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MONTANA'S NEED FOR A FIRM POLICY ON USE OF CATCHABLE-SIZE TROUT

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As has been the case with other state and federal agencies, we in Montana have long been concerned with the problem of bringing our catchable-size trout program into balance with the rest of our fisheries program. Lately we have given this problem increased emphasis and over the past seven or eight months have reviewed every scrap of information we could find on the subject.

In general we are satisfied with our program of planting trout in lakes. The planting of fingerling and sub-catchable trout where there is inadequate game fish reproduction is a proven fish management tool. We believe, too, the planting of catchables is justified in certain small heavily fished lakes, and possibly in others where it is necessary to overcome predation. Once it has been determined a lake should be planted with trout the choice of size of fish, from fry to catchable-size, can be based on simple ecomomics. That is, what size will provide the most pounds in the creel for each dollar spent.

In studying the relationship between size and cost of hatchery trout we have concluded that on a per-pound basis, fry and small fingerlings are the most expensive and that the cost per-pound decreases rapidly on a curve that levels off at the 6-inch size. We believe that from 6 inches to 12 inches the cost-per-pound is approximately the same.

The relationship between size, cost-per-pound and number-of-fish per pound has important management implications. It tells us that for the fish 5 inches and longer each time we add 2 inches we about double the cost per fish. For fish smaller than 5 inches the difference is greater yet. For example, a 5-inch fish costs about four times as much as a 3 inch fish. We know an individual 5-inch trout has a better chance for survival than an individual 3-inch trout, but to be a better buy, more than four times as many 5-inchers must survive to the creel.

What I am saying then, is although the planing of large trout in certain lakes may be justified, we should use small fish whenever feasible to insure getting all the free fish growth we can get.

When we come right down to it comparatively few catchable-size trout are planted in Montana lakes. The program that is hard to justify in Montana is the planting of millions of catchables in streams.

Our state hatchery system now raises just under 1½ million catchable rainbow (7 inches and longer) each year. The

National Fish Hatcheries in Montana about equal our production so together we plant about 2,800,000 catchables a year. This is a three-fold increase over the past 10 years. It amounts to 13 catchables for each fishing license buyer.

Catchable-size rainbow comprise 78 per cent of all pounds of fish raised in our state hatcheries and 95 per cent of the total pounds raised by the federal station in Montana.

A few months ago, Bill Alvord, who is in charge of Montana's fish hatcheries, plotted the fish plants on a map of the state. It was amazing, there is practically no stream of importance without its allocation of catchable rainbow. In fact, except for streams which just happen not to be on the planting schedule, and streams which cannot be reached by a hatchery truck, we have practically no wild trout streams left.

Even our vaunted Blue Ribbon Streams are planted - the Madison, Yellowstone, Big Hole and Missouri Rivers and Rock Creek. And these were named Blue Ribbon streams largely because of bountiful natural food for trout, extensive spawning areas and superb cover. In other words they have excellent wild trout populations. The reason for planting these is hard to justify. But I must admit our studies, particularly on Rock Creek - our Blue Ribbon Stream near Missoula - indicates that planting catchables will add fishing pressure, and possibly improve the catch-per-hour. Apparently we are putting the "cream" on top of already good fish populations. The question then is, at what cost, and just how far can we go to increase fishing pressure and improve the catch-per-hour on streams where fishing is already good.

For lack of funds many important phases of our program "go begging" - control of rough fish populations, lake building, streambank fencing and ditch lining to control erosion into streams. Add to these, impact studies on proposed water development projects so mitigation measures can be recommended. Then too, our lake and stream inventory and surveys are far from completed. so we are literally in the position of putting so much emphasis on hatchery fish, particularly catchables, we haven't the time or resources to find out how many we really need or how to obtain optimum use from them.

Please note I am referring only to Montana's problem, for we believe a program of planting catchables in streams may be justifiable in a state like California. As we understand it, California's catchables are all planted in roadside waters, 70 per cent of the fish planted are returned to the creel, and thanks to a $2.00 trout stamp the program is paid for by the anglers who benefit. As Dr. Calhoun has expressed it in OUT_ DOOR CALIFORNIA, without the program, "mass angling in roadside waters would collapse."

