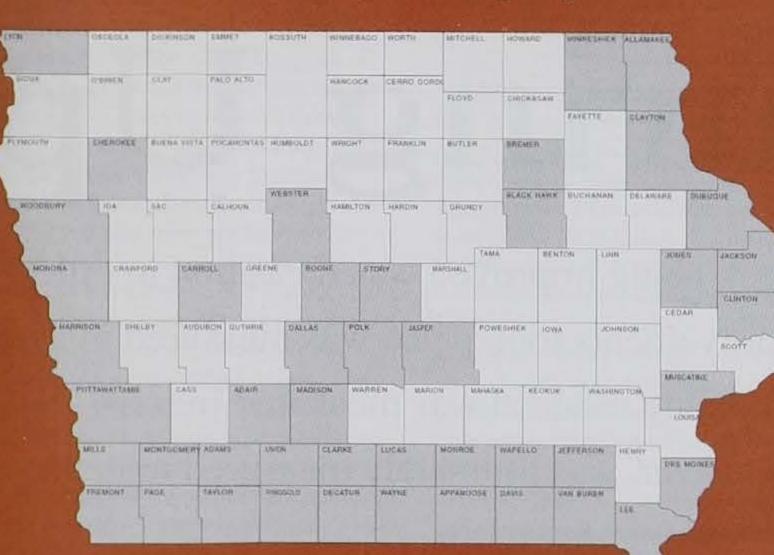
By 1900, bobcats seemed to have disappeared from most of Iowa, and there was almost no mention of them in the literature for a number of years, According to Dinsmore, bobcats are still found infrequently throughout Iowa, but because of their secretiveness, their numbers are hard to assess.

They have been reported in 45 counties in recent years, especially along the state's western, southern and eastern borders (see map).

There may be more. To better understand bobcat populations and distribution, the public's help is needed. Bobcat sightings, particularly those involving reproduction, should be reported to the DNR Wildlife Diversity Program, 1436 255th St. Boone, Iowa 50036, or wdiversity@aol.com or phone (515) 432-2823. Bobcats are considered an endangered species in Iowa, a status that gives them special protection from human persecution.

It's easy to accept the idea that bobcats could always be in lowa, perhaps because we want them here. They are great ambassadors of wild areas. They enhance our appreciation of natural resources and provide special qualities in our lives. Andrews points out, "It's wonderful to think that the bobcat, after being very scarce among the Iowa landscape for nearly a century. could be adapting to humankind and making a comeback."

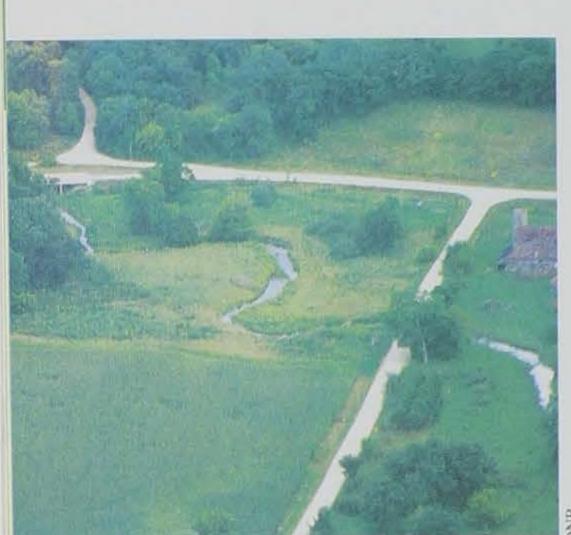
As long as people have known bobcats, we have admired their tenacity for living. Van Wormer wrote, "I've never seen one that had a look of fear in its eyes." These secretive predators represent a wildness Iowans can hopefully enjoy and respect. Conservation officers occasionally are called upon to release bobcats caught incidentally in traps. Retired DNR Conservation Officer Jerry Hoilien compared them to having the temperament of a cornered water snake, "Just all mean." Stanley P. Young, a legendary government trapper wrote, "Attempting to remove a live adult bobcat from a trap is a never-to-be-forgotten experience. Even a little bobkitten is just meaner than strychnine. I don't think there's anything'll raise hell with you quicker than a little bobcat, unless it's a big one,"



Counties With Bobcat Sightings

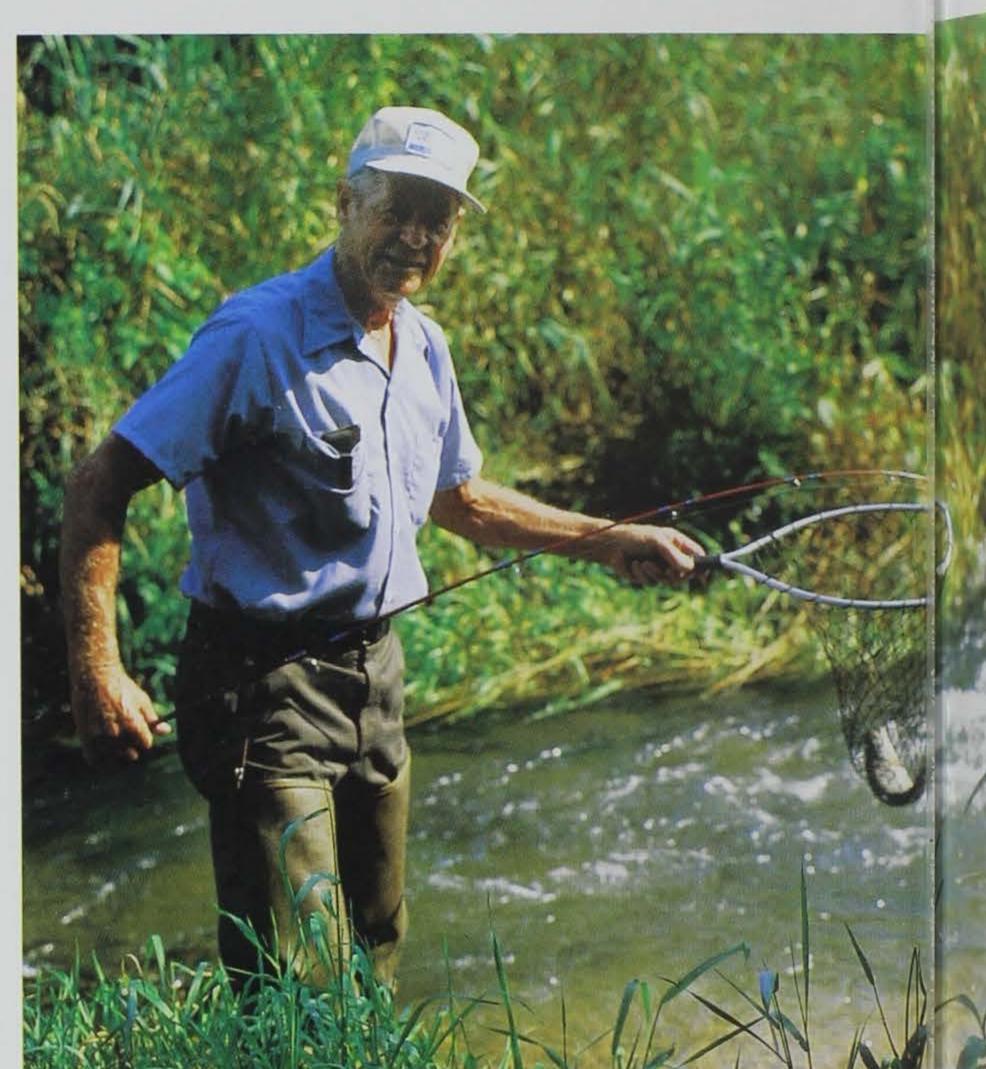
Pat Schlarbaum is a natural resource technician at the Boone Wildlife Research Station.

September/October 1999 • Jowa Conservationist 43



DNR

At the beginning of the Bigalk Creek project, nearly 90 percent of the 1.2mile target area of the stream was extensively grazed. Today, only a 1,700-foot section of the stream has grazing.



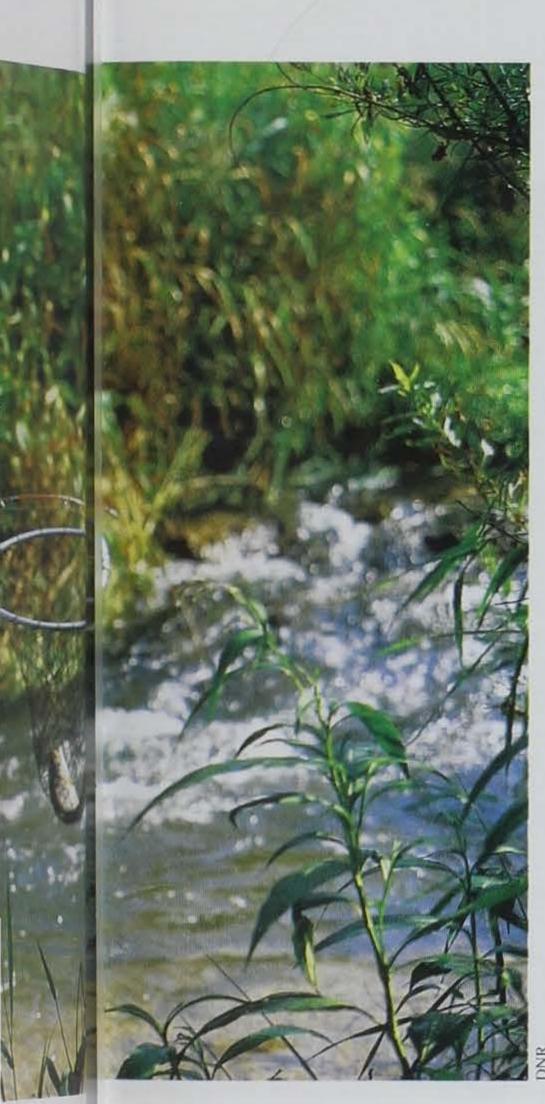
Measuring Up

The segment of Bigalk Creek being improved was measured in miles. The watershed where the improvements took place was measured in acres. The amount of erosion being reduced was measured in tons. Success at Bigalk Creek, however, was ultimately measured in inches.

by Kevin Baskins

44 Iowa Conservationist · September/October 1999

docur repro creek Upper The d makes stream tion o mente trout D trout s sive, f projec includ ers in best n land to D cicile



good reason. Natural reproduction of rainbow trout is not only rare in Iowa, but throughout the upper Midwest.

