warm water FISHING in COLORADO

STATE OF COLORADO—DEPARTMENT OF GAME AND FISH

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THE FISHERMAN'S main concern is to catch fish. Many Colorado trout fishermen, with long years of experience behind them, have polished and perfected techniques for taking the high country game fish. But most of those who try for warm water species generally have had only indifferent success, for at least two good reasons.

First, Colorado has little water that is ideally suited to bass or panfish or walleyes. Most of it is colder than it might be and is stored in reservoirs constructed and operated to provide for irrigation or flood control or both. Fish and fishing are secondary uses of these waters.

Second, trout have so long been considered the ultimate in game fish in Colorado that the few who fish the low-country reservoirs do so between trips to the mountains, where they believe the real fishing to be. To be blunt, they don't know how to catch warm water fish.

The shortcomings of our waters as fish habitat can be mitigated in part by fish management activities. But the fluctuating water levels (which interfere with spawning and cut down production of fish food), and pollution and climatic conditions, will continue to plague us in spite of the research and management efforts described on the following pages.

The difficult time many anglers have in catching fish should be easier to conquer. Knowing the habits and food preferences of the fish is half the battle; and that information, plus hints on angling methods, are also offered by the author of this pamphlet, who is an accomplished fisherman as well as an able technician.

R. F. Gregg, Editor
Colorado Conservation

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Management

THE OBJECTIVE of all fish management is to provide good fishing at reasonable cost. In Colorado, "reasonable cost" for warm water fishery improvement means the proportion of total department income that can be allocated for that purpose without depriving other programs of adequate funds. Over a half million dollars has been earmarked for warm water management and research over the past couple of years.

Several distinct techniques are open to the executives, biologists, hatchery personnel and other employees working on warm water fish management problems. Each is discussed briefly below:

Research

FISH populations should be managed just as carefully as a good farmer cares for his livestock, and according to the same fundamentals. In order to actually manage any living thing, the manager must be able to exercise a certain amount of control over either the environment or the species itself. In order to exercise such control, a basic understanding of the fish, their habits and their environmental needs is required.

It is the job of trained research personnel to determine the physical, chemical and biological aspects of a body of water through full examination and evaluation. When enough background information is available to be evaluated, it can be formulated into a management plan and then the practical work toward fishery improvement can be started. In others words, fish research work provides the basic plans or blueprint from which eventual fishery improvement should be attained.

Progress of fishery improvement has been slow in our low elevation waters simply because until 1947, the department had no blueprints of our waters. Each body of water is individual and has characteristics peculiar to itself; therefore each must receive individual treatment. Research studies have been completed on a total of seven reservoirs with a total surface area of over 10,000 acres. There are well over 300 warm water impoundments in the state, and the total surface area exceeds 150,000 acres. But enough knowledge is now available to assure somewhat faster future progress.

Improving Habitat

ENVIRONMENTAL alteration or the improvement of fish habitat is still primarily in the experimental stage in Colorado, but already there is some indication that this phase of fish management can be utilized to offset some of the harmful effects of water level fluctuation.

In waters where natural shelter such as aquatic vegetation is limited or lacking, game fish populations cannot be expected to thrive. Artificial shelter devices constructed of logs, brush and rocks can be used to replace natural shelter. A great variety of shelter types can be devised, but a plain hog-wire fence, placed upon the lake bottom with tree limbs woven along its length, and a few rock piles extending over several feet in area and several feet in height, will provide serviceable shelters for fish and other aquatic organisms.

The fish tend to congregate about shelters and fishermen can more readily locate them and thereby catch more of

them. Habitat improvement can be very expensive and for this reason continued experimentation will be required before this method can be established as entirely feasible.

Stocking

PROPAGATION and stocking of game fish species is a very important function of fishery management. New fish species being introduced because they appear to be suitable for the type of existing environment include the walleyed pike, white bass and freshwater drum. These species do not build spawning nests, or redds, and their young are not open to destruction by water level fluctuation.

Indiscriminate stocking of various fish species has resulted in the creation of additional problems in many of our low elevation waters. Popular misconception has led fishermen or their organizations to believe that stocking is a cure-all for poor fishing conditions, and millions of fish have been planted from which little good has been realized. The carp, for instance, was not native to Colorado, but was stocked here by well-meaning people in the 1800's.

Before a fish species is planted, the body of water involved should be carefully examined to determine if it is a suitable habitat. Possible effect of the new species on established species should be considered.

