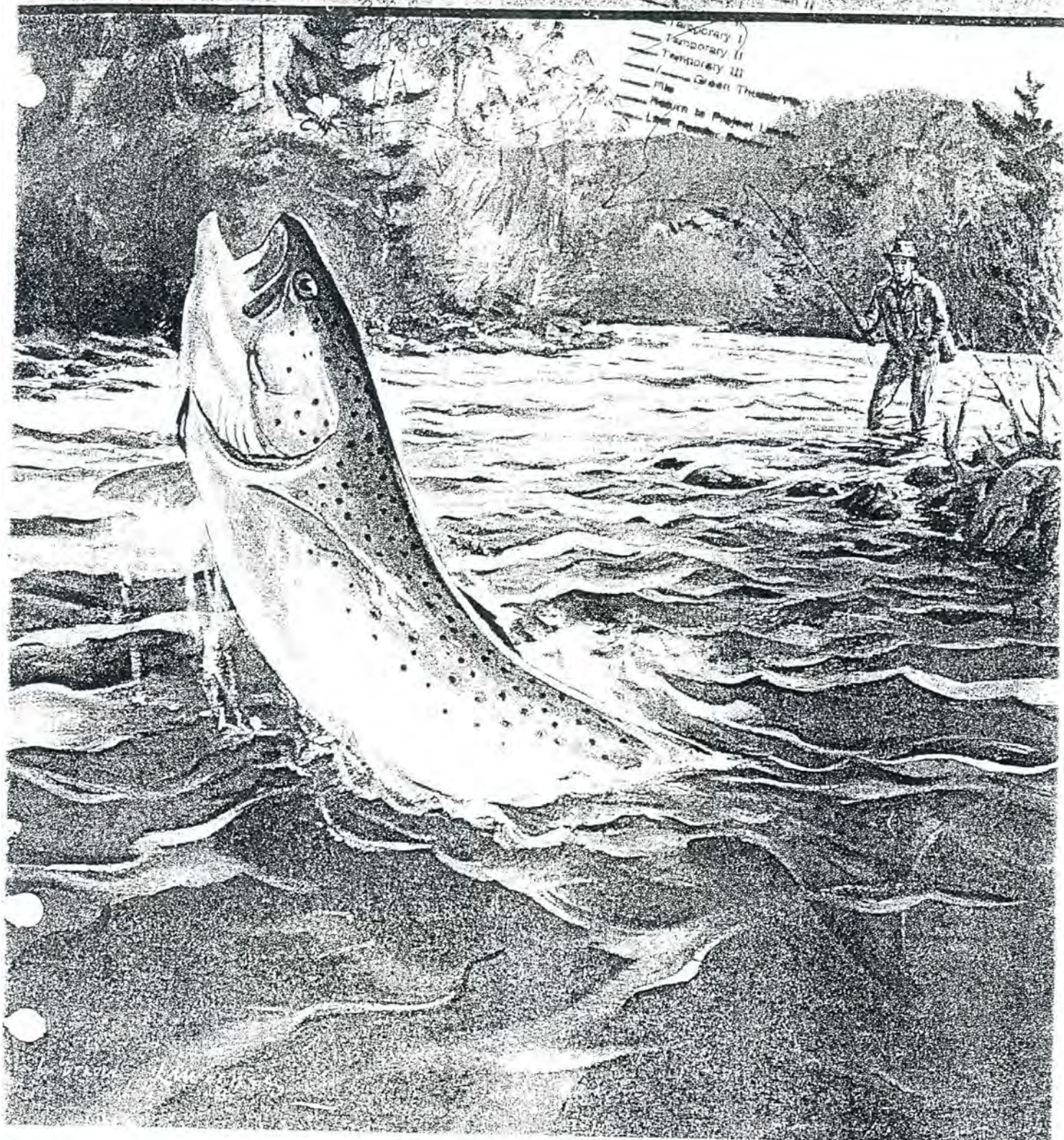


# Field & Stream

U.S. Wetland Month

- Wetland Manager
- Asst. Manager I
- Biologist-Refuge Officer
- Soil Conservationist
- Biologist-Enhancement I
- Asst. Manager II
- Biological Technician I
- Biological Technician II
- Biologist-Enhancement II
- Analyst
- Secretary

- Temporary I
- Temporary II
- Temporary III
- Green Throated
- Return to Project Leader
- Lead Project



# GOOD-BYE TO POT-HOLES

BY CLAY SCHOENFELD

*Is the Soil Conservation Service destroying  
waterfowl habitat faster than Ducks Unlimited  
and Fish and Wildlife Service can restore it?  
Conditions on one of our most important nesting  
grounds indicate need for closer cooperation*

VISITING sportsmen, tramping the terminal moraine of Day County in northeastern South Dakota, have always been impressed by the profusion of pot-holes. There are, by conservative estimate 20,000 pot-holes in Day County—an average of 20 to the square mile. They range in size from one-sixteenth of an acre to 100 acres. Together with surrounding sloughs, lakes and uplands, they constitute one of the prime waterfowl breeding areas on the continent.