"There's one stream in Minnesota where natural reproduction of rainbow trout is occurring and a couple in Wisconsin and about the same in Michigan," said DNR Fisheries Biologist Bill Kalishek of the Decorah Hatchery.

"We are now seeing that the combined work of improving the corridor and reducing sediment is paying dividends," he said.

The natural reproduction of rainbow trout on Bigalk Creek is just an added bonus to a very successful water quality improvement project, according to DNR Environmental Engineer Ubbo Agena.

"Our effort at Bigalk Creek shows that we can make substantial improvements to water quality on our coldwater streams by working with individual landowners and without having to purchase land to do it," said Agena, coordinator of the DNR's nonpoint source water pollution program.

A survey of Bigalk Creek by DNR fisheries biologists in June counted 80 trout in the stream, a 600 percent increase from the 1992 sample when 12 fish along the same stretch were counted. Biologists also noted that 20 percent of the rainbow trout caught could be classified as "naturalized," meaning the fish had been in the stream long enough to get their natural colors and are feeding on what would be a natural diet of insects and small fish. The presence of naturalized rainbow trout is also an indicator that natural reproduction can occur. Included in the sampling were three young-of-the-year rainbow trout, indicating natural reproduction. Fisheries biologists note that the find is particularly significant because young trout are extremely hard to catch during sampling efforts.

Resources and Conservation Service and the Howard County Soil and Water Conservation District.

The cooperation between private landowners and the various agencies was the key to the success of the project, according to Frank Moore, coordinator of the Bigalk Creek project.

The primary concern for Bigalk Creek at the beginning of the project

"Our effort at Bigalk Creek shows that we can make substantial improvements to water quality on our coldwater streams by working with individual landowners and without having to purchase land to do it."

DNR fisheries biologists have documented rainbow trout naturally reproducing on the 1.2-mile stretch of creek above its confluence with the Upper Iowa River in Howard County. The discovery of the 3-inch long fish makes Bigalk Creek only the third stream in Iowa where natural reproduction of rainbow trout has been documented. The state currently has 105 trout streams covering 307 miles.

jiles.

n acres.

ches.

Documentation of natural rainbow trout spawning comes after an extensive, four-year watershed improvement project at Bigalk Creek. The project included working with private landowners in the watershed to implement the best management practices on their land to improve water quality.

DNR fisheries biologists are excited about the discovery and for

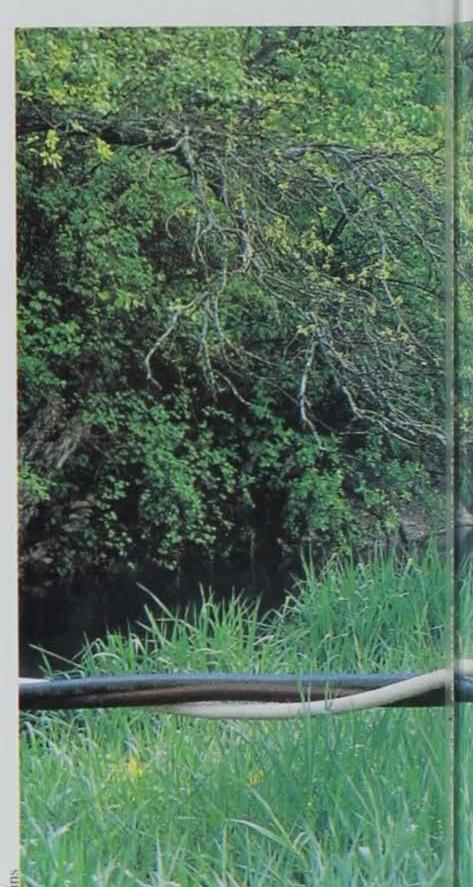
The Bigalk Creek Water Quality Protection Project was a joint effort by the DNR, Iowa Department of Agriculture and Land Stewardship, U.S. Natural was the extensive livestock grazing that took place along the stream, causing excessive erosion and water degradation from animal waste. Nearly 90 percent of the 1.2-mile target area along the stream was extensively grazed when the project began. Today,



"Man has shown he can destroy; he hasn't always shown that he can preserve."

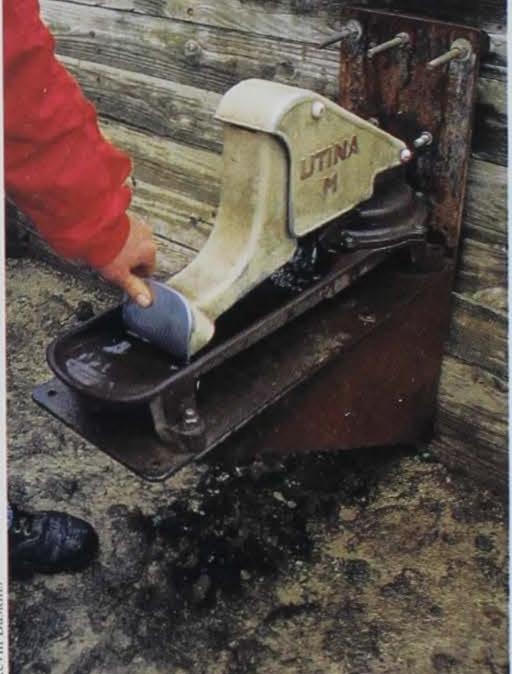
only a 1,700-foot section of the stream has grazing. But removing the cattle from the stream did not necessarily mean losing a primary source of water for livestock. In the case of Manley and Linda Bigalk (whose family the creek is named after), a large pasture along the stream was fenced off and nose pumps were installed as part of an earlier project completed in 1992. The pumps, installed with Section 319 water quality grant money from the DNR, allow cattle to draw water from Bigalk Creek without ever getting close to the stream bank.





"The project was able to not only document the environmental benefits of using best management practices, but the economical rewards as well," Moore said.

"From the beginning, we felt it essential that the econom-



ics of best management practices be provided. The majority of farmers will not adopt these practices unless they can be shown that it is financially beneficial," Moore said.

farm

Weat

tons

the p

struc

crosi

5.00(

of th

migh

all

hasn

serve

Kevi

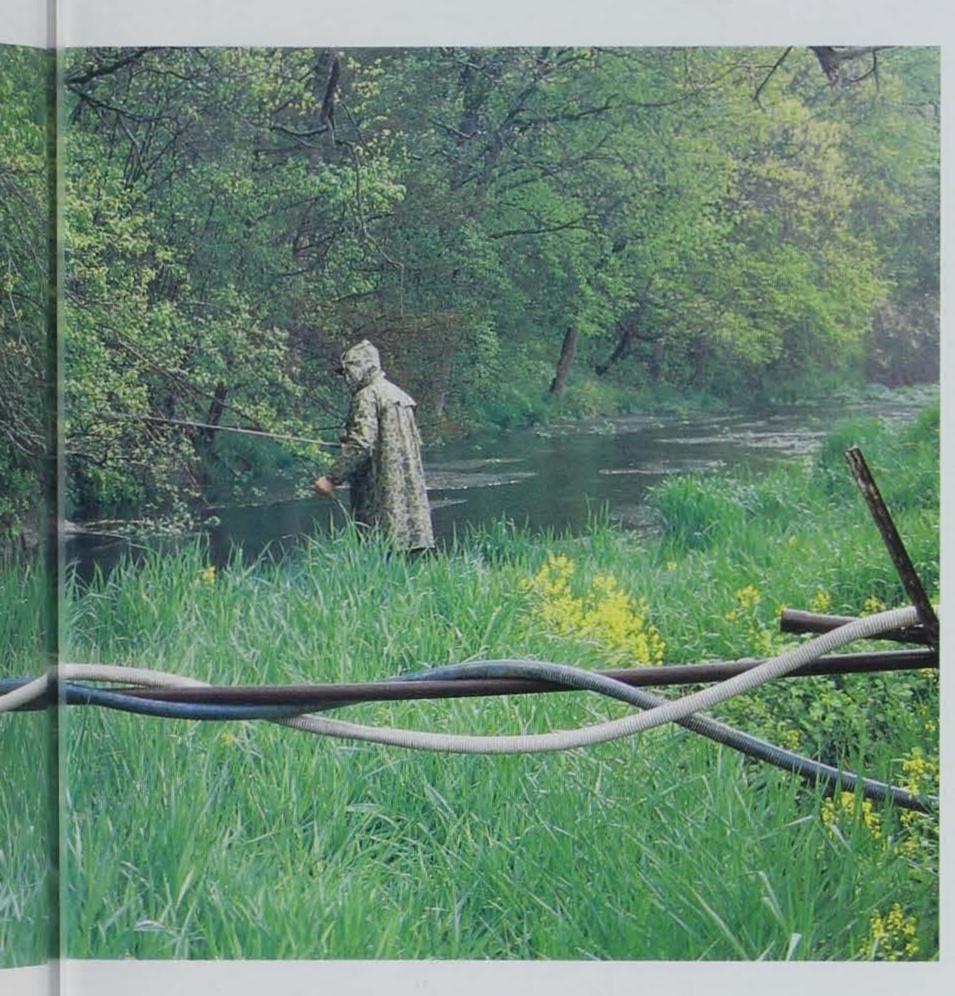
Work

proje

Manley Bigalk said participation in the project has been a lesson to him both environmentally and economically.

"I liked the idea of getting the cattle out of the stream anyway. There's a lot of problems associated with the cattle having direct access to the stream, like cows having calves right in the water. The cattle are also more prone to accidents when they are right on the stream bank," Bigalk said.

The effort to help farmers keep better records paid particular dividends in 1998 when crop prices plummeted. "Adequate records allowed these



Removing the cattle from the stream did not necessarily mean losing a primary source of water for livestock. A large pasture along the stream was fenced off (far left) and nose pumps (far left, bottom) were installed, allowing cattle to draw water from Bigalk Creek without ever getting close to the stream bank.



