To the Sportsmen of Pennsylvania

I appreciate greatly this opportunity to reiterate my views on the program you have so ardently supported and zealously guarded for so many years.

No one likes to hunt and fish any more than I do, therefore I shall certainly see to it that your interests and my interests in these two sports are thoroughly safeguarded.

I have always contended that there is no room on the voting register for game and fish, and that the administration thereof must therefore be strictly non-political.

Likewise, I am heartily in favor and shall exert my every effort to preserve the Game and Fish Funds. They are voluntary contributions made by you and by me to support the cause of wildlife conservation, and should therefore not be considered a tax in any sense of the word.

Pennsylvania today is the leader in game and fish conservation. It acquired that enviable reputation largely because of your efforts. Therefore, I appeal for your loyal support so that working together we may continue to have the best hunting and fishing in the Union.

Arthur H. James
Governor of Pennsylvania
ALTHOUGH spoken of by many men as being just another form of wet fly fishing, bucktail and streamer fishing definitely have a style all their own. Witness, that one of the well-known manufacturers in this country is making a special streamer rod. A satisfactory rod for these lures is usually nine feet in length and quite powerful, especially if one is fishing the larger streams. Rods of other lengths are often found to be equally as good for this fishing, but those of a stiff dry fly action are generally found to stand up under the terrific strain which a rod undergoes in this angling.

A number of years ago, only a comparatively few fishermen carried this type of streamer fly in their assortment of lures. Today nearly every store, in which flies are sold, carries at least a fair assortment of bucktails and in an ever increasing number of stores, the more recent marabou streamers can be purchased.

There is no end to the number of patterns that can be tied. You will see them in shades of the most somber hue to that rivaling the most gaudy salmon fly. And strangely enough, most of them will catch fish. Many patterns have established reputations for catching large trout. Others catch a larger number of fishermen. You have but to look, though, at the records of a national contest of last year to realize the effectiveness of these flies. The five largest trout were taken on bucktails, as were the seventh and eighth largest. About half of the winners were caught on homemade bucktails which, I believe, proves nothing. The fact remains, for catching large trout with the greatest consistency, bucktails and streamers stand at the top of the artificial lure list.

Certainly the novice will derive more pleasure and satisfaction in bucktail and streamer fishing compared to wet flies or nymphs. Most of the time, while using these natural imitations, your line is taut, or at least more so than in fishing the other flies mentioned. That accounts for fewer strikes being missed or occurring without being noticed.

I believe it can be safely stated here that this fishing method is the easiest of all styles I have ever used. My first experience with "buck" occurred on a "first day." The stream was quite high and discolored and the snow flakes were being blown about by a chilly and brisk mid-April wind. Without any previous tutoring, I made the largest catch of browns I have ever taken on the opening day. I fished downstream in a size nine fly and kept it in the deeper and less swift currents, and missed only an average of one out of ten strikes.

Nearly everyone is acquainted with the actions of minnows as they play about the bulrush pockets in a brook, and one is best to simulate their actions with your artificial lures to attain success. Oft times I have heard fishermen state which one particular method of retrieve is the only effective manner in which them can be fished. I prefer to attempt to vary my methods, no matter what lure I may be using. Just recently there appeared in one of our outdoor magazines, an article telling the proper method of retrieve of streamers in the taking of Landlocked Salmon. The author stated that he had used for years what he believed to be the orthodox method, which consisted of a fast and jerky retrieve. Then, one day he decided to move to a new location, he began reeling in the line and fly. Before he had taken in more than a few feet of line, there was a terrific strike and he caught one of the largest fish of his career. This occurred several times before it dawned upon him that it was the manner in which his fly was moving that had caused the fish to strike.

There seemed to be such a trifling difference between the two methods, but it was sufficient to turn the trick. Had this fellow not been too set in his ideas on fishing he probably would have enjoyed many more tight lines. It is naturally easy to detect our errors after they have occurred, but I consider that to be just one more reason to attempt to become increasingly open-minded in anything pertaining to fishing.

With my first purchase of bucktails I was given the advice to use them most diligently in early spring or during high water periods. "Why?" I asked the salesman. In answer to that I was told most sincerely that those periods were the only time those lures were effective. How utterly untrue was that advice. It was true that these flies proved of great value at the times mentioned, but I have also taken nice trout on them while many anglers were concentrating on the use of the smallest and most dainty flies. The streamer flies have helped a lot to impress upon me that there is no "best time" for any type of lure.

I distinctly recall an incident which occurred on a northern mountain stream several seasons ago. Time—late June; water—very low and clear. This stream abounded with trout ranging from about eight inches to fourteen inches in length, and regardless of the fact that many of them were stocked but several weeks before, they generally were quite selective. The only good dry fly fishing I had encountered was in the extreme early morning of very late evening. During various periods of the day I tried bucktails and streamers and at the fish were quite visible, I had no difficulty in studying their reactions. On the first occasion I tried casting from a position at the upstream end of a pool. I dropped the bucktail with a splash and at other times with all the delicacy at my command. I tried to interest the fish by casting below their positions of pulling the lure past them after dropping the fly at a point which I thought would frighten them least. Every trick I knew was tried without avail. As soon as the fish was within striking distance the fish would scarify to another feeding position. The next few pools proved equally discouraging so I stopped to rest. When I started fishing again I fished upstream. To the 7½ foot by 2X leader which I had been using I tied a 16-inch tippet of 3X gut and then tied on the bucktail. The fishing of these lures, on leaders as fine as this, is not of the

STREAMER FISHING TACTICS

By R. W. McCAFFERTY

METHOD OF RETRIEVE

JERKS SHOULD BE VARIED FROM

3 INCHES TO 3 FEET
making 20 to 35 feet casts upstream. Many casts should be made between points G-G and E-E. Taking in the line with the left hand, the rod tip is raised and lowered, which causes the fly to swing toward the angler in darts ranging from 3 or 4 inches to as much as 3 feet. Each pause allows the lure to drift downstream a few inches, depending of course on the speed of the current and length of pause. Attempts should be made to make the streamer swim in a long, even motion also, letting the natural action of the feather streamers represent the swimming of a real minnow.

From this same position you can also fish the broken riffles, which contain many pockets. In doing this, cast downstream and across, retrieving up and across and being sure to play the fly in every pocket, no matter how small it may appear. Remember, too, to vary the speed of your retrieve. After you cover all the casting points once with one speed or variation of darts, go over the same water with another method. If you see you have a trout interested but he will not strike, change your method in preference to changing the fly. Then, if your supply of tricks is exhausted without results, change flies. Next, move cautiously to position No. 2 and fish with casts to pocket between A-A and above the rock which causes this pocket, and make repeated casts on the edges of the currents which form pool D by casting to positions between E-E and H. The small tributary entering the pool at the upstream end makes this a good location for trout during low water periods as at these times, being a tumbling mountain brook, the water temperature is low, aeration high, and it probably carries plenty of natural trout food into the main stream.

From this position you can also fish cross-stream and downstream over the submerged log you had cast over from No. 1 position. To get into the next position I would suggest you leave the stream and detour, crossing tributary at point C-C, then back to stream to position No. 3. At this point it would be well to crouch into a low position both on approaching the stream and while fishing. By doing so, the extra precaution for not only is it harder to make the leader straighten out, but there is ever present the danger of snapping off these comparatively heavy lures on faulty back casts or when casting during a windy day.

The first pool furnished a 10-inch brownie on the third cast. After locating this fish I worked into a position from which I could cast above him. Then, applying only enough tension on the line to keep the lure from sinking, I worked it to within three feet of my quarry. At that point I gave the fly a series of very fast jerks, simulating as best I could the action of a minnow which had suddenly found itself practically within the reach of an enemy. Simple enough. The trout apparently thought of only a luscious minnow dinner as he struck violently. Although all the trout I located seemed to be in feeding positions, they did not appear to be feeding on anything either under the surface or on top. Every fish that I had induced to strike was intereted only after I employed the foregoing method. With the same leader and fly I tried downstream fishing but could not get the necessary action to interest any fish. The contrary was true; I frightened them all without exception. Here was food for thought for the proponents of downstream fishing anglers. The ethics of good angling demand that we forget our own set opinions and experiment.