In water where fish cannot reproduce successfully in enough numbers to provide adequate fishing, creel size fish are stocked on a "put-and-take" basis. The fish are removed by heavy fishing pressure within a very short period. If a considerable number of fishermen depend for their sport on waters in which natural reproduction is

impossible, put-and-take stocking is probably the most economical way of providing fishing.

Fish Salvage and Control

THE GAME and Fish department uses various methods to control rough fish populations and to reduce over-stocked game fish species. In 1952 a fish control and salvage unit was established and equipped to control, rescue and harvest fish in waters throughout the state. This unit is equipped with several large seines ranging in length from 900 to 1800 feet and in depth from 6 to 30 feet. A small tractor, power wagon (four wheel drive truck) with winch for hauling seines, seine barge, boat, live boxes, and conventional trucks complete the unit's regular equipment.

Rough fish control work on 10 public waters began in 1952, and is carried on each year from June through August. Large bays are baited in these waters and when the fish come into the baited area to feed, the huge seines are set around them, then the tractor and power wagon are used to haul the seine and fish to shore. Rough fish taken in this manner can either be killed and returned to the lake for fertilization purposes or they can be loaded and taken to the state hatcheries to be used for trout food.

During the spring and fall, game fish are harvested from leased lakes and re-distributed to public fishing waters. Over 100,000 legal size warm water fish species valued in excess of $20,000 are harvested and stocked annually. This work is generally carried on during the cool spring and fall periods, because the survival rate has been found to be extremely low during the summer.

Fish toxicants are also used to reduce

or control fish populations. Careful study and care must be given before this method is used. Where it is impossible to control fish by other means, toxicants are used to reduce or completely remove fish populations.

Traps of various types are also used to control and reduce fish populations.

Although fish control work is very expensive, the return to the fishermen in desirable fish is generally so great that this management method is quite justifiable.

Educating the Public

VARIOUS types of information relating to the many and varied activities of the warm water fishery management section are being constantly placed before the public. Sources for such information include newspapers, radio programs, *Colorado Conservation* Magazine, news releases, technical papers, etc. Warm water fish personnel provide programs regarding their work for sportsmen and other interested groups.

Use of Fish Regulations

ALONG with other current approaches to the problem of improving fishing, the fishing regulations —management's oldest tool—are constantly being changed, as new facts become available, to provide the fisherman the best results for his fishing effort. Each year a digest of the fishing regulations is published by the department. Every fisherman should obtain a copy of this digest, learn the laws and observe them.

Private and Public Waters

ACCORDING to Colorado law, the department cannot stock or plant fish in any waters except those opened to public fishing. Owners of private waters must obtain their fish from other sources. However, information on stocking and management can be obtained free of charge by private water owners, from the department. Private pond or lake owners who wish to reduce their over-stocked game fish populations can make arrangements to have the job done by the department.

Creating New Waters

THE DEPARTMENT has a number of new warm water fishing lakes either under construction or in the planning stage. Most of these waters will be of the stable type with no water level fluctuation to hinder good fish production. All of these impoundments will be placed in areas where desirable fishing waters are at a premium. All, of course, will be open to public fishing. Among water under construction or definitely planned are:

Sweitzer Lake (Garnet Mesa) — Three miles northwest of Delta, 137 surface acres, maximum depth 30 feet. Fingerling walleye, black bass, channel catfish, rock bass, crappie and rainbow will be stocked during 1954. Lake should be opened to fishing by 1957. A number of brush shelters are being installed. The estimated cost for construction and development is over $100,000.

Ryan's Ponds — Five miles northeast of Rocky Ford. The estimated cost for construction and development is over $25,000. Expected to develop a number of small fishing ponds and wildlife habitat area. Approximately 6 to 10 surface acres of water can be developed.

Funds have been allocated for the development of about a 15 surface acre lake near Cortez, at the site of the existing Denny lake.

At the present time detailed investigations are being carried out on other possible warm water lake sites. The final decision will be influenced by suitability of the sites and funds available. In the long run, it is safe to say, new impoundment construction is one of management's best weapons in forging a good future warm water fishery.