There are many problems with cattle having direct access to a stream, not only with regard to the water quality of the stream but with the safety of the cattle.

ctices be armers will dess they can lly benefi-

rticipation in n to him both mically. ting the cattle There's a lot n the cattle stream, like the water. one to th on the

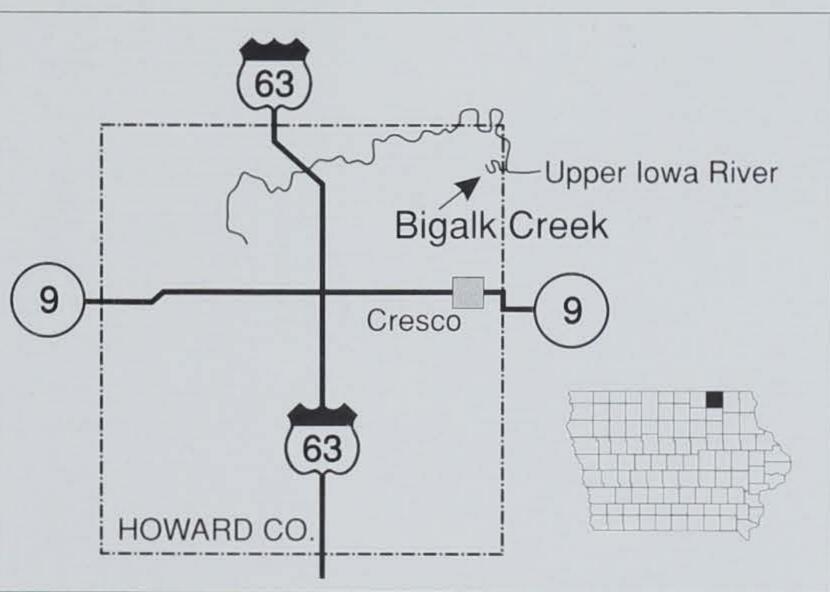
ters keep ar dividends slummeted. swed these farmers to make management decisions to weather the financial crisis," Moore said.

Soil erosion was reduced by 12,785 tons in the Bigalk Creek watershed during the project. If current sediment control structures remain in place, it is estimated erosion will be reduced by more than 5,000 tons a year in the future.

But Manley Bigalk said the success of the project in restoring natural habitat might have provided the greatest lesson of all.

"Man has shown he can destroy; he hasn't always shown that he can preserve," Bigalk said.

Kevin Baskins is an information specialist working on nonpoint-source pollution projects.



Going Smokeless

by Brian Button

attacks ijes. assault who h Weinb Allerg Univer Clinics take th their o towns bans a as state Idopt and Da small t bans, r free ye with se behind lowans usthma to the Lung / 民ople WO3 TO an mutu Dassing

particle

the dee

remain

travel h

sands haze ac East

Loc

conditio

higher t

In



1

A pained and distressed voice was on the phone. "My asthmatic kids have gone to the doctor. We leave town on the weekends and stay in a motel when the city allows open burning. Motels and asthma medication are expensive. And I'm tired of fleeing my own my home." Leaf smoke may be the single greatest acute environmental health threat in Iowa. Perhaps no other form of pollution is responsible for as many doctor visits, hospital admissions or medication costs. While exact statewide figures for asthma attacks triggered by leaf smoke are unknown, many medical professionals agree: a strong correlation exists between smoke exposure, asthma attacks and other respiratory difficulties.

"Open burning is like committing assault and battery against neighbors who have asthma," says Dr. Miles Weinberger, Director of the Pediatric Allergy and Pulmonary Division of the University of Iowa Hospitals and Clinics.

Those who suffer are beginning to take their right to breathe clean air into their own hands. From Iowa's smallest towns to its larger cities, leaf burning bans are on the agenda of city councils, as state rule allows municipalities to adopt bans.

Due to resident concerns, Ames and Davenport, as well as numerous small towns, have recently passed burn bans, making their communities smokefree year-round.

Residents and parents of children with severe respiratory ailments are behind the efforts. More than 344,000 lowans have lung cancer, emphysema, asthma or chronic bronchitis, according to the Iowa Chapter of the American Lung Association. Many of these people may be your friends, neighbors or coworkers.

For some Iowans, leaf burning is an autumn rite of passage, signaling the passing of the growing season. But leaf burning is an out-of-fashion, sometimes life-threatening and environmentally

n Button

single

l health

as many

sions or

ict statewide

iggered by

iny medical

correlation

sure, asthma

ther form of

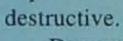
industry combined. Only on days when leaf burning is done can you see airborne pollution in most communities. On non-burn days, there is rarely visible smoke created by cars and industry. (If you see any, let us know!)

There are options to burning. Composting, mulching and municipal waste disposal are common alternatives. Often cities may designate old landfills or other city maintenance areas for leaf and landscape waste disposal. Some towns chip tree wastes to provide free mulch and turn the leaves into rich compost as a service to residents.

Schools and civic groups rake and

bag leaves for community service projects or fund-raisers. And of course, avid gardeners mulch the leaves before composting to reduce the volume and speed up composting. The resulting rich organic matter is a great additive to lawns and vegetable and fruit gardens. That is healthy pollution prevention you can sink your teeth into.

Opponents to leaf-burn bans claim they have a "right to burn." Granted, burning is easy. But so is dumping motor oil, pouring chemicals down the drain, disregarding conservation tillage and fishing and hunting without regard to regulation. But the consequences are



Do your part to improve the health of your neighbors, friends, family and our environment: Don't burn leaves. Your lungs will love you for it! And so will your neighbors.



unacceptable method of disposal. Many lowans recognize this and more than 200 residents call the DNR every year to report open-burning complaints.

The acrid smell of leaf smoke contains carbon monoxide and fine particulate matter (soot). Both are regulated air pollutants. Just as a beach is made up of billions of grains of sand, smoke is made up of individual particles, too. And they can penetrate the deepest portions of the lungs and remain imbedded in tissue for years.

In the air, Iowa-borne particles can travel hundreds — sometimes thousands — of miles, and contribute to haze across the upper Midwest and East.

Locally, burning can create smoky conditions with air contaminant levels higher than emissions from cars and



Although burning (far left) has been the popular way to dispose of leaves, composting (above) is better for the environment. The result is a rich organic compost ideal for mulching (right).

> Brian Button is an information specialist for the DNR's air quality bureau.

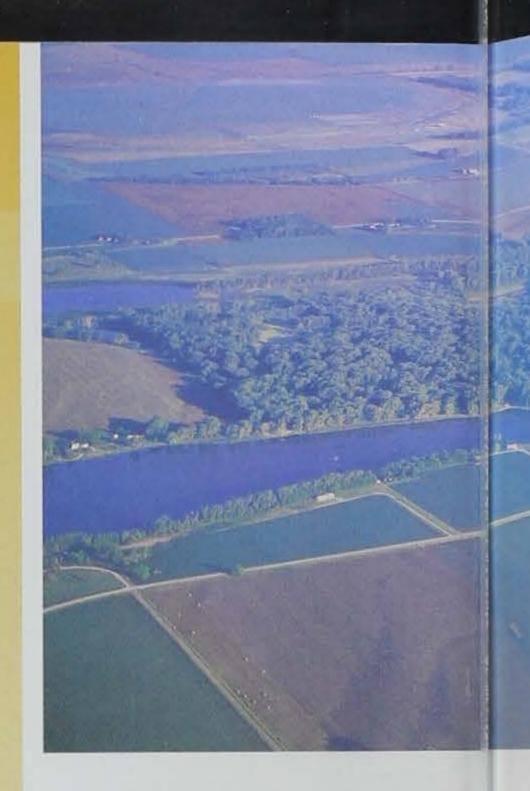
> > September/October 1999 • Iowa Conservationist 49

Parks Profile

A Western Iowa Tribute to the Nation's History

Lewis and Clark State Park

Article by Ron Williams



When Meriwether Lewis and William Clark set out to find an allwater passage to the Pacific Ocean, little did they realize their travels would one day gain them lasting fame.

But today, nearly 200 years after Lewis and Clark first set out to explore the uncharted West, their legacy lives on. The Lewis and Clark Expedition, one of the greatest American adventure stories, is relived all along the journey trail, from its beginning in St. Louis to its end on the Oregon shores of the Clark of did dis resourd acquin opmen Ba explor known covere valleys valleys Prairie timber

uons w

produc

Lewis

other e

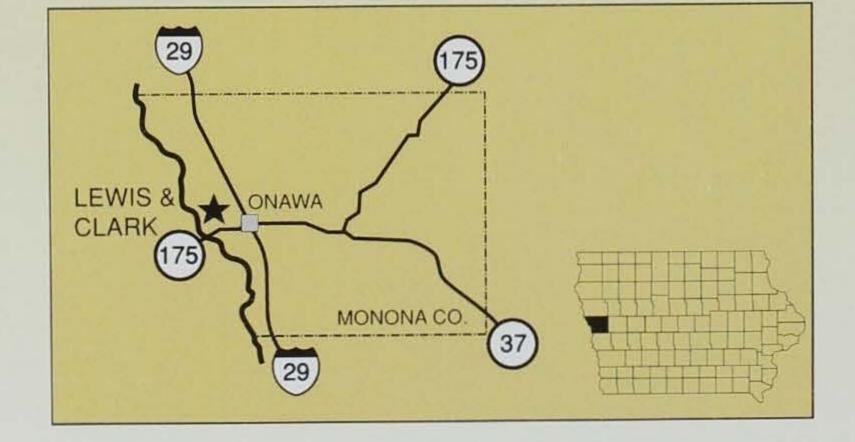
mounts

progres

found (

In

Photos by Clay Smith



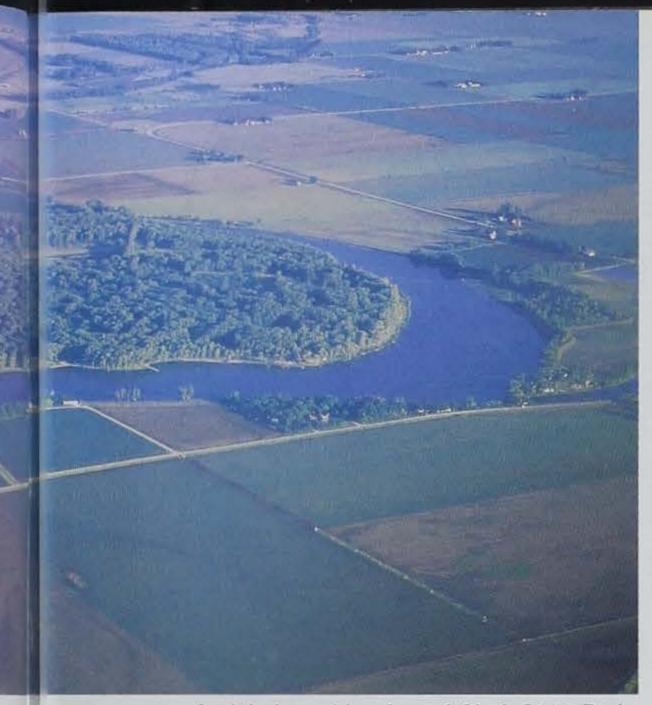
Pacific Ocean.