My favorite system of fishing in recent years has been to pick a small section of stream and then fish that in every manner of which I am capable until I hit upon some method which proves fruitful. It is not always easy work but has done so a sufficient number of times to keep me interested. Usually I begin by casting upstream and after covering a small distance I turn and fish downstream. If the stream is not too fast I will try the crossstream casts. This latter method is invaluable at times in fishing streamers, especially if the stream bottom contains many rocks and pockets. Minnows inhabit these spots as do surprisingly large trout. The strikes occur lighting fast here and if one does not want to miss his fish it is necessary to be on edge every moment. The method used in fishing these pockets is entertaining and with careful manipulation of the lure one can be made to do a lot of work for you. Use the varying current to give the fly minnow-like actions. Let the pull of the current on the leader force the streamer into a pocket, then keep the streamer in that pocket, moving it a little from side to side, while the current does its work of mak­

As I begin writing this paragraph I am sitting on the hook of a mountain stream on a section similar to the one described above. In fishing this stretch we would cautiously take position No. 1. From this point we can fish the eddy and submerged log by
THE fishing season being officially closed, does not necessarily mean that a lot of the pleasures that usually accompany fishing are at an end. Some of the keenest pleasure and satisfaction is derived from repairing broken equipment, and the manufacture of the tackle to be found in the average fisherman's array of gadgets.

A few light tools and a small amount of inexpensive accessories are necessary for repairing, and keeping your tackle in first class condition at all times. My tool kit contains a small riveting hammer, the head of which is covered with rubber. This is used for setting ferrules, and the rubber head insure a clean job, without marring the finish of the metal. Several fine files will be found indispensible. The type used in auto ignition work are of a very fine grade and will be found very handy for filing off ferrule pins and rough polishing. A small hand drill and a few drill points, ranging in size from 1/16" to 3/4" are necessary for removing ferrule pins and making broken joint repairs. A small pair of round nose pliers of the side cutting variety, a small screw-driver, tweezers, a caliper rule and a small vise completes the list.

In addition to the tools, a few accessories will help in completing many jobs, and render a professional finish to your work. Among the accessories I would list as accessories is emory cloth of several degrees of fineness. Polishing powders can be made by coating half of a thin pad with glue and dipping it into emory flour. This method has been used for years by die sinkers and metal stamp workers, and is very essential when fine polishing is a requisite. Rod winding silk can be purchased in several sizes and in plain and variegated colors. Ferrule cement of the type employing heat, is essential for fastening metal parts to wood. Clear fingernail polish used on wrapped stockings can be made to hold and forms a cellular coating that is impervious to moisture and withstands a lot of hard usage. If your work requires a coating of colored enamel, a very good product for this purpose can be secured from stores selling model airplane supplies. This enamel is put up in one ounce bottles and retails for five or ten cents a bottle, according to quality.

In disengaging the male and female ferrules of a rod when the barb of the hook has been broken off the joint, a piece of emory cloth should be wrapped around the protruding end of barb's hole of one inch intervals. This will later be used for removing excess solder, a coat of fingernail polish completes the job and the finished product should look like Figure 4-E.

When the paint or enamel on plugs becomes marred from usage they can be made to look like new by refinishing them with enamel in the original color or a combination that has proven its merits in days spent astream. In refinishing lures, the hooks and their accompanying fittings, i.e. the screw-eyes and eyelets must be removed. The plug is then thoroughly sanded to produce a rough surface for the new coat of enamel.

Model airplane enamel serves the purpose for plug painting very nicely and as a wide variety of colors are obtainable, many combinations and blends can be brought into use. While the enamel is still wet it may be sprinkled with a metallic substance known as Mica, a form of mica, or Mica Paste, in which the mica is ground fine for use as a mica glitter. This material comes in various size granules of very brilliant metalics, including silver and gold, and owing to its light reflecting properties it not only enhances the appearance to the human eye, but is very attractive to the finny quarry in question. After the decoration of the plug is completed, a bit of liquid solder should be worked in the screw-eye holes and the screw-eyes replaced before the solder has a chance to dry.

Spinners and spoons sometimes become tarnished and fine emory cloth is used to polish them. A coating of fingernail polish applied to spoon lures will protect them from oxidation due to water and atmospheric conditions and prevent tarnish.

Devon Type Trout Plug

A lure that was brought to my attention rather forcibly during the past season is the Devon Type trout plug. This type lure accounted for some of the largest trout taken last season from Logan's Branch. In fact, the fishermen from that section accept it as an essential part of their equipment.

I made several of these lures in the following manner. From a piece of copper tubing of the type used for auto gas lines, cut a piece two inches long. At each end saw slots of exactly seven-eighths of an inch or proportionately in size granules of very brilliant metalics, including silver and gold, and owing to its light reflecting properties it not only enhances the appearance to the human eye, but is very attractive to the finny quarry in question. After the decoration of the plug is completed, a bit of liquid solder should be worked in the screw-eye holes and the screw-eyes replaced before the solder has a chance to dry.

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UNLIKE guns, I never store my fishing tackle. One never knows when he may have need for those things which we usually associate with the milder seasons.

To the dyed-in-the-wool fisherman, and to use a trite term, the outdoorsman, fishing knows no season. The latter will use his fishing tackle as an excuse for getting out on mild winter days, while the fisherman will utilize any reasonably decent weather as an accessory to the fact. The fact being that he desires to go fishing.

Fishing, as most everyone knows, is a relatively irrevocable sport. We have those individuals who will use nothing but live bait, and then there are those who think it a desecration of something or other if anything but dry flies are used. And I have seen the chap who would not wet a line or even give a thought to fishing if it wasn't for the existence of the black bass. And still, there are those that swear steadfastly by the lowly sucker and think it a desirable sport. We have those in the milder seasons who wants to feel the solid pull of a good fish, and adequate protection making it extremely attractive to both feathered natives and visitors.

The capriciousness of seasons, fish and methods make little or no difference to that fellow who wants to feel the solid pull of a good fish, be it sucker or trout, on the business end of his tackle.

While returning from Harrisburg last winter, I encountered four fishermen trudging through foot-deep snow on their way to a fishing hole on the Juniata. Of course, I stopped and asked his tackle.

"Isn't it pretty cold work?" I asked.

"It's not bad," modestly answered the speaker. "You can come along and see for yourself," he invited. "It's only a couple of hundred yards down the bank."

Well, for beauty and absolute protection, the spot selected by the sucker anglers of the district was unsurpassed. The flat fronting the water was enclosed on three sides by high, hemlock clad banks. Four or five fishermen already there lollled about a brisk fire while tending their set poles. A couple of strings of minnow suckers trailing out into the water attested either to the skill of the anglers or to the abundance of fish. It was perfect.

Most sections of Pennsylvania are peculiarly adapted for comfortable winter or early spring fishing; particularly on those days when the sun is warm enough to suffuse the tips of willow branches with those colors indicative of awakening life processes. Evasive as these signs may be, they are nevertheless, well-nigh irresistible to one who loves to fish or spend a few hours out-of-doors in the company of genial companions.

On such a day last February I grabbed my tackle, and a supply of worms that I keep in an unused cement lily pool located on the south side of the garage, and made for a beloved spot on Nesamauick Creek. It is a place that I often visit to observe any winter birds that may be about; its cheerful, open aspect and adequate protection making it extremely attractive to both feathered natives and visitors.