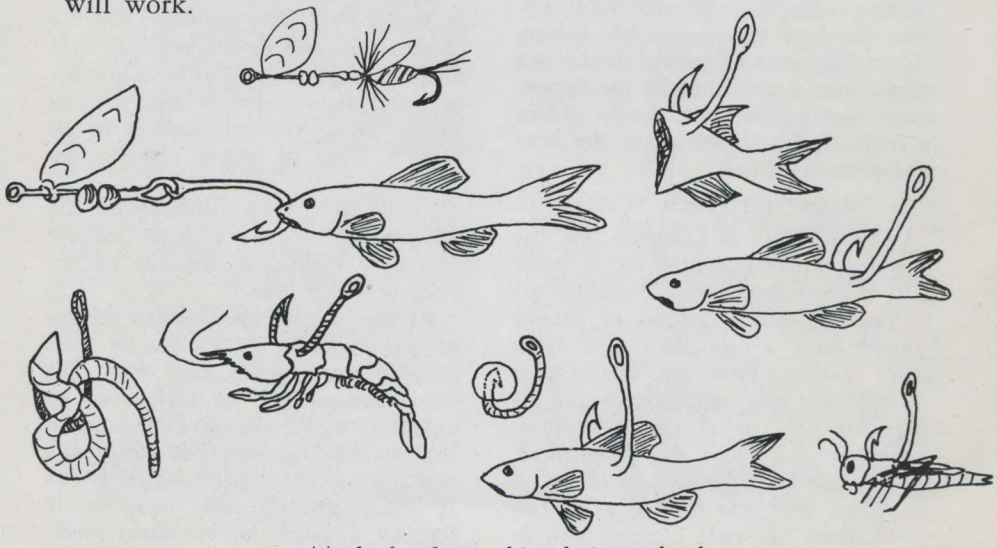
Fishing Hints

ALMOST ANYONE can catch fish and have fun doing it too—if he but knows where to find the fish. And many fishermen don't.

During the spring and fall seasons, fish usually can be found in the shallows close to the lake surface, but in the summer and winter they are more inclined to stay in the deeper waters. Fish live or loiter about the edges of various objects in the lake—weed beds, rocky reefs, sand bars, or in areas where the bottom drops off suddenly. Points of land projecting out into the lake are often productive places to fish. Any submerged objects such as stumps, logs, brush, rocks, etc., that provide fish with hide-outs are promising places to cast your lures.

The fisherman who explores the lake and finds the edges and submerged objects will be the man who makes the catch. Colorado fishermen have an extra dimension to keep an eye on, however—the effects of water level fluctuation. One month a submerged log or rock pile may provide good fishing, but a month later the same object may be up on a dry shore line. So the successful fisherman should know where the favorite hide-outs of the fish are at all levels of the lake.

Temperatures have certain effects on the activity of fish. Fish will seek a spot in the lake where the temperature is most comfortable to them. On a hot summer day the fish will be in the cool deep waters, but as the sun goes down the lake shallows will cool and the fish will move shoreward to feed. But, as any fisherman who tries this advice will learn, fish are very unpredictable creatures. There will be days when nothing will work.



Methods of attaching baits to hook

WALLEYED PIKE

The walleyed pike, *Stizostedion v. vitreum,* is not really a pike at all; it is a perch and it belongs to the same family as the yellow or ring perch. We'll call him walleye, to avoid confusion.

Clean, cool water over a hard bottom is the preferred walleye habitat. A voracious carnivore, Colorado walleyes prefer large live minnows to artificial lures. For still fishing, hook a 4 to 6 inch minnow through the tail area and fish it just off of the bottom, in 20 to 30 feet of water. Walleyes run in schools so you're wise to keep moving until you find one — by trolling, drift fishing, or when still fishing, hoisting yourself off to a new seat occasionally.

Spring and fall are the best seasons for successful walleye fishing, and early morning and night are the most productive hours. If you seek walleyes during the day, you should fish only in the very deepest waters of the lake.

Walleyes will take almost any artificial lure which largemouth black bass will take. Trolling for these fish with artificial lures is recommended. Troll *very slowly,* barely fast enough to get slight action into your lure, and let it sink frequently until you feel it touch the bottom. Minnows should be hooked through the mouth for trolling; and may be used behind various small spinners. The June-bug spinner-and-minnow combination is highly recommended.

WHITE BASS

The white bass, *Lepibema chrysops,* is a member of the true bass family that has recently been introduced into Colorado waters. Because of its recent introduction, this excellent game and food fish is unknown to many anglers of the state. Fishermen who have made its acquaintance find that it strikes hard and puts up a good scrap.