It was Lewis and Clark who opened what would one day become lowa to the rest of the country. Despite their brief stay in Iowa, Lewis and Clark left an indelible mark on the history of the state. That bit of heritage lives on near Onawa, at scenic Lewis and Clark State Park.

But to truly appreciate Lewis and Clark State Park, one must fully understand how it actually came to be.

The Beginning

The earliest U.S. push westward was the Lewis and Clark Expedition President Thomas Jefferson sent up the Missouri River in 1804. It's primary goal was to search for an all-water passage through the North American continent to open up trade and travel to the Pacific Ocean. Although Lewis and



Aerial view of Lewis and Clark State Park.

s and I an all-Ocean, avels avels avels ting fame. ears after to explore gacy lives pedition, adventure ne journey t. Louis to of the Clark didn't find such a passage, they did discover a wealth of natural resources and opened the newly acquired Louisiana Territory to development and trade.

Based on Lewis' and Clark's exploration, western Iowa became known as the land of mostly prairiecovered hills interspersed with flat river valleys. The lands both in the hills and valleys were found to be very fertile. Prairie grasses and forbs, shrubs and timber all grew well. Wildlife populations were strong and the rivers abandoned by the Missouri River sometime after Lewis' and Clark's trip. The lake had a sandy bottom and beaches along the western shore and very clear water. On a bright sunny day, the clear water reflected the beautiful blue sky and the lake gradually assumed the name "Blue Lake."

By the early 1900s, the lake attraction had increased enough so that an early resident began to make some

developments catering to the recreational interests of the public. Rental boats were provided. Picnicking was popular. Cabins and a dance hall were available, and a toboggan run was built from a private east shore grove into Blue Lake. This original park area was known as Wright's Grove or Park (after the family who owned the land). Many people would come to Wright's Park and boat across the narrow lake to swim near the west shore's sandy beaches. No road accessed the west shore beaches at the time. In the early 1920s, local golf enthusiasts used several acres of land on the west shore, known as the "Sand Dunes" for the original Onawa Golf Course. This area, which is now part of the state park picnic and camp areas, was virtually treeless because of the many sand dune formations left by earlier Missouri River channel meanderings. The area provided a very interesting game campground roads. of golf. However, the sand burs, which are still a constant plague, pushed the golfers to a less-perturbing environment.

The golfers' use of the area brought about trail development from the south, providing better public access to the beach. This created more interest in developing a state park, and the first acquisition was made in 1920. In August 1924, with land transactions completed, Lewis and Clark State Park was established in memory of the same early explorers who had camped in the vicinity Aug. 9, 1804.

For the next 20 years, the park was operated by the state mostly as a natural area. Through the Works Progress Administration (WPA), improvements such as tree planting, construction of an enclosed shelter (the lodge), a latrine facility, water system and swimming area were made. The tree planting project was a joint project accomplished by the WPA, the Iowa Fish and Game Commission (now the DNR), local volunteers and the National Park Service which donated 7,000 new pine, maple, elm and cottonwood trees as a living memorial to Stephen A. Mather, the first National Park Service commissioner. This tree planting has resulted in a semi-forested area breaking up the eroding wind action on the extremely sandy soil.

who become ry. Despite is and on the of heritage tic Lewis

ewis and ully ame to be.

vestward pedition sent up the primary I-water American nd travel to h Lewis and produced an abundance of fish.

In the 100 years following the Lewis and Clark Expedition, many other explorers, trappers, fur traders, mountain men and eventually pioneers progressed through western Iowa. Some found the area to their liking and stayed or returned to settle.

By 1846, when Iowa became a state, more and more settlers were pushing westward and settling in the Missouri River valley and the protective Loess Hills which paralleled the river on the east. Farmland was cleared, crops planted, livestock was brought in to graze on the lush grass, towns were established, schools and roads built and eastern civilization took over the area. As the population in western Iowa grew, pioneers searched out natural areas for outdoor recreation. They soon found a small oxbow lake Initial plans for the park were pretty well completed by the 1940s. Picnicking, swimming, fishing and



The park has undergone numerous inmprovements in recent years to meet campers' needs, including hard-surfacing campground roads.

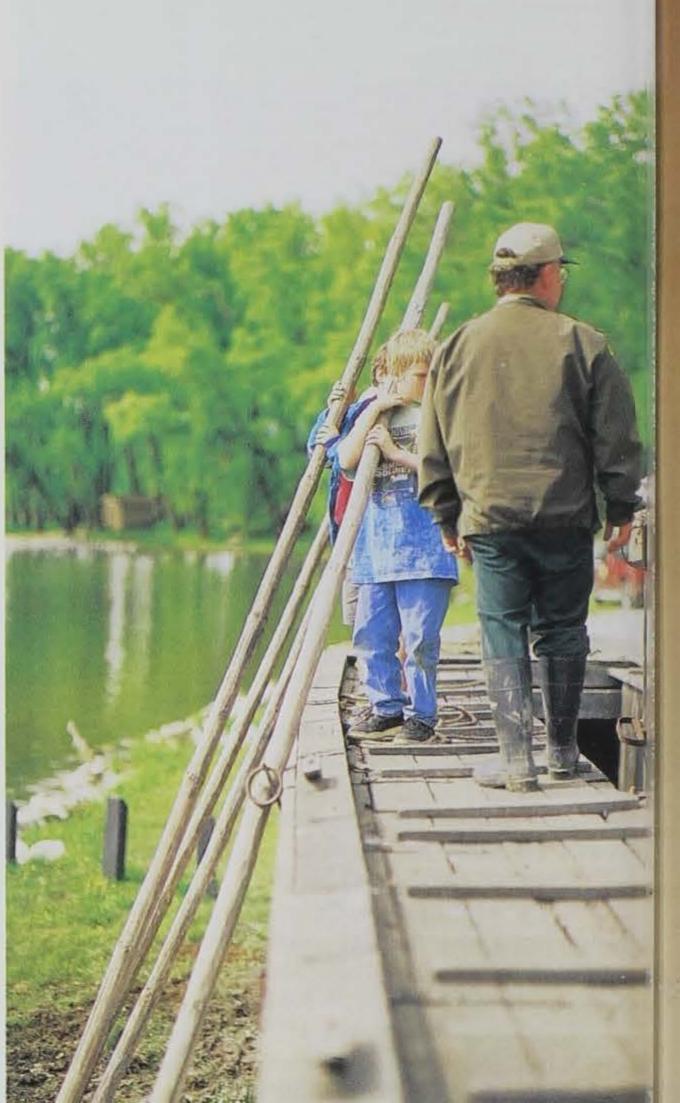
boating were the primary activities offered in the park. A bathhouse had been built at the beach area. The enclosed shelter (lodge) was built in the wooded area to the north of the beach. Picnic tables and fireplaces were spread throughout the park. Access roads and trails had been developed to accommodate the public. Summer Sunday afternoons found the beach and picnic areas filled with people.

In the 1950s and 1960s, a nationwide trend toward outdoor camping created a need for more facilities to accommodate the additional users. Camping units often filled the whole park and steps were taken to restrict camping to a certain area and reserve some of the park area for picnicking. By the 1960s and 1970s, the camping area had been developed with a showerhouse, camp sites with tables, fireplaces and electric hookups and better access roads to handle the larger campers being used. New boat ramps were built into the lake for those who brought their boats along.

In the mid-1980s and 1990s the park experienced increased interest in the history of Lewis and Clark, and interpretation of their trip gained emphasis. The park staff, along with the Onawa Chamber of Commerce and numerous volunteers, developed a Lewis & Clark Festival held annually in June to focus attention on this expedition. A local friends group, The Friends of Discovery, oversaw the building of full-sized replicas of the keelboat Discovery and two pirogues used by Lewis and Clark. The completion and exhibition of these boats have brought considerable attention to the park. Several newspaper and periodical articles have been written about the boats. A half dozen different Lewis and Clark documentary films and videos have used the boat replicas. The boat exhibit is mentioned in several travel guides and the park is now recognized by the National Park Service as part of the Lewis and Clark National Historic Trail. People following this trail are stopping regularly to gain a better understanding about the expedition. Several special

events have been held at the park to focus more on these explorers, and more events are planned as part of a nationwide Lewis and Clark bicentennial in 2004-06.

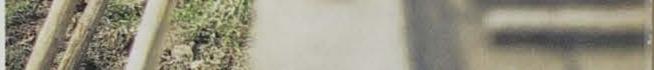
As with all developments, interests in the park change through the years. Facilities deteriorate with time and use. Maintenance equipment wears out. Budgets and maintenance staff levels fluctuate according to the political philosophies of the time. People get older. New generations pursue different activities. As we approach the 200th anniversary of the Lewis and Clark Expedition, the Department of Natural Resources staff is trying to anticipate the needs of the park and its future users. The park roads were recently hard surfaced. Trails are



10

(h)

receiving extra attention. The old beach bathhouse was replaced in 1987. Picnic facilities and docks are being upgraded. The 60-year-old WPA lodge received a face-lift this past winter. The campground shower house is scheduled for replacement soon. The lake shoreline along the park is receiving rock riprap to slow the wave erosion. Plans are currently being considered for several changes or additions to the park under a "renewal process" to not only protect the park grounds and facilities but also to accommodate increased use and more varied interests. The Friends of Discovery are working with the Onawa Community Foundation and the DNR



A popular attraction at the park, especially for school field trips, is the keel boat.

to build a visitor center to house the boat replicas and interpret the river travel of Lewis and Clark.