The lovely pool is surrounded by a fairly open mixed forest, the occasional hemlocks lending a touch of lively green to the stark nakedness of their deciduous fellows. At the head of the pool a patriarchal maple leans far over the water and makes a convenient place from which to fish. I usually set the rod, adjusting the reel at free-spooling position and then resort to the shelter of a big rock on the bank.

When accompanied by a companion or two, we're content to sit by a fire, discuss whatever fancy dictates and watch our tackle. However, there are times when one prefers doing a solo and thereby experience the pleasures of a rapidly declining art. So, on that fine winter day, I sallied forth alone, hoping whatever fancy dictates and watch our tackle. However, there are times when one prefers doing a solo and thereby experience the pleasures of a rapidly declining art. So, on that fine winter day, I sallied forth alone, hoping whatever fancy dictates and watch our tackle. However, there are times when one prefers doing a solo and thereby experience the pleasures of a rapidly declining art. So, on that fine winter day, I sallied forth alone, hoping whatever fancy dictates and watch our tackle. However, there are times when one prefers doing a solo and thereby experience the pleasures of a rapidly declining art. So, on that fine winter day, I sallied forth alone, hoping whatever fancy dictates and watch our tackle. However, there are times when one prefers doing a solo and thereby experience the pleasures of a rapidly declining art. So, on that fine winter day, I sallied forth alone, hoping whatever fancy dictates and watch our tackle. However, there are times when one prefers doing a solo and thereby experience the pleasures of a rapidly declining art. So, on that fine winter day, I sallied forth alone, hoping whatever fancy dictates and watch our tackle. However, there are times when one prefers doing a solo and thereby experience the pleasures of a rapidly declining art. So, on that fine winter day, I sallied forth alone, hoping whatever fancy dictates and watch our tackle. However, there are times when one prefers doing a solo and thereby experience the pleasures of a rapidly declining art. So, on that fine winter day, I sallied forth alone, hoping whatever fancy dictates and watch our tackle. However, there are times when one prefers doing a solo and thereby experience the pleasures of a rapidly declining art. So, on that fine winter day, I sallied forth alone, hoping whenever economy and appetite have been dulled by catching suckers in mid-summers when they are at their worst, then, it will be a refreshing revelation to see, feel and eat a mess of fish. At the time I had the rod in my hands the fish was securely hooked and already going places. But after a couple of short but powerful runs it gave up the struggle and was pulled to the surface without further struggle. It was a white sucker weighing around a pound; cold, firm and meaty.

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From my seat on the maple I baited the hook with a robust worm and dropped it into the water, watching the wriggling bait until it disappeared into the translucent depths.

In spite of the brilliant sunshine the February air packed a sting, so after gathering a quantity of wood I built a good fire in the customary spot. Then I loaded my pipe and made myself comfortable against a prostrate tree trunk. Shortly I spied the rod going through gyrations that usually herald a hooked fish.

It was only a matter of a moment to cotiate the leaning maple and grab the rod. The smart resistance of the captive identified it as something other than a sucker. Instead of the stubborn tugs employed by the latter, the former exerted a gentle pull as if it was being gently reeled in. I watched fascinated. Suddenly it straightened out as the fish felt the sting of the hook. Therefore, I wasn't surprised when I pulled a silvery fallfish from the cold water.

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DISTRIBUTION HIGHLIGHTS

During 1938 your hatcheries reached an all time high for production in number and pounds of fish produced. When you consider the size and age of the fish, we feel there are very few, if any, States in the Union, equaling the record.

TROUT—For the first time 4,601,547 were distributed—of this number 1,386,072 were trout ranging in size from 6 to 21 inches, and 3,205,475 fingerling which were planted in the tributary streams.

For the first time in the history of the Commission, it is producing its own brown and rainbow trout eggs from a selected stock which has been built up over a period of years at the Bellefonte Hatchery. This relieves the Board of the uncertainty of the market for this species of eggs.

BASS—The final figures show that the production and distribution of bass was 526,608 in comparison with 167,265 in 1936 and 357,409 in 1937. This is an accomplishment of which we may feel proud. These bass were 4½ months old and ranged in size from four to eight inches. We are hoping this is only the beginning of a splendid production, and that in 1939 we will be able to greatly increase this number.

SUNFISH, CATFISH, SUCKERS—Arrangements have been made so that the fellow who takes his boy fishing, spending a few hours along some of our lakes and streams will be given a real break by tremendously increasing our production of these warm water fish.

TANK TRUCKS—Distribution methods have been revolutionized by the construction of 15 transportation tanks, with 11 more in the making. They not only transport fish in much better condition but will materially cut the making. They not only transport fish in much better condition but will materially cut the

CONSTRUCTION PROGRAM TO INCREASE PRODUCTION—The upper and lower Spring Creek Projects have now been completed, which provides the Board with what it believes the largest trout and bass hatchery in the country.

A new development has been started at Pleasant Gap which will add 35 additional ponds.

The Huntsdale Hatchery is rapidly nearing completion and of course has been in trout production for several years. There are now available 130 ponds of different sizes which can be used for trout or warm water fish culture.

Additional work is being done at practically all the hatcheries so that the production of bass and warm water fish will be greatly increased.

FISHING REGULATIONS FOR CHEST CREEK

Robert Miller was elected president of the Patton Sportmen’s Association, succeeding Snyder Yerger, at a meeting held in Moose Hall, Patton. LawrenceForever was named vice president, Vincent A. Huber treasurer and J. R. Cornelius secretary. Earl Bearer was elected delegate to the county association meeting, and the State Federation of Sportmen, with Charles Kline as alternate.

The Patton organization proposed the closing of Chest Creek from Eckenrod Dam to the Borough of Patton Water Works Dam. Resolutions embodying the proposed closing from December 1st to the opening of the trout season in April will be forwarded to the State Federation and the Pennsylvania Fish Commission. The plan has as its purpose the conservation of the supply of trout.

The next meeting of the Patton Sportmen will be held February 7th, at which time officers will be installed and committees appointed for the ensuing year. A program is being planned for the occasion.
JUST PLAIN FISHIN' 
In Which Humble Species, from Eels to Suckers, Furnish Sport

By ALEX P. SWEIGART

WHILE to the dry fly faddist and bait casting expert, trout, bass, pickerel and wall-eyed pike are about the only fishes that really count, there are thousands of Pennsylvania fishermen who find virtually all of their sport with more humble species of our streams and lakes. Probably accessibility of waters in which these species are to be found is a good reason for this. The fact remains that Pennsylvania today has perhaps more anglers fishing for catfish, sunfish, suckers, eels, carp and fallfish than does any other state in the Union.

It is the purpose of this article to discuss successful methods by which these species may be taken. Proper study of stream conditions as related to their feeding will also be considered. Although virtually any type of rod, from the cut pole and bamboo to the fly rod and casting rod, (and for that matter, even the throwline) may be used, selection of the terminal tackle, line, hooks and sinkers is of ranking importance. Don't get the idea that successful fishing of this type is a matter for the tyro. Your expert carp, catfish or sucker fisherman is usually one who has made an intensive study of the fishing water he frequents and is able to put to practical use his observations.

It is well to remember that, of the species mentioned, suckers, catfish, eels and carp are notably feeders on or close to the bottom of stream or lake; sunfish and fallfish seem to favor the surface and medium-depth in their foraging. Habits of the first mentioned species dictate that the lure be virtually on or very close to the stream bed and use of lead in quantities dependent upon the speed of the current is essential. On the other hand, we have found in taking sunfish and fallfish, naturally floated bait with no lead, or not more than one or two split shot, usually turned the trick. So much for general observations on fishing for these species. We shall now consider each separately.