Last fall, however, visiting sportsmen were impressed by something besides Day County's pot-holes. They were impressed—and disturbed—by the sight of hundreds of ditches which have already drained 1,400 of those pot-holes, and by talk about more and bigger drainage to come. They saw this drainage as representing a threat to the Mississippi Valley duck population. And they were even more chagrined when they were told that the drainage projects were not due merely to the chance initiative of individual farmers, but also to calculated financial and technical aid from three Federal agricultural agencies.

What is happening in Day County is only a portion of what is going on in the 5,000 square miles of prize duck pot-hole country in eastern North and South Dakota. But because Day County is a typical situation, and because of an on-the-ground study by FIELD & STREAM reporters, let's use Day County as a case history.

In a year of normal precipitation, more than one-eighth of the county is water—principally small lakes and upland kettle-holes. Blue-winged teal, gadwalls, mallards, and pintails nest near these water areas in great numbers. But however attractive they may be to breeding water-

fowl, the pot-holes are called nuisances by farmers, for they are frequently in the middle of cultivated fields.

Fortunately for the ducks, many of these Day County pot-holes cannot be drained. But many others can be and are being drained, usually by means of large, open-type ditches. Reclaimed land is usually sown to wheat, oats, barley or flax.

This Day County pot-hole drainage is under the aegis of the Soil Conservation Service, the Production and Marketing Administration (formerly the Agricultural Adjustment Agency) and the Agricultural Extension Service, operating through the Day County Soil Conservation District.

The official Soil Conservation District work plan recommends such accepted practice as grass-legume rotation, strip cropping, contour plowing etc. Further, it emphasizes the apparent need for pot-hole drainage in these words:

"In this district are depression areas where continuous cultivation has not been practiced because of periodic harmful accumulations of water. By reducing the amount of water run-off into these depressions . . . and by the construction of drainage ditches leading to lower-level sloughs or intermittent stream channels, the percentage of years when these areas can be successfully cultivated will be increased."

Most SCS district work plans usually pay at least some lip service to the conservation of wildlife, but the term "waterfowl" occurs nowhere in the Day County plan, despite the fact that the

county is a famous duck factory.

Under this charter, pot-hole drainage is developing in Day County. The farmers are all for it. With wheat at \$2 and more a bushel, they can't seem to afford not to drain every possible strip of countryside. The SCS men are all for it. Their offer of free drainage-engineering advice helps them tremendously in bringing more and more farms into the SCS network. Local contractors are all for it. They have developed a tidy earth-moving business. Only Mr. Mallard objects. And he can't talk.

To date, the SCS in Day County has drained pot-hole areas totaling 6,753 acres. These have ranged in size from one-eighth of an acre to 90 acres, with the average at 4 acres. Some 350 farmers have participated. And more drainage is apparently on the way because three-fourths of the farms in the county have yet to come into the SCS program.

Another powerful stimulus to drainage in Day County is the fact that the AAA lists drainage ditches among its "approved conservation practices." A farmer can collect 8 cents a cubic yard for ditching, and another 75 cents a thousand square feet for grassing the waterway. Last year the AAA paid the farmers of Day County \$17,283 for digging 43 miles of ditches.

The third Federal agency in the picture, the Agricultural Extension Service, sends out bulletins from the State College at Brookings extolling the merits of pot-hole drainage. The Day County agricultural extension agent is the secretary of the Soil Conservation District.