Throughout the history of this park, the influence of Lewis and Clark and their exploration has been of primary significance. As we plan ahead for the next 50 to 100 years, we want to keep that focus and continue to provide the amenities and aesthetics of a very popular recreation area. DNR park staff welcomes public input and participation. Together we can keep this park a beautiful and educational resource.

Ron Williams is the park ranger at Lewis and Clark State Park.

Practical Conservationist

Trapping 101: Getting Started by A. Jay Winter

Trapping is a sport rich in heritage. The first explorers to Iowa were trappers in pursuit of beaver and other furbearers for trade on the European fur market.

Trapping is a sport where participants get very close to the outdoors. To become proficient, one must learn as much as possible and be able to apply that knowledge to capturing the target species.

My earliest memories of trapping involve trips with my mother before and after school. We spent many hours in a canoe on the Turkey River in northeast lowa pursuing muskrats, raccoons, beaver and mink. My most memorable spot was a very productive muskrat den where I set four small conibear traps at the entrance. My theory was, the more traps, the better my chances were! My prize for the day turned out to be a female mink caught in three of the conibears. Needless to say there was great excitement in my world that day!

Since that time I have spent countless

school

ouse the

he river

of this park.

Clark and

f primary

nead for the

int to keep

provide the

R park staff

participa-

this park a

esource.

inger at

a very

hours on the trapline and learned from all my experiences. The following tips, gleaned from such experiences, will help the beginning trapper get started.

TRAPPERS' TOOLS

There are a variety of tools used by today's trappers. Some are a necessity and some are luxuries. Some are listed below with a description of their purpose:

Traps — There are three basic types: footholds, conibears and snares

Foothold traps are designed to hold the animal until the trapper returns to check the trap. The size of trap to use depends on the animal the trapper is trying to catch. I would recommend the following sizes:

Raccoons	1 or 1 1/2
Muskrats	1 or 1 1/2
Mink	
Beaver	
Fox	1 1/2 or 2
Coyote	

Initial Costs

Furharvester license	
- Resident 16 or older	\$20.50
Plus habitat fee	\$5.50
- Resident under 16	\$5.50
Trap tags (to identify trappe	er) \$8
Traps (need a variety)	\$50
Waders (for setting and	
checking traps in the wat	ter) \$40
Wire (for attaching traps	
to an anchor)	\$5
Lure (for attracting game)	\$4
Stakes	\$12
Pliers	<u>\$6</u>
\$1.	30.50 - \$151

Conibear traps are most commonly set in areas where the animals travel, such as trails or dens. They come in three sizes, each designed for different size animals:

Muskrat and mink	.110
Raccoon	220
Beaver	330

Snares are pieces of aircraft cable formed in a loop and hung above a trail. When the animal walks through the loop, it closes slowly and holds the animal until the trapper arrives. They come in one basic size and can be set to restrict the size of animal caught.

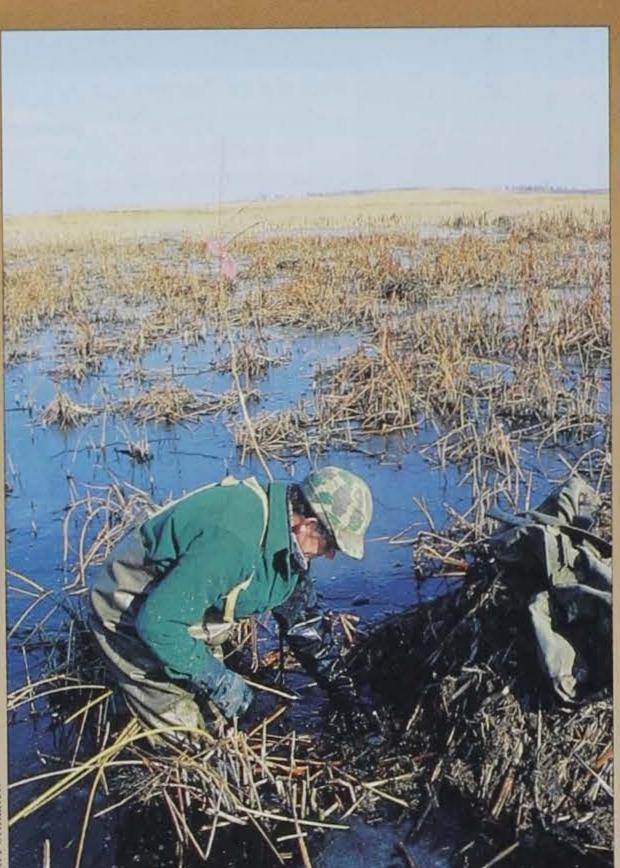


Some of the earliest explorers to lowa came in search of furbearers for trade on the European fur market. The muskrat, like the one above, continues to be one of the most widely trapped furbearer.

Packbasket — A packbasket allows the trapper to carry all the items needed on the trapline. Traditionally, these were made from strips of wood, but a 5-gallon bucket works great.

Stakes — Stakes hold the trap at the trap site when the animal gets caught. They are most commonly made from 18 inches of 3/8-inch concrete reinforcement rod with a washer welded on top. Wooden stakes made from 2x2s also work well. Drill a hole through the top to attach a wire leading to the trap. Another method is to attach the trap to a movable object, such as a cement block, dead log or rock. Note: Snares must be staked solid.

Practical Conservationist



containing an attractant, a pail with bait, or other lured area. Remember, however, even the best lure is not going to make up for poor set placement.

SCOUTING

Going into the field before you intend to trap is important. This allows you to determine the population of different furbearers and find potential set locations. Remember, approximately 98 percent of Iowa is in private ownership, so you must ask permission before scouting or setting traps. I have personally found that acquiring trapping permission in Iowa is relatively easy if you only take the time to ask!

REGULATIONS

There are a variety of laws that must be followed on the trapline. They are designed to protect the animals, trapper or other wildlife that use the same areas. These include, but are not limited to:

- Traps must be checked and the animals removed every 24 hours.

— Conibears with a jaw spread more than 8 inches must be set entirely under water.

— Snares must have a loop size of 8 inches or less and a deer stop that prevents the snare from closing smaller than 2-1/2 inches.

— All traps and snares must have a metal trap tag that includes the user's name and address.

For a complete list of regulations, consult the 1999 Iowa

Blind sets, designed to catch furbearers as they go about

their daily routine, is one method of trapping furbearers.

Hunting and Trapping Regulations booklet.

Clothing — Clothing should be comfortable for all types of weather. I would recommend rubber footwear to control scent on a dry-land trapline and hip

boots or chest waders for trapping muskrat, beaver or mink in the water.

METHODS

There are many methods used to trap different furbearers, but it can easily be broken down into two different types of sets — blind sets and lured sets. Blind sets are designed to take an animal while they are going about their daily routine. This may include traps set on trails, den entrances, water slides, feed beds, etc. The other type are lured sets that attract animals by enticing them through smell. This may be a hole dug in the ground or stream bank

54 Iowa Conservationist • September/October 1999

Sources of Equipment

Funke Trap Tags and Supply 2151 Eastman Ave. State Center, Iowa 50247 800-626-2894

Sheda's Trapping Supply Box 188 Chelsea, Iowa 52215 (515) 489-2155

R and M Animal Lures P.O. Box 96 Rowley, Iowa 52329 (319) 938-2636 T-N-T Trapping Supply 10555 U Ave. New Hartford, Iowa 50660-7506 (319) 983-2519

The Snare Shop 13191 Phoenix Ave. Carroll, Iowa 51401 (712) 822-5318 www.snareshop.com

A. Jay Winter is a training officer at the DNR's Springbrook Conservation Education Center in Guthrie County.

Classroom Corner

Community Service by Don Sievers

The following activity is a modified version of the activity "Community Service" from Solve the Crime: Save the Song of Spring! Neotropical Migratory Birds and Their Midwestern Connections, a middle school activity guide, copyright 1998. The activity guide is designed to accompany a wildlife trunk which focuses on neotropical migratory birds with midwestern connections. Your local Area Education Agency has a copy of the trunk available for loan. If you would like to purchase copies of the activity guide contact Linda Zaletel, 56461 180th St., Ames, Iowa 50010-9451.

Background:

Community service action projects can help students develop a stronger environmental ethic and increase their sense of personal worth and competence. Students begin to understand they do have the power to bring about positive and significant change. They become role models for others as their enthusiasm rubs off on their peers.

Action projects can achieve important educational goals by infusing connections between diverse subject areas. Projects can help students develop communication, research, data collection and analysis skills, teach them about legislative processes and provide opportunities for creative thinking. Most projects often depend on cooperative learning through a team effort. Students develop life skills

by gathering and processing information, weighing the pros and cons of issues, making group decisions, and identifying strategies for achieving goals. Age: Middle School

Subject:

science, social studies, language arts

Objectives:

Students will: 1) participate in an action project to help neotropical migratory birds, 2) understand the additive value of many small actions, and 3) be able to communicate the importance of their project to others.

Materials:

Taking Action - An Educator's Guide to Involving Students in Environmental Action Projects. 1995. Project WILD. Note: To obtain a copy, contact: Project WILD, 707 Conservation Lane, Gaithersburg, Md. 20878

Time:

dependent on project chosen



ed area. nake up

portant. furbearately 98 permisund that y if you

d on the orother tlimited

every 24

must be

nd a deer an 2-1/2

includes

99 Iowa

1506

or at the

n Educa-

The procedure section lists several ideas and contacts to get students started on projects. Students may have their own ideas, or brainstorm with others before they chose a service project.

Procedure:

1. Read about completed student action projects in *Taking Action-An Educator's Guide to Involving Students in Environmental Action Projects*. 1995. Project WILD.

2. Pick a project from the following list of ideas, visit with a local conservation agency for suggestions or create your own project.