The habitat of the white bass is deep, still water over sand or gravel bottoms. Sand bars and points projecting out into deep water are the preferred angling spots. The fish often can be seen roving about upon the lake surface feeding on minnows and insects. When you can see them surface feeding, then is the time to get your spinners, spoons and other "hardware" into action. Cast in among where the fish are swirling the water, hook and land your fish quickly and cast again. The schooling fish move rapidly and soon may be out of your casting range. Where no surface action is evident, fish the lake bottom for white bass. Small live minnows are the preferred bait. Hook the minnow on a small hook—number 6 or 8—and use a small split shot.

White bass bite more readily during the early morning or late evening hours on hot sunny days. At the present time, Adobe Creek reservoir, Bent county, is the best place to fish for white bass. However, brood fish have been stocked in a number of waters throughout Colorado and bass fishing in these waters should develop soon.

YELLOW PERCH

Yellow perch, often referred to as ring perch in this state, are very abundant in a number of waters scattered throughout Colorado. The yellow perch is one of the easiest fish to catch and will bite on almost any type of artificial lure or natural bait. Perch are generally hungry all year, and provide some exciting moments during the slack winter months.

This species is a bottom dweller and if fishermen expect to catch a stringer, they had better fish on or near the lake bottom. When perch are abundant, they can be taken almost anywhere in a lake. When relatively scarce, look for them around submerged brush or weed beds. Trolling with deep running lures such as a fly and spinner combination is often very effective for taking yellow perch during the summer months.

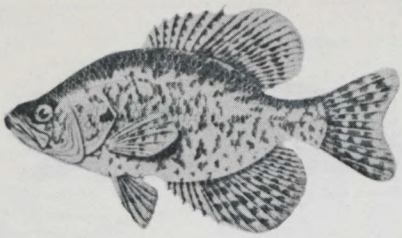
For the fishermen who are hardy enough to brave the elements of the winter, fishing through the ice for yellow perch really brings some record results. These fish have good appetites during the winter months and will bite readily on almost any type of bait. Cut a small hole six to eight inches in diameter through the ice, bait your hand line with a worm or minnow, drop it down to the lake bottom and if a school of perch is near, you will soon have plenty of action. Yellow perch travel in schools, so you may have to move about until you find a school to catch anything.

CATFISH

The black bullhead catfish is very common in most of the low elevation waters. The flesh of this fish is considered very delicious and many anglers prefer it to all others for table fare. Where food is abundant, bullheads can reach a size of 12 to 14 inches in length and a weight of 1 to 3 pounds. Bullheads have a high reproductive capacity and in many waters the populations are so large and food supply so small that most of the fish are stunted.

Channel (shown above) and blue catfish are found in many widely scattered areas throughout the state, but where available, they are a favorite fish. These are the big fish of the low elevation waters, and monsters up to 22 pounds have been taken in this state. Channel and blue cats can be found in many prairie reservoirs and in the lower drainage area of the Dolores, Colorado, White, Yampa and Green rivers of western Colorado and in the Arkansas River of eastern Colorado.

Natural baits such as minnows, small frogs, crayfish, earthworms and grasshoppers are all excellent baits for the catfish. Specially prepared baits such as the "stink baits" are also good. Occasionally channel catfish can be taken on artificial lures such as spoons and flies. During the day, fish around submerged brush or in deep dark holes. At night the catfish will move into the shallows to feed. Night fishing has always produced the most successful catfish catches.

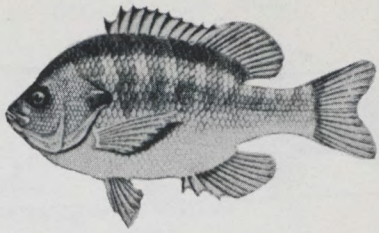


CRAPPIE

As a tackle-busting game fish, the crappie doesn't exactly rank with the tarpon. However, a great number of Colorado anglers seem content with the sport, and to some extent the table fare, afforded by these fish. Many low elevation waters support either the black crappie or the white crappie or both. The white crappie seems to prefer the warmer, more turbid waters and it is not adverse to mud bottoms. The black crappie is more often found in cooler, cleaner waters. It is shown above.

Everyone knows that a bucket of small live minnows is the standard equipment for crappie fishermen. But many a nice stringer of crappie has been taken with the aid of artificial lures, such as small spinners and flies. Earthworms and grasshoppers take their share of crappie. During the daylight hours, fish for crappie at a depth of six feet or more. Still fishing with a bobber or a tight line is the favorite method used in crappie fishing, but should this fail, fish your bait or lure with a slow retrieve for action.