Sucker Fishing

The expert sucker fishermen, and there are many of them on the Juniata watershed and elsewhere, know intimately the wintering holes for the sucker schools and the courses the fish follow on their run to the spawning areas. During an open winter, they usually figure January and February as exceptionally good months for taking these fish, although good catches are frequently made in December, and early March has long been regarded as tops. Much of the fishing centers at the junctures of smaller streams with the river or at points slightly below. A sudden raise in the major stream is considered good while a dropping water level is regarded unfavorably. The belief exists that increased current in the stream starts the suckers to working, while by the time the water has started to fall the fish are generally fed up.

Disregarding the type of pole or rod used, the terminal tackle seems to be pretty much standardized. Popular hooks are of the common Kirby variety, small hooks being preferred. In rigging the line for fishing, a favorite method is to attach a sinker of from one-half to two ounces in weight (depending upon the flow of water in the stream at the time) to the end, and then space two or three hooks, attached to the line by short pieces of line 6 to 10 inches in length, at intervals of from 15 to 20 inches. In its feeding, the sucker probes about the bottom with its cup-like mouth, which may be extended or withdrawn at will, and for this reason it is wise to permit the baited hooks to rest right on the bottom. Black lines are popular.
The sucker as a general rule takes the lure lightly and in a deliberate fashion. Most popular baits for taking it are the small red worms, distinguished by the red vein running lengthwise under the skin, pink worms, white worms and other small garden varieties. Hooking the bait lightly under the skin so that the ends are lively and kicking seems to add to its attractiveness as a lure. Many sucker fishermen prefer worms ranging in length from 1½ to 2½ inches. With the approach of spawning time, usually in late March or early April, development of the eggs and milt in the adult suckers seems to increase their foraging activities. Incidentally, a favorite time to angle for this fish is immediately after a heavy downpour of rain when the water is extremely roily and raising.

**Catfish and Eels**

Since similar water conditions seem to govern the feeding of both eels and bullhead catfish, we shall consider fishing methods for them under the same head. Both species are nocturnal in habit, doing much of their foraging at night or when the water is freshly following heavy rains. White night fishing for bullheads or eels is the generally accepted method, it is well to remember that some of the best catches are made immediately following a rainstorm when the stream is becoming clay muddy and raising.

The scaleless bullhead catfish is perhaps the least selective when it comes to taking food of any of our fishes in Pennsylvania waters, with the exception of the eel. Larger hooks and lead sinkers heavy enough to carry the bait to the bottom and hold it there, particularly in stream fishing, are the ticket. As for bait, the nightcrawler and common garden worm are in top ranking. Fishermen taking bullheads in the Conodoguinet Creek, in Cumberland County, report excellent catches on shrimp, either canned or fresh. Liver, cut in small squares, also accounts for many catfish. So varied in this homely fellow's appetite that we also know of the taking of bullheads on doughball bait being used in carp fishing, on minnows being fished alive or dead, and on peeled crayfish. The bullhead is a determined type of biter, apparently motivated by one desire—to gulp down a mouthful of food as rapidly as possible. Hardy and remarkably tenacious of life when taken from the water, he usually puts up a first-rate struggle before landing. The spiny rays of the bullhead, located in the fins immediately behind the bases of the gills and in the dorsal or back fin are capable of producing a painful jab, so bear this in mind when taking him from the hook.

For downright greed, you'll go a long way before you find an equal to the common eel. Here is the scavenger of the inland waters, a good thing to remember when angling for it. Back in the days when outlining for eels was still permitted by law, we recall an incident that served to illustrate this scavenger tendency. Accompanied by an old fisherman, we were walking along the shoreline of a central stream and noticed an exceptionally large muskrat lying dead in the shallow water. The weather was hot and this 'rat had certainly been dead long enough to rank as good bait. Casually, we kicked the carcass and to our amazement two big eels wriggled toward deep water. Incidentally, this old eel fisherman invariably used as his bait for the outline links in a small sun early in the morning of the day he intended to make the set. The baitfish, mostly chubs and shiners, were then permitted to lie in the hot sun all day, and, having developed a strong scent by evening, used to bait the hooks. The method of baiting the hooks was unusual and may be put to practical use in hook and line fishing for the eel today. This old timer cut a narrow pointed stick, about five inches in length, with a notch about an inch behind the point. The line was then inserted in the notch; the stick entered into the mouth of the bait and pushed through the vent. The minnow was then pulled down on the hook with the barb extending from the side of its mouth.

"Then eels take the bait headfirst," was his contention, "and this way you're right sartin ter hook 'em deep down so they can't pull off so easy."

Fortunately for our fishing, the days of outlining are gone forever but the methods employed by the old time outliners have not been improved upon. Chief difficulty in baiting in this manner for red and line fishing would be the necessity of fastening the baited hook and trailer line to the fishing line each time a bait is changed. Another thing to remember in night fishing for eels is the tendency of the species in foraging to work rather close to the shoreline of the stream.

We may list as good bait for eels, in addition to minnows, nightcrawlers and slightly tainted meat. Fish the lure on or very close to the bottom with sufficient lead to weight it down. Larger hooks of the Kirby variety are suitable, as well as a strong line, for a big eel is a powerful customer to deal with. Sinkers should be used.

**Carp Fishing**

For those who may have gained the notion that successful fishing for carp is a pastime only for the amateure angler, we believe there is a surprise in store. Both scale carp and leatherbacks, in spite of the size which they attain in our waters, rank with our most timid fish and to take consistently carp well up in the weight ranking requires both skill and patience.

First requisite is locating a school of these big fish. Deeper pools and flats of streams in which carp occur usually have a number of the fish. A tell-tale sign that seldom fails in early morning when locating them are roily clouds in the water as a result of their night foraging. Night fishing for the species is increasingly popular but this does not mean that good catches of carp may not be made during the day. Early morning and late evening are favorite times also with the carp fishermen.

Baiting the fish to a chosen fishing spot is a
BERKS COUNTY LAD
GOOD SPORTSMAN

LUCAS HEADS CENTRE
SPORTSMEN

At the State Centre, Game Fish and Forestry Association's first meeting of the year, on January 6, Russell Lucas was named president for the coming year at the election of officers.

Elected to other posts were Edward Lodding, first vice president; Claude Gette, second vice president; directors, John Beals, Charles Johns, Dean Allison, Charles Hartz, Jacob Hurwitz; secretary, Maynard Henry, and treasurer, J. F. Kephart.

One of the important discussions of the meeting centered around the state law which forbids the trapping of muskrats in holes. The local association went on record opposing this law as it now stands and urged the game commission to change the law so that trappers in the future will be allowed to trap muskrats in holes.

The association decided to have articles placed in the Philipsburg journal so that the public will have a better understanding of the game laws and in order that boys interested in sports may be assembled at different times to receive instructions in various sports.

A motion was put on the floor by W. C. Kephart urging the game commission to place a bounty on weasels and goshawks and urging that the protection for skunks be abolished.

Elmer Pilling, Glass City, refuge keeper asked that any persons knowing of places where rabbits were not wanted to notify him. Pilling stated he would trap the unwanted rabbits and place them in other locations.

A committee was appointed to take charge of the annual banquet which was held on January 26 and reports of the game and fish committees were read.

In conjunction with the meeting a rifle shoot was held with the Altoona team which is one of the five teams comprising the league of which Philipsburg is a member. Altoona won the shoot by nine points. The match marked the third time since the league began that Altoona has been able to defeat local riflemen.

"The fish committee report for the year showed the placing of 2,000 rainbow trout, 3,000 brown trout and 500 minnows in Black Moshannon; 2,000 brook trout, 1,000 brown trout, and 5,000 minnows in Six Mile Run; 1,000 brown trout in Cold Stream; 600 brook trout in Black Bear and 600 brook trout in Benner Run; 5,000 fingerling brook trout were planted in Benner Run, Six Mile Run, Black Bear Run, Corbin Run and Tom Tit Run. Black Moshannon Lake received 1,000 perch, 5,000 surfperch, 8,000 catfish, 1,200 pickerel and 1,000 tadpoles and frogs.