Community service projects can help students develop a stronger environmental ethic and increased sense of personal worth.

Classroom Corner

Extensions:

1. Brainstorm with peers and develop your own project.

2. Team up with another school (local or in another country) to work together on a project beneficial to both.

Resource Materials:

Taking Action-An Educator's Guide to Involving Students in Environmental Action Projects. 1995. Project WILD.

Action Project Suggestions

ECOTOURISM:

Students can develop surveys to determine the economic impact of a local wildlife area or the benefits of developing more wildlife habitat near their community. They may use a copy of the 1996 National Survey of Fishing, Hunting and Wildlife-Associated Recreation, published by the U.S. Fish and Wildlife Service, for an example. They can develop ways to publicize their results through a local media source.

CHRISTMAS BIRD COUNT (CBC):

National Audubon Society sponsors a Christmas Bird Count each year. It is America's oldest and largest annual birding event with participants from

coast-to-coast. The count occurs on one calendar day during a two-to-three week period centered around Christmas Day. Each count covers a circle 15 miles in diameter, in which birders are grouped into parties to cover specific locations. For more information contact: American Birds, National Audubon Society, 700 Broadway, New York, N.Y. 10003.

SU

11

ret

19

mi

ce

the

5拍

TIL

ZVI

dei

shi

m

CC)

Bo

Tar

In

H

100

1175

肌

Ac

SEP

Cer

SIN be.

Was

whi

dan

lor.

Roi

a pr

gat

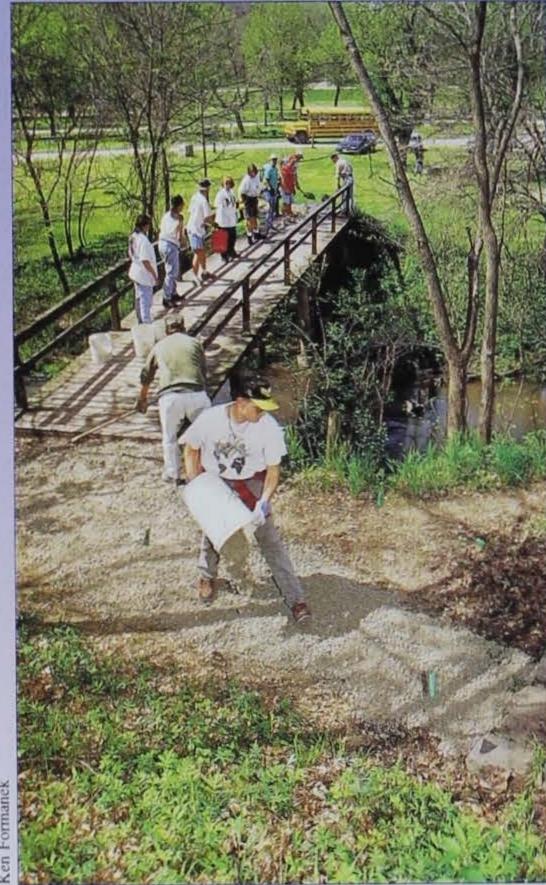
safe

ñ0n

Pur

WATCHLIST:

Through the Internet, students can become involved with ongoing research projects on neotropical migratory birds. The watchlist is compiled by Partners in Flight. It identifies species of birds whose populations are in trouble. Species are given priority rankings depending on how much their populations have declined and the seriousness of future threats to their habitats. Their web site is: http://www.audubon.org/bird/watch/ kids/.



Local county conservation boards, natural resource conservation service offices and area DNR staff members are a good source for identifying local community service projects.

FEDERAL JUNIOR DUCK STAMP PROGRAM:

Students work to design a duck stamp to be bought by conservationists and other stamp collectors with revenue directed towards the preservation and conservation of wetland habitat. For contest rules and deadlines, contact: Federal Duck Stamp Program, U.S. Fish and Wildlife Service, 1849 C Street NW. Washington, D.C. 20240.

CELEBRATE INTERNATIONAL MIGRATORY BIRD DAY (IMBD) WITH A POSTER BIRD:

Research how local grocery stores decide what images to print on their bags used for carrying products home. Make a request to have a neotropical bird species and two or three facts about that species printed on the bags for IMBD (second Saturday in May, annually).

LOCAL PROJECTS:

Check with the local County Conservation Board, Natural Resource Conservation Service or the Iowa DNR's area wildlife biologist for suggestions or information about ongoing projects.

Some Hunters Have All The Luck

Iowa's deer hunters had another successful season last fall with more than 112,600 deer harvested.

local

their

and

their

It is

from

ing a

Each

's are

more

Soci-

)ngo-

The

ecles

given

tions

their

/atch/

mser-

ected

bitat.

tamp

NW.

3IRD

print

quest

about

tay in

atural

wild-

going

Although slightly lower than the record harvest of more than 118,000 in 1997, the 1998 figure was still above the management goal for the deer herd. Excellent success rates were one reason for the sizable kill, with nearly 70 percent of shotgun hunters and 50 percent of muzzleloader hunters tagging a deer.

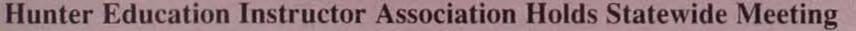
However, three Iowa hunters were even more lucky. In addition to tagging a deer, Dell Jasa of Spirit Lake received a shotgun and Jerry Koestler of Burt won a muzzleloader donated by Whitetails Unlimited, and Ken Maro of La Motte received a bow donated by the Iowa Bowhunters Association. The three hunters were among the nearly 40,000 hunters randomly selected to participate in the annual post-season harvest survey.

The survey is used to statistically estimate the number of deer killed in each deer season. Hunters returning completed survey cards are eligible for the drawings. This incentive program has been in place for the last four years and has increased the survey response rate.

"We have a 70 percent response rate, which is just phenomenal," said Willie Suchy, DNR wildlife biologist. "Having the drawing allows us to get a higher response rate in a shorter period of time."

The harvest information is part of the data used to set deer hunting regulations each fall. Based on the harvest results for 1998 and the results from the DNR's winter aerial and spring spotlight surveys, Iowans will see nearly identical regulations this fall as the past two years. The number of deer counted on the surveys were about the same as a year ago, and hunters had excellent success rates last fall so deer numbers are still pretty good.

The liberal regulations this fall should reduce or stabilize deer numbers in most areas. The results from the harvest will be watched carefully this fall in an effort to maintain desired deer numbers.





Eastern wild turkey

Record Spring Turkey Harvest Set in 1999

Despite less-than-ideal weather conditions during much of the season, Iowa hunters harvested a record number of wild turkeys during the 1999 spring season.

According to Dale Garner, DNR forest wildlife research biologist, resident wild turkey hunters harvested an estimated 17,360 bearded birds, almost 10 percent greater than the previous record set in 1998. 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 43,008 resident shotgun licenses issued, an 8 percent increase over spring 1998 totals. An additional 2,462 resident archery-only and 1,999 nonresident licenses were issued. "Iowa turkey hunters have some of the highest success rates nationwide and this past spring was no exception, with 45 percent of the hunters bagging a turkey," Garner said. "We had a great poult hatch in 1997 and a good hatch in 1998, which meant there should have been a good number of 2-year-old toms and jakes in the population," he added. "I was expecting a record harvest because these two age classes are the most vulnerable and as such, comprise the majority of the harvest. However, when the weather turned lousy, I wasn't sure what would happen."

The newly created Iowa Hunter Education Instructor Association (IHEIA) held its first statewide meeting as a part of the Hunter Education Volunteer Instructor Academy held in July at Springbrook Conservation Education Center near Guthrie Center.

Approximately 60 volunteer instructors attended what is expected to be an annual event. The main speaker was Bill Christy of Blacksburg, Va., who spoke about shotgun shooting fundamentals and how to be a good instructor. DNR Recreational Safety Officers Rod Slings and Craig Jackson presented a program on hunting accident investigation. Arlen Throne, DNR recreational safety officer, conducted a program on nontoxic shot patterning and Gary Purtilo, DNR conservation officer, led the program on archery topics.

"The instructors enjoyed a great

weekend and learning experience," said Sonny Satre, DNR recreation safety coordinator. "If we can convey to the students what Bill Christy taught us about shotgun shooting, Iowa will have some excellent shooters and safer shooters in the years to come."

The IHEIA was created to improve the overall hunter education program in Iowa. The group will support the efforts of instructors throughout Iowa and provide information on important hunting issues.

Iowa's hunter education program began in 1960. Since hunter education became mandatory in 1983, hunting accidents have been on a downward trend. Approximately 1,700 volunteer instructors certify up to 14,000 students each year. Hunters born after Jan. 1, 1967, must satisfactorily complete a hunter education course to obtain a hunting license.

Improved Habitat Conditions Produce Bumper Crop of Ducks



Blue-winged teal

Reflecting improved habitat conditions throughout much of their breeding range, the population of breeding ducks rose by 12 percent to 43.8 million, according to the U.S. Fish and Wildlife Service's 1999 annual survey of key nesting areas for breeding ducks.

The increase reverses an 8 percent decline in 1998, and represents a 34

average recorded since 1955. Prior to 1998's decline, duck populations enjoyed three straight years of increases.

An early warm spring and good precipitation resulted in an abundant number of ponds and excellent nesting cover across much of the survey area. Most of the Dakotas, northern Saskatchewan, the Northwest Territories and western Ontario saw improved habitat conditions from 1998. The estimated num-

ber of May ponds in Canada and portions of the north-central U.S., critical to the reproductive success of waterfowl, rose 46 percent from 1998 to a level 37 percent above the long-term average.

Breeding populations of mallards rose 15 percent to 11.1 million, 51 percent greater than their long-term average. Blue-winged teal numbers, at 7.2 percent greater than the long-term average. Other species also saw improvement, with northern pintails up 21 percent, northern shovelers up 22 percent and green-winged teal up 61 percent. Mallards, green-winged teal and bluewinged teal were at record highs while shoveler and redhead numbers were the second highest recorded since 1955. E

Many of Iowa's duck species experienced population increases. Mallards, wood ducks and blue-winged teal had good reproductive efforts, said Guy Zenner, DNR waterfowl research biologist.