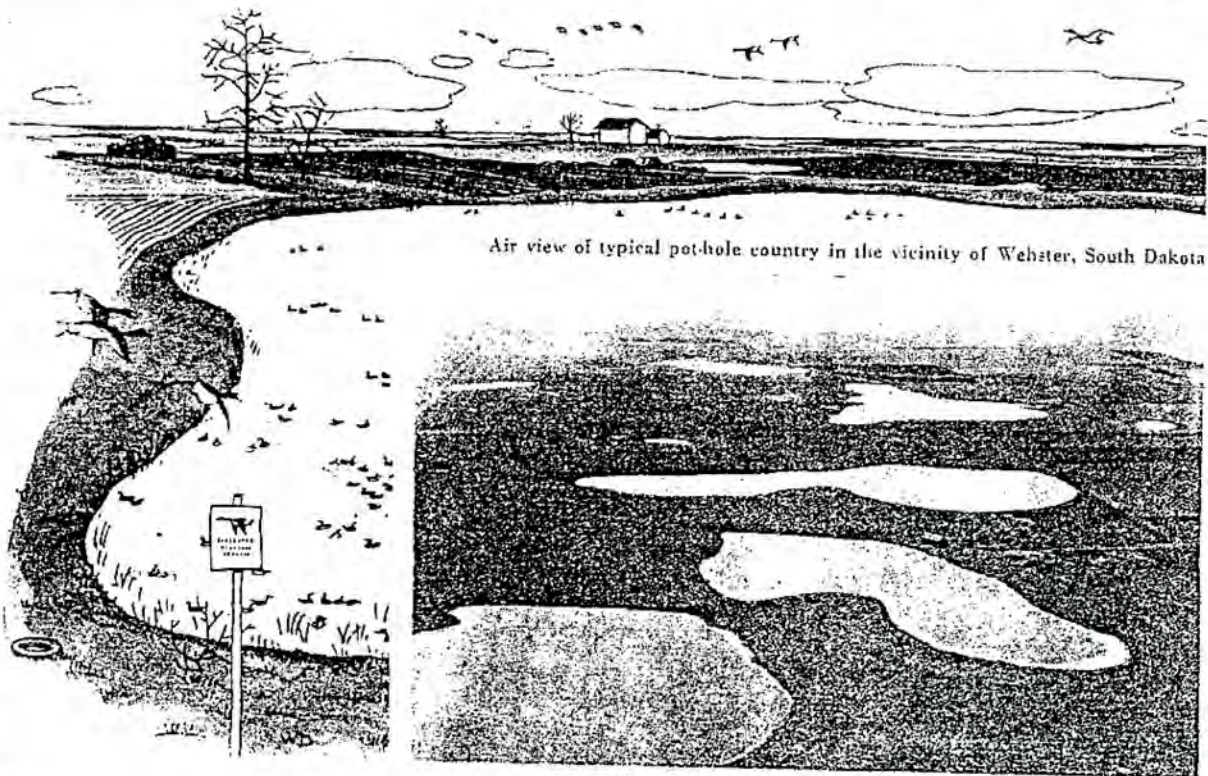
It would be foolish, of course, to say that these three Federal organizations are solely responsible for pot-hole drainage in Day County. They are merely doing their assigned jobs of stimulating farm productivity. The real "culprits" if you want to call them that, are high farm prices and a farmer reluctance to look beyond today in terms of soil and water exhaustion. But it would also be foolish to claim that widespread drainage would proceed in Day County in the absence of Federal checks, bulletins and know-how.

Now just how good is this duck factory which is being tampered with in and around Day County?

Ira N. Gabrielson, President of the Wildlife Management Institute, has called the area "one of our best units according to production per acre."

W. A. Elkins of the Fish and Wildlife Service has labeled the region "the most important duck nesting grounds in the United States."

Jerome Stoudt, flyway biologist for the F & WS, has census data to show that in the spring of 1948 the area had a puddle-duck population of 32.7 pairs per square mile and that 82 per cent of all water areas under observation were occupied by breeding waterfowl. Stoudt's detailed census data is of real interest to all duck hunters. One typical Day County transect of 11 square miles, for instance, contained 76 pot-holes totaling 757 acres of water—an average of 9.9 acres to the pot-hole and 68 acres of water to the square mile. Some 37 per cent of the pot-holes were occupied



Air view of typical pot-hole country in the vicinity of Webster, South Dakota

by ducks. There were 178 bluewings, 82 gadwalls, 59 mallards, 19 pintails, 4 ruddies, 8 redheads, 7 shovelers, 5 canvasback, 3 baldpate and 5 scaup—a total of 370 and a breeding-pairs-per-square-mile ratio of 33.2. These are June, 1948, figures.

As far as Dakota farmers go, they believe that pot-hole drainage is of at least immediate, if not long-range, value to intensive agriculture. By and large the reclaimed pot-hole soil is good. Art Lundeen, a farmer northeast of Bristol, drained a pot-hole at a cost of about \$20 an acre and raised a 50-bushel-to-the-acre crop of oats on the same ground the first year.

From a short-time point of view, the farmer can't lose. The PMA (AAA) benefits pay for 60 per cent of the cost of drainage, and the \$1.90-a-bushel floor under wheat prices means that he can recoup the rest of his investment in a year, or at the most in two. If he thinks about them at all, he may feel sorry for the drained-out ducks, but the utility of a brood of bluewings on the back forty is slight, indeed, compared to the cars and tractors which added profits will buy.