The shoot field showed a profit of $93.79 for the season. The committee was thanked by the members of the organization for their fine work and were reappointed for this year.

Elmer Pilling reported that feed for game would be available for distribution by responsible interested sportmen and that a load would be obtained for distribution by local persons interested.

Jacob Hurwitz reported that feeding boxes can be obtained through the NYA. Claude Gette was appointed to investigate the securing of these boxes.

writes Warden W. E. Wounderly, of Reading, Berks county:

Enclosed herewith you will find a snapshot of Master Rodger Mogel and his setter dog, Duke. Rodger is an ardent fisherman at the age of 10, and he would rather miss a meal than miss his fishing. He does a lot of his fishing in Fox Lake, which is located on Spring Creek, a tributary to the Tulpehocken Creek.

Time and again I meet Rodger along the stream and I have often wished that some of our older fishermen were as clean sportsmen as this lad.

I recall one day when he was fishing at Fox Lake. Beside him was James Troutman, a veteran fisherman. Presently, Troutman caught a entish about 9 inches in length, took it off the hook and started to put it in his live bag. This was too much for Rodger.

"Hey," he said, "why don't you give fish a chance? He's got tears in his eyes because you took him away from his mother." Mr. Troutman immediately returned the catfish to the water.

When it comes to knowing the Fish Code, you can't fool Rodger. He has made a study of it and is able to tell the names of some of our fish in Latin.

Rodger's father died a number of years ago, and at present he is living with his uncle and aunt, Mr. and Mrs. Bryan Mogel, of Bernville. One of his fishing buddies is Herbert Klein, 9 years old, of Bernville, and another is Maggie Roggen, stewardess at the Heidelberg Country Club, an ardent anglerette.
25. P. P. suckers

Dr. Glenn V. Brown, consultant for the Fish Commission. Concentrations of free chlorine that will kill fish: Trout, 0.65 parts per million; goldfish, 0.10 parts per million; carp, 0.15 p.p.m.; catfish, 0.20 p.p.m.; bluegill sunfish, 0.25 p.p.m.; suckers, 0.20 p.p.m.; pickerel, 0.30 p.p.m.; sunfish, 0.30 p.p.m.; yellow perch, 0.20 p.p.m., and black bass 0.60 p.p.m.

Question: What is the reason that fishermen are prohibited from using goldfish as bait?

Answer: It has been found in fish conservation that indiscriminate stocking, whether it be planned or accidental, has worked untold damage to fishing in waters affected. In addition to the fact that the goldfish is after all only a glorified carp makes its introduction into any of our fishing waters highly undesirable. It is believed that these fish tend to lose their brilliant coloration after years in a stream reverting to dull, color-like colors. They are considered highly undesirable and there is always the danger that fishermen, after using them may dump remaining goldfish from the bait bucket into a stream.

Question: What is a good way to catch nightcrawlers for fishing purposes?

Answer: During dry hot weather, securing a good supply of nightcrawlers for fishing may be quite a job. However, by wetting a lawn with the garden hose in the evening the big worms may often be brought to the surface. After dark, with the use of a good flashlight, you may be able to get a sufficient number for fishing. Tread lightly as you walk on the ground, for apparently, the nightcrawlers are very sensitive to vibrations on the ground. Often they may be entirely out, at other times, only the foreparts may be exposed. Quickness is essential in capturing them. Sometimes when one is grasped it may have secured a hold in its burrow, and if this is the case, squeeze steadily with the fingers, gradually bringing it out. A sharp pull will usually tear it apart.

Question: Are interested in fishing for pickles. Could you tell me the best section to go for this kind of fishing?

Answer: While the range of the eastern chain pickled is fairly wide in Pennsylvania, apparently the section in which it is most abundant is in northeastern Pennsylvania, in the counties of Pike and Wayne. Not only is this fish thriving in ponds, it is abundant in many of the small ponds and glacial lakes in these counties. With fishermen in that section of the state, it ranks as a favorite game fish.

Question: Have heard that free chlorine used often in purifying water may at times, if concentrated enough, kill fish. Could you give me any idea of the resistance powers to it by the various species?

Answer: The following table as to the powers of resistance of various species of fish life in our waters to free chlorine has been furnished by Dr. Glenn V. Brown, consultant for the Fish Commission. Concentrations of free chlorine that will kill fish: Trout, 0.65 parts per million; goldfish, 0.10 parts per million; carp, 0.15 p.p.m.; catfish, 0.20 p.p.m.; bluegill sunfish, 0.25 p.p.m.; suckers, 0.20 p.p.m.; pickerel, 0.30 p.p.m.; sunfish, 0.30 p.p.m.; yellow perch, 0.20 p.p.m., and black bass 0.60 p.p.m.

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IMPROVING THE MANADA

JUST what can be accomplished on a trout stream through permanent stream improvement is graphically illustrated in the following report on such work by V. R. Breneman, of Hershey.

Until recent years, he writes, many of our boys journeyed miles for a few hours fishing. That is, those who could afford it did. The others, a large majority, did not fish because there were no fish. Yet in 1935, there were hundreds of brown trout caught in a stream that was considered almost hopeless a few years before, the Manada Creek.

On July 18, 1934, there were 40 cans of brown trout released by the Fish Commission in the Manada Creek near the Gap. During the following season, I know of several 14 inch brownies that were taken. One of the accompanying snapshots shows 10 trout that were taken in the Manada. These brown trout ranged in size from 9 to 13½ inches. That the brown trout has prospered in the Manada is very evident from this picture (shown below). The stocking of this stream and the fact that the trout have so well adapted themselves to our very accessible Manada have created more interest and instilled more enthusiasm in our fishermen than anything else ever accomplished by the Fish Commission in our locality.

In 1935, from June to September, never a Sunday passed but that there were some ardent fishermen, either building dams or deflectors or creating hiding places for trout along their favorite stream. That their labor was not in vain has been proved to them and in 1936 the stream improvement program was one of the biggest projects ever attempted by our club, the Lebanon Valley Fish and Game Association.

WALTONIANS MEET IN CHICAGO IN MARCH

Announcement has been made that the seventeenth Annual Convention of the Izaak Walton League of America will be held at the Congress Hotel, Chicago, March 16, 17 and 18.

Sportsmen, conservationists and others interested in discussion of national conservation issues are invited to attend the convention.
**FEDERATION MEETS ON FEBRUARY 12**

The Directors of the Pennsylvania Federation of Sportsmen's Clubs, who sit as a permanent Resolutions Committee, will meet at the Penn Harris Hotel in Harrisburg at 10:00 A.M., Sunday morning, February 12, and spend the entire day going over these resolutions to get them in shape for the annual meeting the next day. This meeting will be devoted exclusively to the Directors in considering these resolutions and getting them in shape.

Any sportsman wishing to speak on a resolution that has been presented to the Federation will be given a hearing before the Board of Directors and entitled to explain the resolution.

The annual meeting will be held on Monday, February 13, starting at 9:00 A.M., in the House Caucus Chambers at the State Capitol.

All resolutions presented to the Federation must be in the hands of Dr. C. A. Mortimer, Federation Secretary, ten days before the annual meeting and each resolution must be on separate sheets of paper, typewritten and double-spaced, it has been announced.

Federation officials advise the sportsmen coming in on Saturday and Sunday nights to make reservations at the hotels in Harrisburg as they will probably be crowded on account of the legislative session, although, it might be a little quiet because of this being a holiday.

**NORTH PENN ELECTS**

Augustus Hiltebeitel, Sellersville, was elected president of the North Penn Fish, Game and Forestry Association, at the annual reorganization meeting of the group, held in the Sellersville fire hall.

Mr. Hiltebeitel succeeds Elwood Polkette, Bethlehem Pike, near Souderton, who previously occupied the chair. Under the constitution of the organization, the president is limited to one year in office.