"Given the good production here and the bumper crop of ducks coming off the prairies, we should see excellent numbers of birds migrating through Iowa again this fall," he said.

However, Zenner cautioned waterfowl hunters not to get their hopes too high since hunting success is dependent upon habitat, weather and the timing of the migration.

"The potential for a good season,

however, is definitely there," Zenner said.

Backbone State Park Recognized For Its Landscaping

Backbone State Park was recognized for its "classic examples of landscape architecture" by the American Society of Landscape Architects (ASLA). The award was presented during a ceremony held July 10 at the park's beach house.

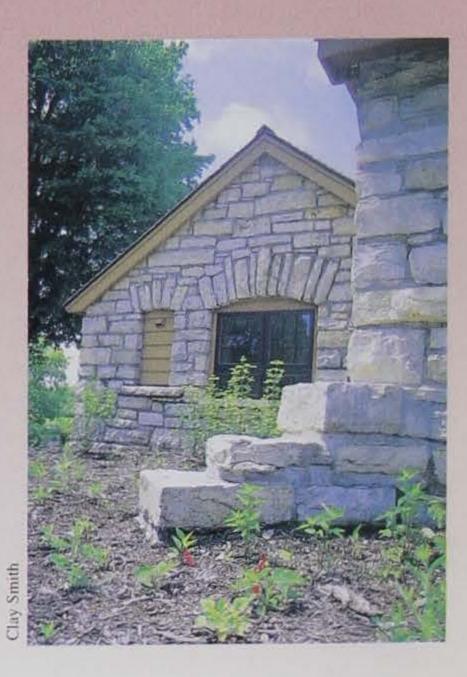
The "Medallion Award" program is part of the 100th anniversary celebration of the American Society of Landscape Architects. Backbone was recognized for the significant site planning and landscape development over the decades and, more recently, in conjunction with renovations to the beach and boat houses.

Specifically, ASLA pointed to the rustic park architecture found throughout Backbone State Park. David Sadler, president of the Iowa Chapter of ASLA, said "Backbone State Park is definitely a treasure for Iowa, and with it's rich history and unique site characteristics, is truly deserving of this award."

Michael Carrier, DNR division administrator of Parks, Recreation and Preserves, noted the most recent site improvements at Backbone were part of an ongoing statewide effort to renovate park infrastructures, funded through a special legislative appropriation known as Restore the Outdoors (RTO).

Steve Pennington, DNR bureau chief said, "Receiving an award from an organization as recognized and as professional as ASLA causes all in state parks to be doubly appreciative of this award."

The bronze medallion award will be on display above the main entrance foyer of the Backbone State Park beach house.



Energy Efficiency Program Saves Taxpayers Money

At a ceremony Aug. 5, Iowa Gov. Thomas J. Vilsack honored a Department of Natural Resources (DNR) financing program for its success in saving energy and taxpayer dollars.

"Your dedication to this effort is a credit to you and your agency, and has resulted in a tremendous benefit to Iowans," Vilsack told DNR-Energy Bureau staff members.

The program, called the State of Iowa Facilities Improvement Corporation (SIFIC), works to make state agency buildings energy efficient. Iowa's taxpayers will save \$130,000 in fiscal-year 2000 interest, thanks to early redemption of the program's original bonds.

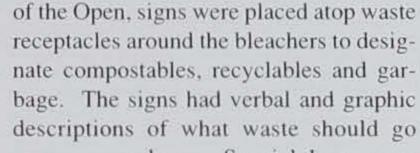
SIFIC is a nonprofit corporation created by the DNR in 1986 to provide state agencies with lease-purchase financing for energy-efficiency improvements. The Iowa departments of General Services, Human Services, Corrections, Veterans Affairs, Public Safety, Transportation and the Department for the Blind are program participants. To date, SIFIC has saved state agencies and Iowa taxpayers more than \$19.5 million in energy costs through \$11.4 million in energy improvements. This financial success is what led to early redemption of the bonds. Final lease payments were made on behalf of all participating agencies through the proceeds of the program.

The DNR will also celebrate the early retirement of the SIFIC bonds at an event later this year.

For more information, contact Monica Stone of the DNR's Energy Bureau at (515) 281-6361.

Recycling Big Hit At U.S Senior Open Tournament

The 1999 U.S. Senior Open golf tournament was a success on many levels – including recycling. Through an initiative spearheaded by the DNR's Waste Management Assistance Division, one ton of recyclable plastic water bottles was collected over four



where. Special bags were placed in each designated bin:

bleacher areas. The decision was made to scale back the program even further. All but the recyclable signs were taken down and the compostable bags were replaced with regular garbage bags.

The program was monitored and

n avroveperrcent bluebluewhile re the 55. sperilards, 1 had Guy biolo-

re and off the mbers in this

wateres too indent ing of

rsaid.

days of the Open.

"While we didn't get to implement our original plan, we are still thrilled with the outcome of this effort," said Mary Klemesrud, environmental specialist for the division. "We limited our collection to the bleachers on 16 holes, but we believe we recovered up to 90 percent of the eligible recyclable plastics from these areas."

The division's original plan called for the collection of recyclables (mostly plastic) and compostables (mostly paper products and food wastes) on all areas of the golf course for the full seven days of the event. The plan was scaled back to involve recycling and composting in only the bleacher areas to comply with the wishes of the Open's organizers.

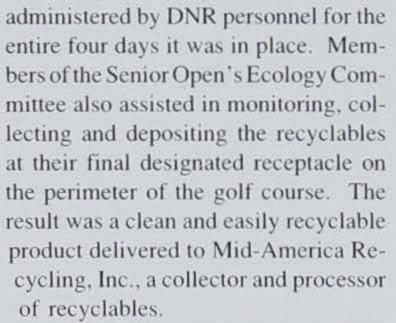
Beginning Thursday, the fourth day

biodegradable bags in the compostable bins, clear plastic bags in the recyclable bins,

and black trash bags in the garbage bins.

At the conclusion of play Thursday, DNR staff analyzed the spectators' understanding and practice of the selfguided method of sorting. It was clear spectators were, for the most part, correctly identifying and using the recy-

cling bins, but very few compostable wastes were being discarded around the



The DNR plans to implement new or improved recycling and composting initiatives at other special events statewide. Suggestions have been made to try recycling at the Iowa State Fair, the state's nationally known Register's Annual Great Bike Ride Across Iowa (RAGBRAI), the Farm Progress Show and university football games.

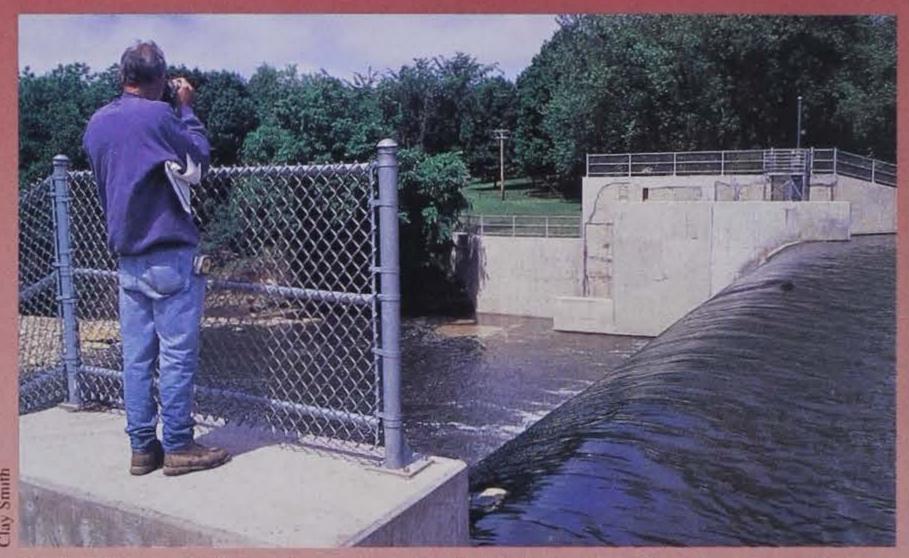
Mines of Spain Fall Seminar Planned Sept. 25

A once-popular seminar celebrating a piece of Iowa history is staging a comeback.

The Mines of Spain Fall Seminar, after a 14-year hiatus, is returning to eastern Iowa. Slated for Sept. 25, the seminar will explore the rich natural and historic heritage of Mines of Spain State Park and the Mississippi River. Participants will gain a better understanding and appreciation of the area and the time spent in the outdoors through sessions on birding, outdoor photography, Indian mound culture, native tallgrass prairies, hawks and raptors, native Americans, Julien Dubuque, Mississippi fisheries and woodland plants and animals.

The sessions will be presented by Larken Powell, University of Dubuque; Larry Stone, independent photographer; John Pearson, DNR; Shirley Shermer, Iowa Archeology office; Robert Weideranders; Dubuque historian; Bill Pusateri, Iowa DOT; and Tom Boland, DNR Mississippi fisheries.

There is a \$5 registration fee to cover lunch and other incidental costs. Those planning to attend the seminar are asked to preregister and pay the fee in advance. To register, contact Wayne Buchholtz, Mines of Spain park ranger, at 319-556-0620.



David Allen, a DNR dam inspector, checks the integrity of the Backbone State Park dam following heavy spring flooding.

Dams in 'Relatively Good' Condition Despite Spring Floods

Dams in the spring flood area of northeast Iowa are in relatively good condition, with most dams showing either no floodrelated damage or minor erosion damage.

David Allen, DNR dam inspector, said none of the flood-control dams inspected had any significant damage and other dams, especially the low-head river dams, had varying degrees of damage. He said the problems did not threaten the structural integrity of the dam or present any life-threatening conditions.

damage to the powerhouse.

The county-owned Fontana Park Dam, near Hazelton in northern Buchanan County, suffered erosion damage where the dam meets the east bank and on the east side of an old mill house. "The dam was eroded about 3 feet below the spillway crest," he said. "And the old mill house lost a good size piece of its foundation, but the mill is still standing."

However, registration will be accepted the day of the event beginning at 7:30 a.m. Sessions will be held at 8:30 a.m., 10:15 a.m. and 1:15 p.m.

"Dams on Otter Creek and the Wapsipinicon River suffered the most damage," he said.