True, the enthusiasm of the average Day County farmer for drainage is tempered somewhat by a premonition of droughts to come. He knows just what effect pot-hole drainage will have on the general water-table. He has read a Soil Conservation Service warning from Washington that "destructive droughts and dust storms will return sooner or later . . . [because] many farmers are

plowing up sod to grow wheat at present-day advantageous prices." And he remembers that not too long ago Federal money was being spent in Day County on artificial lakes and reservoirs. But in the face of high prices today, the average Day County farmer is taking little thought of the morrow. He is cultivating to the hilt, and the devil take the hindmost duck.

As one Waubay farmer put it last month: "I guess you'd call me a soil robber. And you'd do it, too, if ten years ago your children were wearing paper shoes. I'm taking mine while the taking's good."

In the second place, the PMA (AAA) in Day County is proud of the role it is playing in helping farmers reclaim their wetlands.

"We're the bread-and-butter agency in this county," says Director E. E. Gelhaus at Webster. "You can't eat a field terrace, but you can buy groceries with our benefit payments. A good deal of PMA drainage in this county doesn't show up on the SCS records at all. Commercial contractors are responsible for encouraging a lot of it, too." He doesn't see pot-hole drainage as hurting the ducks, and feels that the real enemies of breeding waterfowl in the area are predators and hay mowers.

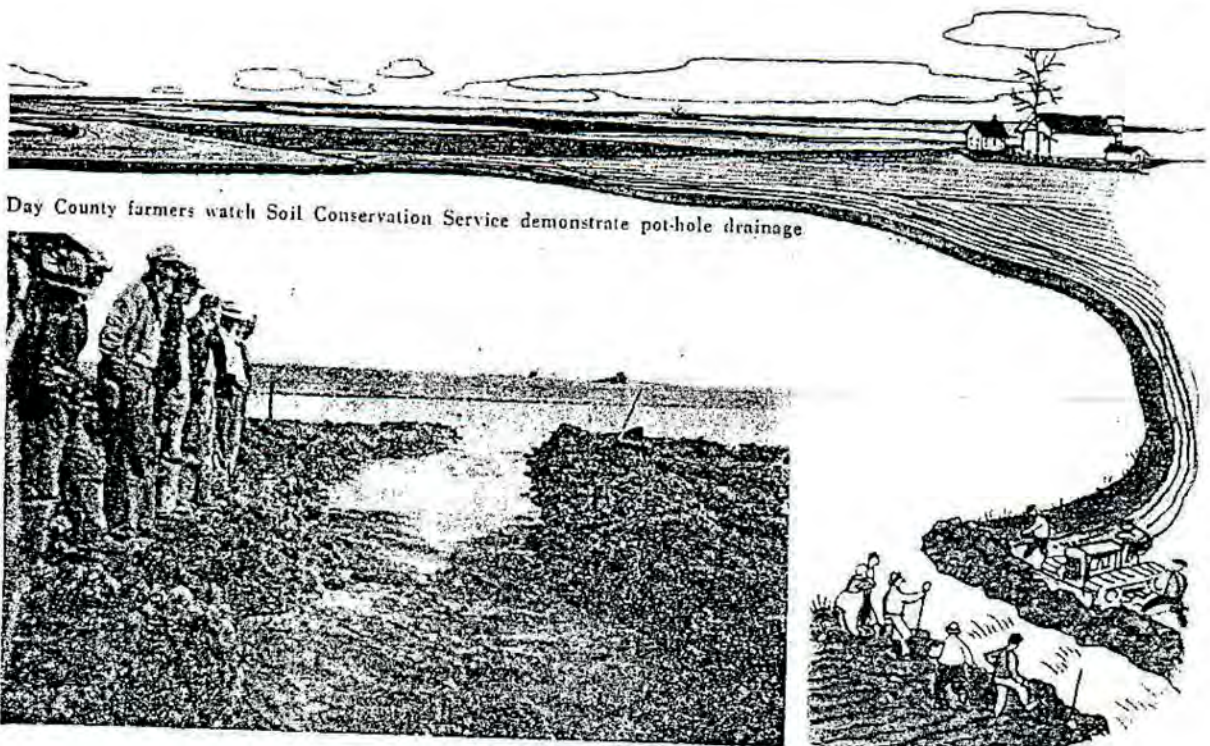
In the third place, the SCS men in Day County are reasonably confident that their participation in pot-hole drainage is sound. They feel, at the outset, that the project is in keeping with high SCS policy. It is quite true that National SCS Director Hugh Bennett

defines soil conservation simply as "a matter of using land efficiently under a farming system that safeguards it from erosion," and goes on to list "draining unproductive land" as one of eleven approved techniques. But Mr. Bennett is careful to couple drainage with "a shift to safer, less intensive uses on near-by, highly erodible or otherwise unfavorable land, as by substituting rich drained bottomland for poor, highly erodible hillsides."