We doubt, however, that California's fish managers would see the need for such a program under Montana conditions.

We feel fortunate if we realize a 40 per cent return from stream plants of catchables. Our fisheries program as a whole is not self-supporting so it must be considered that some of the catchable program is paid for with hunting license fees. Limited measurements on fertile streams indicate they contain more creel-size wild fish in the fall after the fishing season is over than in the spring. This, of course, is due to natural recruitment. Then too, we have long felt that small infertile streams might be a justifiable site for catchable plants. Now we learn that due to the problems involved - mainly truck following - small streams are the ones California would eliminate from its program.

Add to this the fact that catchables planted in streams must be caught in a month or for practical purposes be considered lost. And while we say we are helping the "dub" fisherman, we find that as with wild trout, a tenth of the anglers catch half the fish and one-third to one-half of the fisherman days expended result in no trout creeled - even on streams planted with catchables. Perhaps catchables make fishing a bit easier but we have not been able to develop a hatchery fish that will commit suicide so the novice angler can fill his creel.

I have additional personal apprehensions about planting catchables in waters with good wild trout populations. We Americans, and particularly in the Rocky Mountain states, take great pride in our self-reliance, our ability to take care of ourselves and do things for ourselves. As Aldo Leopold pointed out in his SAND COUNTY ALMANAC much of our hunting and fishing is a recall to our pioneer ancestry. So what do we do? We plant catchables in streams with adequate trout populations and we establish children's fishing waters, to be planted with catchables, right in the midst of areas with ample fishing. It is as if we were doing all we could to convince our people, and children especially, that we can't do anything, not even fish, unless a benevolent government agency makes it possible. This sort of program isn't teaching self-reliance, the workings of nature, or even skillful fishing.

Part of the problem, please note the emphasis on the word "part", for it is by no means all the problem, is the fact we have three big trout hatcheries in Montana operated by the Federal Government. Yes, I know it is sacrilegious not to be overjoyed with a Federal trout hatchery, but they do create certain problems, and surely I am among friends.

In the first place these three hatcheries at Creston, Bozeman and Ennis were built mainly to serve Glacier and Yellowstone National Parks. Then as you know, several years ago the philosophy of the National Park Service changed, and I think rightly so, to emphasize native fauna. Catchable trout plant were discontinued and now maintenance plants of fingerlings are made on a conservative basis. In other words, the full production of these three National Fish Hatcheries was no longer

needed for its original purpose. And as I am prone to quip - "Did they wither on the vine - oh no, they are still growing."

Now there is no question, we can find use for Federal fish. The Bureau of Reclamation and Corps of Engineers have been engaged in an extensive dam building program in Montana. Fort Peck, Canyon Ferry, Tiber and Fresno are large reservoirs that were built some time ago. Clark Canyon and Yellowtail Reservoirs were recently completed. Libby Reservoir is under construction and no doubt there are more to come.

Managing large reservoirs with periodic plants of trout is an extremely expensive business that should only be entered into when suitable populations of game fish can not otherwise be established. It should be continued only if proven effective and economically feasible. Using these criteria some of these reservoirs should be planted with trout. Since the expense of fish management in these reservoirs was created by Federal projects, there is logic in using fish from existing National Fish Hatcheries to stock them. We would much prefer, however, to be given the money to raise the fish in our own hatchery system. Whatever the source of fish, fisheries management of these waters remains under the jurisdiction of the Montana Fish and Game Commission and fish stocking is to be in accordance with the State's specifications as to species, numbers and sizes.

This is where some of the problem comes in. Salary scales at individual National Fish Hatcheries have in the past evidently been geared to the pounds of fish produced. When a trout hatchery is working for pounds there is only one thing to raise - catchables - and these we have plenty of!

A predicament state fish managers have faced is what to do with all the catchables turned out by the Federal stations. A fish manager, worth his salt, has a professional ethic which makes it abhorrent for him to recommend measures that are a waste of public funds - be it a fishing lake that is a boondoggle or catchable fish where smaller fish or none at all would do. In accepting the catchable fish he doesn't need, he is in effect recommending them. Yet to turn down fish from a Federal station means they will go to another state. For the local state fishery manager this is political suicide.