The privately owned hydroelectric dam in Anamosa suffered quite a bit of

Iowa Renewable Energy Resource Guide Available

Iowans can learn more about energy forms produced in the state thanks to the recently published Iowa Renewable Energy Resource Guide.

The guide, produced by the DNR's Energy Bureau, provides in-depth descriptions of Iowa's most significant homegrown energy resources, along with their past growth, current status and future opportunities in the state. From wind to biomass to hydropower, the guide gives an overview of the importance of renewable energy to Iowa's environment and economy.

Copies of the guide are available by contacting Julie Tack at 515-281-8665, or by email at jtack@max.state.ia.us.

Allen said officials are in the process of lowering the Otter Creek water level so they can take a better look at the damage.

The dam at Backbone State Park suffered considerable erosion damage on the island between the spillways, but its integrity is not threatened.

"The flooding stripped away a lot of the top soil exposing the bedrock," Allen said.

Allen has notified all but one dam owner of his findings, offered some recommendations, and suggested they check out the dam foundation after the water recedes.

Allen inspected seven rolled earth dams and 20 low head dams.

60 Iowa Conservationist

September/October 1999

Iowa Trappers Association, Inc.

Trapping conjures up images of an early explorer traveling on the rivers of Iowa in pursuit of beaver. These people were a very hardy lot subjected to all types of weather and who had to carry all their belongings with them. They would trap a variety of animals and trade the fur for supplies to meet their basic needs.

The history of the fur trade has early roots in Iowa dating back to the 1760s. Records indicate trapping was an important source of income and food during the early settlement of Iowa. Trappers are still actively taking a variety of furbearers today, such as raccoons, beavers, muskrats, mink, fox and coyote. Trappers have accounted for as many as 390,000 raccoons taken in Iowa in one year (1986-87). This harvest benefits many types of animals by removing predators and preventing overcrowding.

The Iowa Trappers Association (ITA) was founded in 1959 and is dedicated to education, habitat protection and trapper representation. As an organization it is involved in many educational pursuits throughout the year, such as participating in Iowa's Youth Hunter Education Challenge and Becoming an Outdoors Woman program, printing the Iowa DNR Trapper Education Book and providing the Katie Blackman Scholarship for college students.

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 9
- Des Moines
- October 7
- Sioux City
- November 10
 Des Moines
- Des womes
- December 9
 Des Moines

Environmental Protection

State

na Park Juchanan ge where id on the

ut 3 feet

"And the ece of its anding." e process r level so damage. Park sufge on the out its in-

v a lot of

k." Allen

one dam

ome rec-

ley check

he water

led earth

The ITA has also been involved in many habitat projects that protect furbearers and other wildlife. Some of these include the Meredith Marsh Project, Dutton Marsh, Forest City Marsh, Belva Deer Lake Project, Johnson Prairie Marsh, Eagle Lake Wetland and the Trumpeter Swan Program of Iowa.

A yearly highlight of the ITA is its annual convention. This year's convention will be held in Jefferson Sept. 10-12 at the Greene County Fair-grounds. This is a time to make and renew friendships, purchase supplies, learn techniques from experienced trappers and participate in competitions.

For more information, or to join ITA, contact: Chris Grillot ITA Secretary 2769 110th Ave., Wheatland, Iowa 52777-9649 (319) 374-1074

Commission:

- September 20
- Des Moines
- October 18
 Des Moines
- November 15
 Des Moines
- December 20
 Des Moines

Warden's Diary

"A Legitimate Pastime."

I'm probably on shaky ground here. Lately, it doesn't seem fashionable to talk about guns in any way supportive. Hence, it doesn't seem fashionable to talk about hunting in any way supportive.

I'm not going to debate the Constitution's Second Amendment. Everyone has his or her opinion. One day I was with a wise game warden who had a propensity toward gruffness. He was getting an earful from someone expressing his own opinions. After listening, my mentor said, and I paraphrase, "Opinions are like armpits. Everyone has at least two, and sometimes they both stink!" That's probably why not too long ago, I made a conscious decision to quit reading the editorial page, as this same mentor also told me, "A person's IQ is inversely proportional to the length of his or her editorial." But, I'm being facetious here. Everyone has a right to think what he or she wants. So, I stay out of the debates.

I'm not here to change opinions on this subject. I just want to tell of something I once witnessed. And as I heard in church one Sunday, "You can't argue with a man who has had an experience."

For many years now I've been involved in teaching hunter safety. I've seen it evolve from a voluntary course to one to be very selective in our shots. Hunting, in general, was a widely enjoyed way of life where I grew up. I'm no different from many because I learned what I know about guns from my dad, who did not take kindly to any kind of unsafe gun handling.

That's not the case today. Many of the students we see don't have any experience with guns. But, they want to learn. We teach them the safe way to handle them. There is a nononsense approach to safety strictly adhered to on the course. It's a thrill to help a young person hit that first target and see the look on their face. You can sense the accomplishment they feel.

This one particular day, Arlen was running the thrower and I was on the line helping the kids with the shotguns. This one particular young man came to the line, and I put the shotgun in his hand. You could sense during the course he wasn't part of the crowd. I don't think he could throw a football 40 yards in the air. I don't think he had a three-point shot. He seemed kind of withdrawn.

I helped him load the shotgun and reiterated the rule of keeping the gun pointed downrange, and to yell "pull" when he was ready. Arlen threw a bird, the boy tracked it with the

required of anyone born after Jan. 1, 1967, before they can buy a hunting license. I've seen a lot of kids go through these classes. Many adults are even beginning to take the class. But of all of them, one young man sticks out in my mind.

Arlen Throne, the recreational safety officer for the northcentral district, and I were teaching a course in a school. We had taken the students through the textbook, practiced with BB guns and were going to a range to shoot targets and clay birds.

To digress, isn't that the way many of us started? With a BB gun? When I was growing up, the family business was selling seed, grain and coal. It was back in a time when grain elevators were slightly less advanced, when you cranked a temperamental Tecumseh engine on the auger and unloaded the wagons into a railroad car. Invariably some got spilled. Spilled grain draws rodents and sparrows, which are not good things to have around stored grain.

Some of the rodents eating the spilled grain would get huge. So along with putting out D-Con and Warfarin, I became a predator of such vermin. My friends and I would hunt them with BB guns, and when we were a little older, air-propelled, Crosman pellet guns. Because buildings were present we had barrel, pulled the trigger and the bird exploded. Arlen threw another bird. The boy hit it again. Five in a row until the gun was empty.

He reloaded. "Pull." Same result. Five in a row. Arlen and I looked at each other. The other students had noticed and stopped talking. We sensed something special was happening here. Arlen and I decided to see just when this kid would miss. He didn't. Over and over he hit the clay birds. The other kids were starting to shout some encouragement. Finally, he missed. He took out his earplugs, looked at Arlen and I, and smiled. I will never forget that smile. For a moment, he had experienced accomplishment and encouragement.

I think about what happened. He found something he could enjoy for the rest of his life. He can still enjoy hunting, hitting a clay bird or hitting a target, long after the ability to hit a home run or a jump shot have ended for others. If I can still help give a young person a pastime to last a lifetime, then, in my opinion, that's a good thing.

by Chuck Humeston

62 Iowa Conservationist • September/October 1999

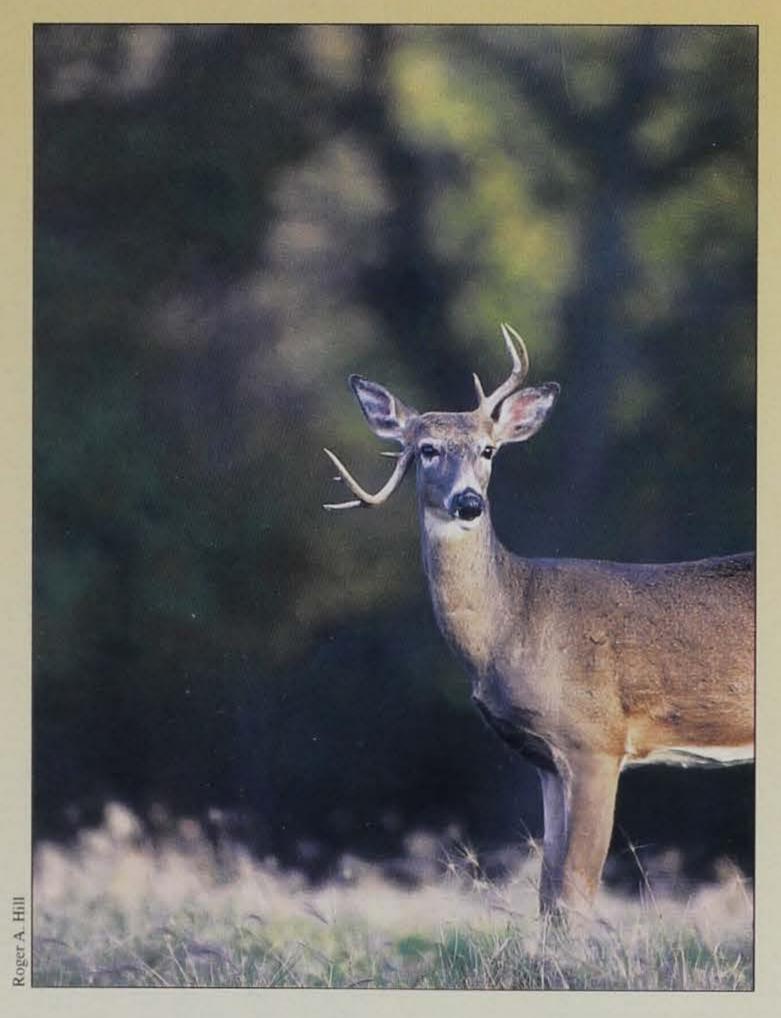
Parting Glance

d, was a lifferent from my afe gun

s we see to learn. is a nocourse. and see hent they

ower and This one shotgun sn't part 40 yards e seemed

e rule of II" when with the en threw



I the gun

Arlen and iced and appening ald miss. ther kids emissed. amiled. I erienced

thing he hunting, ability to If I can ne, then,

"I don't feel I have my head screwed on straight."