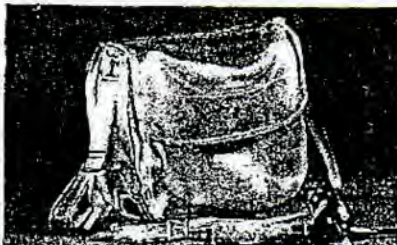
This exchange is not taking place in Day County to any appreciable extent. Pot-holes are being drained, but the pressure is not being relieved on worn-out uplands. Out of the 150,000 acres in the county under SCS supervision, only 16,210 are cultivated on the contour, less than 2,500 are strip-cropped, and a scant 1,940 are seeded to permanent hay. The 38 miles of ditches dug by the SCS in 1947 exceeded the 28.2 miles of conservation terraces built the same year.

On paper, the 453 Day County farms participating in the SCS program are models of well-balanced soil conservation. Each has a comprehensive farm plan. But on the ground, on farm after farm, the only approved practice in field use is a drainage ditch. Beside many drainage ditches are plowed fields where the subsoil is showing through the dissipated topsoil. The SCS has been willing to sign up farmers for immediate drainage-engineering service on the promise that "sometime" they will begin to retire their eroded uplands.

There are exceptions, of course. The J. J. Cowan (Continued on page 150)



Day County farmers watch Soil Conservation Service demonstrate pot-hole drainage



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bass' mouth was open. Apparently he had got the plunker stuck deep in his mouth in such a way that he couldn't close it. He was slowly drowning.

"Cap," I whispered, as though afraid I would alarm the fish, "hand me the net. There's a fish down there as long as your arm. He's fastened to a branch."

Cap eased the net out, doing just what I had done—acting as though any noise might scare the fish away.

I eased the net into the water. Down and down I pushed it, until finally my whole arm and part of my shoulder were immersed. But I managed to slide the net over that fish's head, then quickly scoop him entirely into it. I hauled him out, breaking the line as I did so. Over the gunwale and into the boat I brought him. Cap let out a shout.

I held the big fish up, still in the net, and looked at Cap. And I could see a sudden change in his expression. He was worried. His bright little blue eyes, which can light up with a twinkle so merry that it affects all those who see, showed deep concern. And he had reason to be concerned. Whose plug was in that big bass' mouth? Whose fish was it?

There were two ways of telling. One was the size of line. One glance at the piece of line hanging onto the lure answered the question. It was mine.

But I knew that nobody could ever convince Cap he hadn't been robbed out of the biggest fish of his life if the decision rested solely on the size of line. He would always know he had been swindled. Who could look at a line and say what its breaking strength was? And I could see the line clearly and Cap couldn't. His eyesight isn't what it used to be, and he was at my mercy—so I robbed him. That's what he would think.

There was one other way of deciding—and it permitted of no error. Cap fastens his lure on his line with a safety-pin clip. I don't. I tie my line directly onto the lure.

I peeked down into the Brush Bomb's huge mouth. There was no clip on the line. It was tied directly to the plug. But just as I was going to tell Cap the sad news I glanced up at him and checked myself. He was watching me with a half-eager, half-questioning look. I couldn't say it.

What I said was, "Cap, he's yours. There's one of those clips tied onto the line—he's your fish."

"Hot ziggity," Cap shouted in glee. "Man alive, that's the biggest fish I ever caught in my life. He ought to go 10 pounds."

"He's a cinch for 10 pounds," I said, making a mental note that he might go 7 if weighed on friendly scales.

I dug out the plug and handed Cap the fish to string. And it was one of the few times I ever saw Cap string a fish without protest. Not that he ever objects vocally. He doesn't say anything. But I know Cap, and I am positive that he considers it an outrage that he has to string all the fish while I do nothing more than run the motor.

While Cap was stringing the fish and admiring it I dug out one of those little clips and fastened it onto the plug, after first breaking off the chunk of line. Then I handed Cap the plug.

"Yes, sir, there's my clip on it," he said jubilantly.

Cap was in such fine humor that we fished more than half-way back to our starting-point before it occurred to him that we were fishing on the wrong side of the lake. Finally he started talking. I couldn't hear him; so I continued fishing. He talked more. I fished serenely on. Then he began waving his arms, giving

me the danger signal.

I cut the motor.

"We're fishing on the wrong side," he said.

"Yes, Cap, I know," I said. "We're always on the wrong side."

I started the motor and went on with my fishing. Cap sat sulking, refusing to cast. It was his way of filing a protest. But soon he got a grip on the gunwale and the boat lurched as he made another sweeping side-arm cast.

There's never a dull moment in life when you're fishing with Cap, for to him life is a bright, ever-changing, fascinating thing. If it isn't, then you make it that way. You change things. And Cap is absolutely positive that in time he will change me—cure me of my faults. He'll eventually make me fish on the right side of the lake, he thinks. I think so too. You can wear stone down if you work long enough.