Other officers elected were: Edward Buchenauer, Telford, vice president; Abraham Mitman, Sellersville, secretary; Herbert Heinrichs, Sellersville, financial secretary, and Harry Moser, Sellersville, R. D. 1, treasurer.

Reports were presented on the deer shoot that was held at Argus, as a benefit for the game association. The event netted a profit of $106.

**KEYSTONE SPORTSMEN PLAN DINNER MEETING**

With 930 members now on the club rolls, the Keystone Fish, Game and Forestry Protective Association of Shamokin anticipates one of its outstanding banquets on Tuesday evening, February 21, according to word received from Charles H. Wentzel, Secretary. A varied program has been planned for the banquet which is scheduled for 6:30 o'clock at the American Legion Building on Independence Street. Commissioner of Fisheries C. A. French, is scheduled as the principal speaker.

**MID-WINTER PARLOR FISHING**

(Continued from Page 4)

The detail of the bow piece is shown in Figure 5. The corners on one side can be rounded, which will give the appearance as illustrated in the end detail of Figure 5-A. A bending form is necessary and can be made from scrap %" material. An accurate method of making a bending form is to first draw the pattern on a piece of paper and then transfer it to the wood.

The shape of the form is shown in Figure 5-B. Four blocks will be necessary to hold the net bow in position while bending. These blocks can be cut from the scrap material from which the bending block was sawed. The blocks and their relative position are shown in Figure 5-D.

The wooden handle filler as shown at "E" can be made from walnut or other contrasting colored wood, as your fancy suggests. The top of the handle filler should be %" wide and shaped so that the contour corresponds with the lower end of the form at "C" and tapered to %" wide at the end. The handle should be about 7 inches long.

Now with the form and net frame pieces ready, the form is nailed solidly to any convenient flat surface and the blocks "D" are placed in position %" away from the form, allowing ample room for the bow to be slipped or rather bent into position.

The first step in bending the bow is to soak it thoroughly in steaming hot water. After the wood is pliable enough to bend easily, it can be sprung into position around the form, starting at the top and working around each side of the form. The handle filler is placed in position between the protruding ends and held firmly by means of clamps. This setup should be allowed to stand several days to insure thorough drying and settling the bend in the wood.

After the bow is entirely dry it may be removed and two holes drilled through the handle to accommodate dowel pins.

The handle filler is now glued into place and the dowel pins driven in. After the glue has dried the handle can be polished and you are ready to fasten the net. A net can be purchased for from fifteen to fifty cents according to quality, and laced to the bow. A net bow so constructed will be light in weight, serviceable and a joy for the owner to carry.

**FISHING CONTEST PRIZES AWARDED**

The Susquehanna Fish and Game Association held a meeting in the fire hall at which time the annual election of officers was held. Results follow: President, Eugene Kinard; vice president, Elmer Ranker; secretary, George E. Filbey; treasurer, Edward G. Schultz; field marshal, Jacob S. Keller; assistant, Leonard Fisher. An order for 50 rabbits will be placed for the purpose of restocking. The prize of a fishing reel was awarded to Evans McDowell, for the catch of the largest bass. Burman Bailey was the recipient of a fishing rod for the largest salmon, caught in the Susquehanna River. The association reorganized for the ensuing year and will sponsor its annual membership drive.

*Beautiful Paradise Creek, Monroe county trout stream.*
SO MUCH has been previously published on the subject of stream improvement, that it might seem there is little left to be said. One factor should be borne in mind, however, that all streams are not alike. What we do in one stream may be impractical or unnecessary in another. How will we know our stream's needs? It is this thought that will justify this article and simplify getting to the problem of each stream's peculiar needs. Let us start with a vision of the ideal stream. It is, of course, a stream that has all, or the greatest variety, of desirable factors in proper proportion and in fitting relation to each other in the smallest given stream area. Then let us say, "How will we recognize this 100 per cent stream?" Quite likely we will not. If, however, we know the necessary components that are found in the ideal stream, then it is easier for us to visualize what is needed to make a good balanced stream. We can then better judge what our stream lacks or has in over-abundance and thus arrive at a practical answer to those questions of the what, why and wherefor of stream improvement.

No attempt is made to be specific in stepping up food requirements for fish because in the ideal stream, nature takes care of this. In other words our stream improvements must be aids to this end. In making the survey, it is only necessary to answer intelligently where each desirable element of a good stream can become negative. An over-abundance or a lack of any of these factors is a negative finding. All stream improvements are to help nature do her part. With this as the motive we must capitalize upon our knowledge of nature's courses of action. We can best lay our foundations in low water. It is not assumed or intended that each plan suggested by the following sketches should be carried out in making the stream improvements, but rather that the method or methods employed be chosen as evidencing the best or easiest manner to overcome each condition definitely established as being a negative finding in our stream survey.

The improving of trout streams is not done successfully by building impounding dams. I am not in favor of building many dams on my trout streams. However, small riffle and boulder dams are very practical; these dams should be constructed low in the middle to allow water to flow over at all times. A good plan is to leave the opening one-third of the entire width of the dam.

Stones or Timber?

I have found that stones are more practical than timber and use timber only where stones are scarce. By watching the results of flood waters, I have found that the stone work for dams and deflectors is more permanent than timber. Log deflectors can, however, be built in a permanent manner if the work is carefully done by using a "dead man" to tie the log into the bank and being very careful to anchor the log back far enough so that the ice and other floating matter can not tear the logs out. The nature of the bank is a big factor in anchoring any device into the bank. Clay banks will hold much better than gravel or other soft material. These are all factors that must be considered when recommending the location and type of device to be used. It is utterly impossible to securely fasten a log device into a gravel bank.
due to the gravel rolling and shifting so that the logs will not hold. The best method to use in gravel banks is to build with stone and pave the bank on each side of the device to stop the water from washing around the end of the device used.

Log covers and parallel logs are best anchored into the bank by hitching a 5/4" cable to the cover and anchoring it to a "dead man" which is buried into the ground bank. Do not use stakes to anchor log covers or parallel logs as the flood waters will pull them out. Another good method is to hitch cable to a tree which is close to the bank. I have also found it a good method to crib banks to stop bank erosion and keep silt out of the stream. All the devices described herewith have been used by the writer and I have found that they will resist flood waters and are just as good after passing through a flood as before. If care is taken to protect the bank where the device enters it no trouble will be experienced in holding the device.

The timber dam is best used in wooded areas where there is lots of shade. If constructed with a log skirting and banks cribbed or rip-rapped it will be permanent. The log deflector is also recommended in wooded areas and the banks should be cribbed as shown. Logs are easy to get in these areas and this fact makes this device practical in the forest area.

Stone work is best suited to low meadow areas; dams and deflectors with banks paved are very practical. The dams should be built with the middle lower, and the opening about one-third of the total width. That is, a 15 foot dam should have a five foot opening in the middle. This is shown very clearly in the sketch showing three types of boulder dams.

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SUCKER FACTS AND FANCIES

(Continued from Page 6)

has influenced the opinions of many who would otherwise give it consideration. And I might add that they are not nearly as bony as some fishes that are esteemed as delicacies.

For more than an hour after landing the first sucker they continued biting regularly, the long intervals between fish allowing me plenty of time to look about. During one of those intervals I spied a familiar summer bird, a common kingfisher, going about the business of picking up a meal. During the course of the day I saw two more of them, apparently summer residents of the far north sojourning in what to them was southern clime. Frequently kingfishers are seen all winter long on open streams in this section.

The day passed altogether pleasantly and leisurely, the activities of the fish being attuned to the mood of the fisherman. Indeed, the out-of-doors, and all its delights seemed to be taking advantage of the brief respite from winter's cold. Several bunches of crows flapped slowly overhead, passing on to the birch sprouts on the hillside without emitting a single petulant caw. And even more remarkable were the jays, for the several that I saw went about their business without their usual demonstrations.