A successful crappie fisherman always seeks a promising location to fish, such as a submerged brush or rock pile, or a weed bed, or deep water off dams or rock ledges. In Colorado, crappie fishing is best during the spring and fall seasons. A number of waters in northeastern Colorado furnish excellent crappie fishing, with the state's prime spot at North Sterling reservoir out in Logan county.

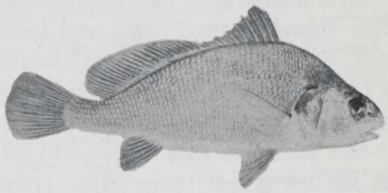


SUNFISHES

Bluegill sunfish are not abundant in Colorado despite the fact that they have been planted in our waters repeatedly. Occasionally a bluegill of a pound or more in size can be taken.

The green sunfish and hybrid sunfish are very abundant in most of the low elevation waters, but at around a half foot in size, are generally attractive only to youngsters.

Flies, worms, grasshoppers, small spinners and minnows, in more or less that order, are successful enticers, used around shelters and submerged objects.



DRUM

The drum or freshwater sheepshead, at a size of 1 to 3 pounds, ranks high as a food fish. Its fine flavor and few bones will cause many an angler to travel the huckster's mile to obtain it. Drum can be taken in only one body of water in Colorado—Bonny reservoir.

The drum feeds upon insects, crayfish, minnows and mollusca. For best results, use crayfish or earthworms in the very deep waters during the daytime and in the shallows at night. The man who finds an area riddled by crayfish burrows will probably catch all he can use.

BLACK BASS

Although the largemouth black bass has been introduced into almost all of the low elevation waters of the state, there are very few places where black bass fishing can be considered good. Black bass prefer warm waters with muddy bottoms, where plenty of shelter in the form of submerged weeds and brush is available. In most Colorado waters shelter is lacking during part or most of the year due to water level fluctuation, and our waters are not warm for long enough periods of time.

There are a few black bass present in almost all of our larger reservoirs and occasionally good bass populations can be found in small lakes and farm ponds. Look for the black bass around any type of submerged shelter such as logs, rocks, brush, or weed beds. When you cast your lure into the vicinity of such shelter, a bass may strike from ambush. During the early spring the anglers who know where to find deep water just off a rock ledge should catch a creel of bass. In the summer, fish for bass with bait on the lake bottom in deep water, 20 to 30 feet, near a submerged object.

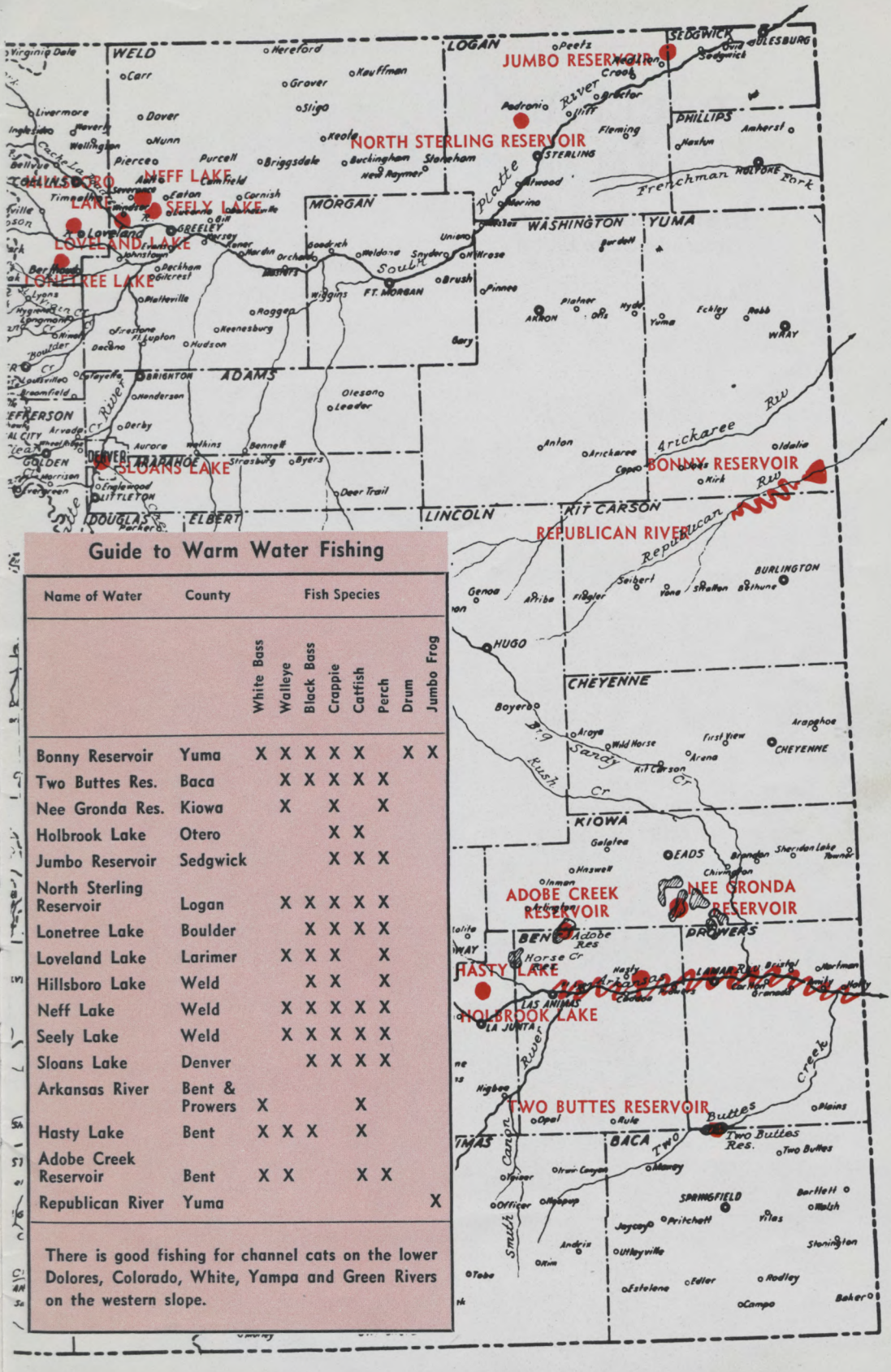
The black bass will strike at almost any type of artificial lure, and will take a large variety of natural baits such as minnows, crayfish, frogs, earthworms and grasshoppers. Pork rind added to a spinner or spoon is always intriguing. A common mistake in using artificial lures is retrieving them too fast. Take it slow.