As for me, my ambition in life is to grow up to be as young as Cap is.

## GOOD-BY, POT-HOLES

(Continued from page 37)

and Joe Kampa farms near Webster offer excellent examples of wetland drainage coupled with careful management of hill-sides. But these prize-winning farms are as scarce as hen's teeth.

Pot-hole drainage to the local SCS men, in other words, is a natural, because it is one soil practice which doesn't have to be sold by arguing. Demand for drainage is ready-made. The SCS yardstick at the county level is in terms of number of farms signed up; and if it takes drainage to attract a farmer into the SCS picture, why then it's drainage the district men offer, whether anything else is done simultaneously or not.

Nor do the Day County SCS men see anything contradictory between what they are doing and Chief Bennett's statement that "land that is definitely better suited to wildlife than to agriculture should not be drained." As a matter of fact, most of them sincerely believe that pot-hole drainage in Day County is actually improving the waterfowl situation. Before we can evaluate that claim, we've got to define our term "pot-hole" a little finer.

There are four types of Dakota pot-holes. Class A pot-holes are comparatively permanent sumps. Class B pot-holes are unplowed areas which dry out between May 15 and July 15 in an average season. Class C pot-holes are shallow, overgrown areas which ordinarily go dry early in the spring, but which are never plowed. Class D pot-holes are plowed in the fall in expectation of their being dry enough to seed the next spring.

Now, the SCS feeling is that by draining, say, four transient pot-holes on a farm into a fifth pot-hole it is thereby exchanging five "useless" areas for one permanent wildlife haven—aiding both the ducks and the farmer.

In certain cases there is some merit to this argument. The drainage of Class D pot-holes has no appreciable effect on wildlife. The drainage of Class C pot-holes does not much affect breeding waterfowl except in a very wet year.

The big catch comes in dealing with Class B. The SCS men do not recognize these pot-holes as being of value to ducks. They associate duck-breeding habitat with large areas of permanent open water; whereas actually these small, "temporary" Class B South Dakota pot-holes constitute the choicest of puddle-duck breeding grounds. This is the considered judgment of a non-partisan ornithologist, Joseph H. Hickey of the University of Wisconsin.

Class A pot-holes are without question good duck habitat.

How many Day County pot-holes fall into each of these categories in a given year nobody knows. Ground observation would indicate, however, that, of the pot-holes drained to date, 60 per cent at the very least were in Classes A and B.

Even granted that the SCS was successful in creating a series of relatively permanent pot-holes by eliminating others, this technique would far from improve the breeding-waterfowl situation, because the critical factor in duck production is not so much the amount of permanent water as the amount of *shore-line during the nesting season*. "X" amount of water scattered in the spring and early summer in five small pot-holes will, other things being equal, produce more ducks than the same amount of water in a single permanent kettle, because the total available nesting-season shore-line is greater.

This important shore-line factor is all bound up in what "duckologists" call territorial behavior, under which breeding ducks demand a specialized terrain that includes water, a loafing spot, nesting cover and food. As H. Albert Hochbaum of the Delta (Manitoba) Duck Station writes: "There is a close relationship between the number of territorial pairs and the length of shore-line."

The main objection in the eyes of biologists, then, to the drainage of these small Day County pot-holes is the loss of valuable shore-line, because any reduction in shore-line will directly affect the duck-breeding potential of an area.

Here's the way Gerald B. Spawn, associate professor in charge of wildlife techniques at South Dakota State College, summarizes the Day County habitat:

"My opinion is that under normal rainfall conditions most of the pot-holes [in Day County] will produce ducks or at least give them a start in an area which is not too hazardous even if the smaller pot-holes dry up. . . . I would personally rather see the pot-holes remain as they are than be drained into one central water area. . . . The more the pot-holes can be scattered out, the more the potential breeding range will be used. . . . A drainage program should be conducted with caution."

Looking at Day County as a whole, you remember that 6,285 acres of pot-holes have been drained, the average area being about 4 acres. If 60 per cent of that acreage were Classes A and B habitat, it would total some 3,771 acres. This type of duck-breeding range normally has a population of 1.2 pairs per acre, according to Dakota survey data—a duckling potential of about 7 per acre. That would mean Day County drainage to date has theoretically lessened duck production by 26,397 ducklings a year. The famous Delta (Manitoba) Marsh produced only one-tenth that many ducklings in 1947.

These calculations are only estimates and need to be clarified by further research. But they do have just as much, if not more, verity as any flat statement that pot-hole drainage in Day County is not harming the ducks one bit.

Paul Underwood, SCS man at Webster, confidently expects that, come the next drought, he will be back in the position of recommending that Day County farmers dam up their drainage ditches to conserve moisture, and that consequently some of the drained pot-holes will be put back into duck production. The fact is, however, that once a plow has destroyed an aquatic plant community which it has taken nature hundreds of years to develop, that habitat cannot be recaptured quickly, if at all.