An interesting observation in connection with sucker fishing is the remarkably few game fishes that one hooks.

Just the other day an officer of our local sportsman's association asked me if sucker fishermen didn't account for a lot of trout and bass.

Well, you know, his question was a genuine surprise to me, for what he indicated had happened to rarely to me that I have seldom given it any thought. So I quickly attempted to think of some logical reasons why it happens so infrequently.

"I don't think so," I finally answered.

"Why not?" he came back.

"My opinion is that the cold water blunts the appetite of the bass, while the trout don't usually consort with suckers."

"You mean by the last that the trout are too high-hat for the suckers?" he smiled.

"No," I replied, making a clean muff of the wisecrack, "the trout simply don't frequent the same places until well along in the spring. Once in a while an occasional trout will be caught, but here again, the tactics of the suckerfisherman usually scare any trout that may be about."

That seemed to satisfy him so he went on his way mumbling to himself.

In the meanwhile I tried to recall the occasions when it had happened to me. After cudgeling my brains I could think of only two instances when I caught game fish on my winter sucker excursions. In both cases the fish were brook trout, one of them a beauty 125/16 foot, about two pounds.

So far this fall (written December 15), the weather has been ideal for going astream in quest of the sucker. But most of the anglers in this district don't begin to get out until about early March, then they all feel the urge at the same time and go out in numbers, frequencing favorite spots on Neshannock, Deer and Little Beaver Creeks.

Excellent fishing spots at any time and especially in the winter may be found at the junctions of streams. Besides being favored rendezvous of the fish, such places as a rule never freeze and thereby are of easy access to the fishermen. If you "can take it" and desire to experience something unusual in the fishing line, go out in a heavy snowstorm, set your "pole" and chew make yourself comfortable about a fire. If someone doesn't spot you and report you to the authorities as a nut on the loose, you'll catch fish and enjoy it.
TACKLES, LANDS CARP
THEN FREES FISH

Write C. A. Einmeier, of Pittsburgh:

"William Balak, a young high school lad who
played football for the Mt. Pleasant High
School, and resides at Reservoir Street, in Mt.
Pleasant, was swimming at the Bridgeport Dam
in Mt. Pleasant. He dived into the water and
bumped into one of its finny inhabitants. Mr.
Balak swam for Mr. Fish and tackled him
with Mr. Fish diving for the bottom and trying
to score a touch-down for the home team. But
Mr. Balak also wanted to score a touchdown,
be still-armed him and caught him under the
gill. After a furious struggle, Balak, being a
 husky football player scored a touchdown, by
coming up with a large size carp, firmly
grappled under the gill. After the carp was
measured and weighed (31 inches long, weight
16½ pounds) he was returned to the water to
be lured by a more gentle fisherman, with an
appetizing gosling, instead of being tackled
by a rugged bruising football player."

JOIN 1-ON-2 CLUB

Toward the last part of the bass season I
happened to be fishing one day at a place known
as Big Bend on the Allegheny River, above the
town of Warren, and was present during the
following amusing incident, writes J. A. Calkins,
of Johnsonburg.

The fishermen involved were fishing from
boats: the two boats were about ten yards
off shore, and about thirty-five or forty yards
apart up and down stream from each other.
The fisherman in the boat downstream received
a strike and let the fish run upstream with his
bait. At about the end of its long run, one of
the fishermen in the boat farther up the river
also received a strike. Both fishermen set their
lines retrieved by each fisherman. When the
boats were brought together and the fish was
landed it turned out to be a good size bass and
the fishermen in the boat farther up the river
began to think that the old fashioned "sit-in-the-
sun-and-wait" methods.

EXCEEDS SUNFISH LIMIT; IS
PINED

Sunfish bite in hot weather but it doesn't
pay to catch more than the legal limit.

Thomas Ferris, of Scranton, learned this to
his sorrow when President Judge Will Leach
found him guilty of illegal fishing. The two
extra sunfish that Ferris caught at Ford's
Pond, near Schuylerville, on August 22, were
to cost him $10 apiece.

Instead of paying the fine, Ferris entered bail
and appealed to court, where he was repre-
sented by Attorney David Miller. Judge Leach,
from George Washington to Franklin
Roosevelt, many of our Presidents have been
ardent fishermen.

For youth and adult, there is no more
beneficial auxiliary to education, than to
commune with Nature in her woods and on her
waters. The refined angling spirit cannot sin
against fellow mortals nor against society.

As the late President Coolidge said—
"There is an indescribable spiritual charm in
the gentle art of fishing. It affords a refresh-
ing luxury, a simulation to the body and a
happiness to the soul. There is something
natural, homely, wholesome and unsullied about
the fisherman which we shall all do well to
live up to."

Modern angling methods fire the imagina-
tion, and challenge the skill. They also ap-
peal to the sense of good sportsmanship and
the finer human sensibilities. Fishing is now
more interesting and engaging, since it has
eliminated the prosaic,—the old fashioned "sit-
in-the-sun-and-wait" methods.

The fishing here will be all downstream or
across. When crossing, through a heavy
current, fish slowly. It is not natural for a
minnow to swim upstream fast through
a strong current. Wherever possible, they will
usually swim around such places and in trying
water. It is the employment of
these seemingly infinitesimal maneuvers that
often fills your creel.

A carp that was a carp! Thirty seven inches
long, it weighed 25 pounds, and was taken by
Sid Beheget of New Castle after a 20 minute
battle on Safe Harbor dam, Susquehanna River.

STREAMER FISHING TACTICS
(Continued from Page 3)

This, you can avail yourself of the added
protection which the broken water of the rifle
affords.

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water.
A most unique character was old Dan Roberts. Where he came from we never knew. He lived in a little hut along the Milford road at Tafton, Pike county, and worked in the River Quarry, where he was quarry blacksmith. For many years he was a familiar figure as he to and fro from Hawley to Tafton, always carrying a little brown jug filled with a strange and terrible brand of hooch.

The new Watauguaque Lake now covers the site of Old Dan's hut. The stone quarry industry has passed away and the race of hard working, hard drinking, hard fighting "men," as the movies would call the quarrymen, has fled into history but Old Dan Roberts lives in the memories of the folks of that section as a sort of superman whose feats of strength and endurance filled our boyish minds with admiration and awe.

Old Dan was probably forty-five years of age when he came to Pike county. He began work at the Quarry and took up his abode in the little hut, where he lived alone with his dog. Cement had not yet come into use and the great bluestone quarries produced flagstone, curb, sills, lintels and memorial stone for the trade in the big cities. Stone quarry workers were a hardy race of men, mostly Irish in our section, who earned big pay and spent it freely on pay nights. A stone quarry town was not unlike a western mining town, somewhat milder perhaps, but as likely to put on a big paynight fight. But the quarry towns harbored no gun men. Fights which often occurred were what the Irish called "friendly fights." No one ever got seriously hurt, although many carried marks to work on Monday morning.

Among big men, Old Dan was a giant. He towered well above six feet in height and could bend a horseshoe or tear a pack of cards off with his hands. But the feats that made Dan famous were his weekly bouts with "John Barleycorn." When the work of the week was done, Dan dressed in his "blacks" and went to town. Drunk or sober, Dan was not quarrelsome, unless someone refused to take a drink with him from the "Little Brown Jug," which he always carried with him. This always offended him but his resentment never took a course more violent than to growl and swear at the offender.