CARP AND SUCKERS

While most fishermen have a low opinion of carp (pictured above) and suckers as table fare and as potential tackle-busters, those who know doubt that premise to be absolutely true. Carp and suckers from the clean, cool waters of this state are not only good to eat, but they can put up quite a scrap as well. Carp can be taken with artificial flies, and on light tackle they put up a mighty battle. Anyone who has pulled a two-foot stubborn sucker from a fast mountain stream knows that these fish, on light tackle, are genuine sport.

Natural bait or prepared bait such as dough balls will get more carp and suckers than anything else, if you remember to fish on the bottom at all times. Always leave a little slack in your line for these fish like to mouth the bait and if they feel the slightest tension on the line they will leave. Continued siltation is slowly limiting the distribution of our game fishes, and it's likely that soon only carp and suckers will be able to survive in many of our silt-shallowed waters. Perhaps someday these "rough" fish will provide the only sport fishing on the plains. Better learn how to catch them now.

For those sportsmen who find hook and line fishing for carp or suckers boring, the use of a bow and arrow should make life exciting. A bow rigged up with a spinning reel, with the line attached to the arrow, can furnish some mighty fine sport when you tie into a big lunker.



Guide to Warm Water Fishing

Name of Water	County	White Bass	Walleye	Black Bass	Crappie	Catfish	Perch	Drum	Jumbo Frog
Bonny Reservoir	Yuma	X	X	X	X	X		X	X
Two Buttes Res.	Baca		X	X	X	X	X		
Nee Gronda Res.	Kiowa		X		X		X		
Holbrook Lake	Otero				X	X			
Jumbo Reservoir	Sedgwick				X	X	X		
North Sterling Reservoir	Logan		X	X	X	X	X		
Lonetree Lake	Boulder			X	X	X	X		
Loveland Lake	Larimer		X	X	X		X		
Hillsboro Lake	Weld			X	X		X		
Neff Lake	Weld		X	X	X	X	X		
Seely Lake	Weld		X	X	X	X	X		
Sloans Lake	Denver			X	X	X	X		
Arkansas River	Bent & Prowers	X				X			
Hasty Lake	Bent	X	X	X		X			
Adobe Creek Reservoir	Bent	X	X			X	X		
Republican River	Yuma								X

There is good fishing for channel cats on the lower Dolores, Colorado, White, Yampa and Green Rivers on the western slope.

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