M. S. McMurtrey, SCS regional biologist

FIELD & STREAM APRIL 1949

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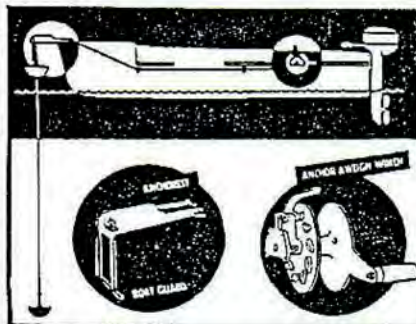
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ogist, points out that in attempting to create key permanent pot-holes the SCS is engaged in highly desirable muskrat management. He has a point there. Muskrat trapping is an important side-line in Day County. The 1947 take amounted to \$500,000. And some of the new SCS wildlife havens are ideal muskrat habitat.

But Lester Berner, biologist for the South Dakota Department of Game, Fish and Parks, points out that "some of the sloughs which were very good muskrat areas a few years ago are of much less value now because the water has become deep enough to drown the plants which originally made the areas attractive."

Chester Francis, conscientious SCS regional engineer, is perfectly frank in stating that the SCS to date has just one drainage criterion: "Is it economically feasible to drain this pot-hole?" The answer is always given in terms of dollars to be made from agricultural crop production, not in terms of ducks to be lost.

In all fairness, local SCS men are caught between a farmer demand for drainage at the local level and a lack of wildlife policy at the top level. So inevitably, on the SCS totem-pole in Dakota, Mr. Mallard is low man.

There is no organized opposition in Day County to pot-hole drainage, not even by the home waterfowlers. The drainage program is not dramatic; it is not centralized in one big marsh. Even local residents are unaware of the extent of the program. And in a region where the economy is based entirely on agriculture, nobody opposes what the farmers are all for.

There are, however, some residents who are becoming worried. Ury Dahling, astute game warden at Webster, is afraid pot-hole drainage will become a fad to be employed without rhyme or reason. He can show you already, for instance, at least one grain field near Waubay in which the surface area of a big ditch equals the surface area of the little reclaimed pot-hole.

Dr. P. D. Peabody, long-time Webster resident, is outspoken in his feelings. "They're crazy," he'll tell you. "In another five years the dust will blow their ditches shut."

The *Aberdeen American-News* recently carried this editorial: "Are we moving in a circle, short-sightedly, in alternately draining and then damming up our waters here in South Dakota? We hope South Dakota as a whole can answer that question by saying, 'No more draining of sloughs and swamp lands.' . . . South Dakota must realize that a reserve of water is this state's greatest need and that with water it will always be able to take care of itself. Any program that would rob South Dakota of its water reservoirs would indeed be short-sighted."

State Biologist Berner has publicly criticized the absence of wildlife conservation in the SCS picture. "Farmers have trained themselves to think in terms of raising grain and livestock, and the SCS men have trained themselves to think in terms of helping the farmers to raise grain and livestock," he wrote last year. "Neither group has as yet been entirely successful in learning to think of wildlife as a supplementary crop."

Even one SCS field man admitted recently in private that "maybe we're going too far. Somebody that knows about these duck matters ought to come out here and tell us how far we can go. And if the pill tastes bad, why we'll just have to swallow it, anyway." Another SCS official, who declines to be quoted, realizes that the drainage program is controversial and will welcome a clarification of Federal policy with regard to migratory waterfowl.

Harold W. Card, editor of the Webster

*Reporter and Farmer*, says that "pot-hole drainage is one of the finest things that has happened to Day County agriculture in years."

At O'Connell, county agent, agrees that it's a great idea. "If they'd only call it water management instead of drainage, nobody would complain," he says.

A local bird-watcher, Art Lundquist of Webster, is inclined to be philosophical about it all. "If these drainage ditches didn't dry the ducks out, the next drought would," he feels. "As matter of fact, by draining small pot-holes that dry up in the summer anyway, the SCS may actually be helping the ducks by keeping them from being attracted to spots where they would become marooned."

It's all well and good to talk about a farmer "preserving the biotic integrity" of his land, but right now that sort of line runs off a South Dakota farmer like water off a drained duck-hole. He has seen nature itself raise more hell with the integrity of the South Dakota landscape in the past twenty years than man has ever done. It will take considerable educating before the average Day County farmer is ready to believe that a right land-use is possible even if it does not yield maximum profits, or that a wrong action is not to be condoned merely because it pays.