In fairness to the Federal fish hatchery administrators, we do feel improvement is being made and they are on the verge of developing criteria to insure economic use of fish from National Fish Hatcheries. We were very much heartened by a speech made several months ago by John Gottschalk, Director of the Bureau of Sport Fisheries and Wildlife. He pointed out that demand for hatchery fish and actual need are two different things.

Just this past week I had the opportunity to talk with Dr. Howard Tanner. As many of you know he was for a long time associated with the Colorado Cooperative Fishery Unit and

with the Colorado Game and Fish Department. In September 1964, he joined the Michigan Conservation Department as Chief of the Fish Division, and just this week he returned to Michigan State University as Director of National Resources and Assistant Dean in the Department of Agriculture.

He advised that recently the Michigan Department has gone out of the catchable trout business. Over the past two years the number reared has been reduced from 2 million to 300,000. This year it will be zero.

Michigan's trout streams have been surveyed. Those with adequate natural reproduction will be managed on the basis of wild trout. Those with inadequate natural reproduction will be periodically planted with brown trout fingerlings. Certain tributaries to the Great Lakes are in still another category; they will be planted with yearlings of migratory species. Elimination of the 2 million catchables will make 12-13 million fingerlings and yearlings available for these stream plants and for stocking lakes.

Anticipating this panel discussion, I inquired about public reaction to the new program. Dr. Tanner said it has been like the story of Chicken Licken - everybody expected the sky to fall down, but it didn't. In fact he said there were only a half dozen or so letters of complaint from sportsmen.

In explaining the new program to sportsmen's groups it has been pointed out that 75 per cent of Michigan's trout stream fishing has been based on wild trout; at best only 25 per cent has been due to catchables. A 50 per cent return to the creel has been considered a good return. This is only a 50-cent return on the dollar. This is not a good investment - it would get a man fired in private business.

Fingerling trout, planted where they will do well, are a much better investment. This has been termed "investment stocking."

Dr. Tanner pointed out that complaints on the new program have been almost exclusively from commercial interests: motels, chambers of commerce and the like who are interested in attracting people to an area but who were not paying the bill except as individual fishing license buyers. The trout fishermen who collectively were paying for the catchables had little comment. They could understand the logic of investment stocking with fingerlings and other phases of the new program.

Although we consider Michigan's new program to be admirable, we do not feel it is entirely applicable to Montana. Michigan is basically a lake state and much of the fishing is for warm water species. On the other hand, Montana is largely a trout state and most of our fishing is on streams. Increased emphasis on fingerlings for lake planting would make better use of some hatchery production now devoted to catchables. However,

switching all our hatchery production from catchables to fingerlings would create as many problems as it would solve and would not provide money needed for programs other than fish culture.

Personally I feel it is unfortunate we cannot wipe the slate clean and start over again gearing our hatchery program to our need, but of course we cannot. We have taken a step in the right direction for in the past 5-6 years three of our less efficient hatcheries have been closed.

We are not likely to make drastic changes; change will come slowly. But we should keep our governing body, the Montana Fish and Game Commission, and sportsmen aware of the unbalance in our fishery management program. They are the ones who will decide how long uneconomic phases of fish stocking will continue as a concession to public demand.

The title of our panel is "Use of Catchables in Relation to Habitat." It seems fitting to close with a passage from Durward Allen's OUR WILDLIFE LEGACY which bears directly on the subject:

> "Fish propagation and stocking are worth all this attention because, like the young cowbird in a nest of warblers, they have come to dominate the scene and hog the nourishment. Public thinking is ever in terms of hatcheries, despite the fact that of the fish caught, only a minuscule portion ever started life in a tank or rearing pond.
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> Our great dependence for angling sport is on the yield of naturally productive waters, and to increase such natural yield is the most promising aim of management. Like nearly all our conservation efforts, this turns out to be a problem in land-use ecology, the solution to which will require intelligent and sustained attention. We could do far better than we are doing now; but there is no point in pessimism, for the constructive trend is here and well on its way."