Ducks Unlimited has spent \$2,000,000 in the past ten years on restoring some two hundred Canadian marshes, sloughs and pot-holes to duck productions, according to Director Arthur Bartley. Yet, if the census figures of wildlife authorities are reliable, all the DU projects in Manitoba did not produce as many ducklings in 1947 as the drained-out pot-holes in Day County would have. For instance, DU's Big Grass Lake in Manitoba is credited with producing 1,500 ducklings that year. It is highly likely that any 79 of Day County's drained pot-holes typically produced that many annually.

This becomes a fair question: Are we spending money on the restoration of B-grade Canadian duck habitat and letting A-grade habitat in the U. S. slip through our fingers?

Maybe Day County is symptomatic of the fact that we'll simply have to accept intensive, mechanized, subsidized agriculture as being unlimited—and stop shooting ducks so freely. As one Grenville farmer put it: "If you guys would stop worrying about me draining my pot-holes, and shoot fewer ducks, everything'd be all right." A Roslyn garageman looks at the situation this way: "Looks to me like we've got to choose between civilization and old-time duck hunting. Oh, maybe we can keep a few ducks around. But if it's a question of choosing between draining a pot-hole to grow flax and keeping it for the mallards, why, the pot-hole and the big-time duck hunting will most naturally have to go."

In the past seventeen years the Fish and Wildlife Service and other Federal bureaus have spent some \$8,000,000—part of it duck-stamp money—on restoring marshes in North and South Dakota. No wonder duck hunters are now objecting when they see part of their tax dollar being spent to drain the very type of habitat that is costing money to develop elsewhere.

What is happening in Day County is typical of what is happening in the whole Dakota duck pot-hole country. SCS figures for six counties in northeastern South Dakota list 16,376 acres of pot-holes drained. Extensive drainage is under way in the Lake Tewaukon area near Cayuga, North Dakota, just across the state line.

Some nearby districts are even more vigorous than Day County in exploiting drainage. The Day County District does

provide farmers with dynamite for blowing small ditches, but other districts have gone so far as to purchase heavy ditch-digging equipment (often from Government-surplus stocks) which is in turn rented out to farmers at going rates. The profits are used, among other things, to print calendars, stationery and brochures urging more drainage. It's a vicious circle, with Pete Pintail strictly on the outside looking in.

As if pot-hole drainage in South Dakota weren't enough, the water-level in Rush Lake, Day County, is at the mercy of a state highway project, and Putney Slough in Brown County, famous resting area for blue and snow geese, is threatened by a flood-control plan.

In surrounding states the pattern is being repeated. Minnesota has a big drainage program under way. UW Professor Hickey declares that "in some parts of Wisconsin since the war, soil conservation has come to mean one thing—drainage—and the Soil Conservation Service has come to stand for the Soil Exploitation Service."

Hickey's predecessor, the late Aldo Leopold, wrote this about the Middle West picture just before his death last summer: "The farmers have selected out those practices which were profitable anyhow, and ignored those which were profitable to the community, but not clearly profitable to themselves. . . . All in all we have built a beautiful piece of social machinery—the Soil Conservation District—which is coughing along on two cylinders because we have been too timid and too anxious for quick success to tell the farmer the true magnitude of his obligations. Obligations have no meaning without conscience, and the problem we face is the extension of the social conscience from people to land."

## THE SUNKEN FLY

(Continued from page 30)

over the widely scattered places that could hold trout, I was bound to score a good average. The fly that spends the better part of a day in the water is certain to give satisfaction. This in effect is the whole story of wet-fly fishing—know the stream bottom, and design a method to exploit it.

So now we find that we cannot say downstream or upstream alone, for these are methods within the method and these are what pay off. While the Beaverkill was ripe for downstream fishing in late summer, the following spring on opening day I went to another Catskill stream and picked up where I had left off.

Fishing downstream was the easiest way to start out that morning. The Chichester was flowing clear and bank-full, and because of the steep gradient of the river bed going down was less tiring. I tied on a pair of wet flies, a Mallard Quill and a Leadwing Coachman for the dropper, and started combing the pocket water. Here and there I would step into a pot-hole and get pushed along with the current, but the stream was interesting and full of promise.

I caught five or six small rainbows in the backwaters, but nothing came to my flies from the main channel, or even from the deep pockets behind boulders. After an hour had passed the Chichester still held promise but no fulfillment. Upon reaching the iron bridge I got out of the stream and crossed to the other side. The bank I had been wading would be for a left-handed caster going upstream, and obviously I needed every advantage I could muster.

Facing the current was hard work at first, but I found by wading in the back

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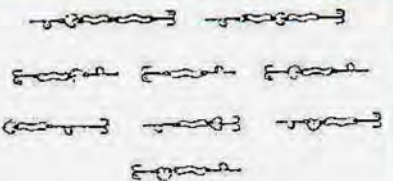
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