The boys were really afraid to drink from the "Little Brown Jug." Out of some diabolical recipe Old Dan brewed a mighty powerful brand of "white mule." He always kept a good supply on hand and generously offered it to visitors. It was a familiar sight when he passed Old Dan's hut to see the "Little Brown Jug" setting just inside the door. Whenever he went to work or to town or anywhere else, he carried the jug with him. After making the rounds of the saloons in town and filling up with the weaker brands which ordinary people drank Old Dan would reel off home, offering a drink to everyone he met. Folks who knew him would dodge out of his way. The "Little Brown Jug" and its contents had a reputation. Whatever he made of no one ever knew; but Dan seemed to be the only person who could drink it without any trouble curing it. After successfully fighting his terrible brand of Pike county whiskey, when a man, is bitten by a rattlesnake he has some trouble curing it. But after successfully fighting his terrible brand of Pike county whiskey, a little thing like a rattlesnake bite did not worry Dan.

But the strange part of the story came afterward. Perhaps nothing could better illustrate the deadly quality of the old style Pike county whiskey than the fate that overtook the rattlesnake that bit Old Dan. An hour or so after the encounter between Dan and the snake, a passerby met the rattler in the road, throwing a fit. The spectator looked on in horror as the rattler tied himself into a bow knot, barked like a dog, frothed at the mouth and finally, taking its rattle in its mouth, it rolled away into the woods just like a hooprail.
VIEWS ON BLACK BASS VISION

None of us will argue the fact that bass, and all other fish in open waters, can see—some, perhaps, better than others. A dogfish, for instance, is supposed to have very poor eyesight. Prof. G. H. Parker, who experimented with this fish, proved that it bumped its piscatory nose on all dark objects when first placed in an aquarium and it took some time before it adjusted itself to its new surroundings.

What we are interested in, however, is how well does the average black bass see and how do objects look to him in both the water and the air above.

Except that they vary somewhat according to the depth of water in which the fish live, most fishy eyes are pretty much like those of the majority of animals higher in the scale of evolution, including man. In proportion, the eyes of a bass are somewhat larger, especially those which have of necessity become adapted to seeing in deep waters. In this case, both the eye and its pupil (in almost all fish) are large and the eyes are situated near the top of the head so they can catch any stray light which might penetrate to them.

In the case of various fish inhabiting caves or the extreme depths of the ocean, on the other hand, only rudimentary eyes exist. These organs are of no use to them in such places, because no light can possibly penetrate their gloomy abysmal world.

Like that of other fish, the lens of the bass’ eye is rounder than in most other vertebrates and the cornea is flatter. The entire eye is covered with a thin membrane. This is made necessary, undoubtedly, to protect it from the dense medium in which all fish live. Bass, like other fish, have no eyelids and, consequently, are unable to shut off excess light.

Human vision is termed as being binocular. That is to say, we can automatically see an object with both eyes focused on it at the same time. The vision of a black bass, on the other hand, is monocular. He sees something with only one eye at a time. In order to see the same thing with the other eye, he would have to change his position completely. This is due to the fact that his eyes are placed far back on his head, while our eyes are situated away toward the front. Neither does the fishy iris expand or contract as ours does.

Now that we have told a few anatomical facts regarding the eye, let us consider what the bass can see with it. This, in many respects, is a difficult thing to judge satisfactorily. All we can do is try to place ourselves in the position of a bass and determine what we can see. This has been attempted by a number of both able anglers and scientists and some very interesting things have been discovered.

Of course, our eyes are not adapted to a watery element, and certain allowances will have to be made for this fact. At least, such experiments serve as a guide and give us something to go by. The fundamental laws of optics, which are now rather well understood by physicists, would apply, at any rate.

In the first place, let us see what our worst might look like to a bass. To understand this, we must bear in mind that a beam or ray of light is refracted or diverted when it passes from one medium to another of different density. This, of course, would apply in the case of light passing from air into water and all objects from which rays of light were emanating into the water would appear distorted when viewed from beneath the surface of the water. This can be demonstrated by viewing such objects both with the naked eye and by means of photography.

When the eye or camera submerged beneath the surface is placed in a vertical position, and pointing upwards, the sky appears as a more or less contracted circle of light. The center of this circle or “window,” as it is sometimes called, is always directly above the observer. All objects at or near this point, such as clouds, appear perfectly normal in shape.

As we look down towards the horizon, however, objects become more and more distorted: and tests seem to indicate that the horizon of bass’ vision is much more limited than ours if we are in the same position as the fish.

When it comes to objects situated wholly within the water, there is not much to be said. There is no doubt that in quiet water at least they present a normal appearance to the fish as they do to us. The proportions and size of all such objects are conventional and natural.

One thing more about vision in general—how extensive is the field of vision of a black bass? This depends in the first place on the depth the bass is located beneath the surface of the water. Regardless of this fact, however, everything is in the range of vision that is within a 48-degree angle to the perpendicular. It can readily be seen, therefore, that a bass if he is on the bottom where there would not have a very large field of vision. This field would increase materially as the fish moved to a greater depth.

It is entirely possible that a fish might be aware of objects outside of this 48-degree angle, but he perception would, probably, only come as a result of reflected light. This would be true especially in the case of light emanating from the gold tinsel of such flies as the gold-ribbed Hare’s ear or similar tinsel on largemouth bass lures.

Feeding black bass are, however, usually not very far below the surface, especially when they are prowling shore shallows.

This means the placing of lures with some accuracy where you have seen a bass risimg or where you have a suspicion that a bass is lying.

All of this may give a person a few things to think about as he wanders along bass-streams or casts his lures into river eddies. All we have to do to know that a bass has good vision.
Which caught a largemouthed bass 23\4 inches long. Lloyd Ober caught a smallmouthed bass in the Perkiomen at Salford. Mrs. Bessie Hartley caught a smallmouthed bass in the Perkiomen at Salford. Leo Pold Biskup caught a 16\4 inch largemouth bass in Maple Beach. H. L. Reed caught a smallmouth bass in the Perkiomen at Salford.

Rudolph Reep caught a largemouthed bass 29\4 inches long and weighed 7 pounds 14 ounces. William Hobbs of Bristol caught a 27 pound largemouth bass on a plug at Salford. Mr. Hobbs of Bristol caught a 27 pound bass in the canal while fishing with a bucktail wobbler.

HOGESTOWN RUN PROJECT UNDERWAY

An $18,750 W. P. A. project, sponsored by the Mechanicsburg Sportmens Protective Association, is underway near Hogestown in Cumberland county to provide new trout-fishing waters in Hogestown Run, on a site described by the Fish Commission as ideal for brook trout.

Three fields have been flooded by a pond formed behind a dam across the run, which is described as excellent for trout development. The dam was closed recently, allowing the pond to fill for the first time. Some 500 cubic yards of rock and earth were moved by hand and by wheelbarrow to make the dam, said G. Walter Gehbiers, president of the association and foreman on the construction job.

The dam has a breast of 180 feet, 20 feet wide and is equipped with two spillways. Much of the land was donated by sportsmen of the region.

Constructed in each "drum" or pool beneath the overhanging trees is a spillway, made of huge, flat rocks which will permit the trout to jump from one water level to the next higher pool.

OFFERS SUGGESTION ON WILLOW PLANTING

One of the most enthusiastic fishermen in Montgomery County is Bill Feinsteinicher, of Collegeville. He writes:

Are more willow twigs to be planted this spring? Are many of the twigs that were planted last year still growing? I found that most of the willow shoots planted along the Perkiomen Creek were placed in meadows and subsequently eaten by cattle. Others died because they lacked water. Why not plant fewer twigs but emphasize care and protection in doing so?
method employed successfully by veteran fishermen. This may be accomplished when sweet corn is in season by tossing grains of the raw corn into the water at a given spot every evening for a week or more. When the carp are coming regularly to the spot, small hooks are embedded in a few of the corn grains and the circus is on. Any question as to the strength and the dogged battle of which a ten-pound carp is capable is quickly dispelled from the mind of an angler making the catch.

Patience is a prime requisite with the carp fisherman. After a good cast with the lead weighted line (strong black line as fine as possible and a good casting reel are popular with some fishermen) the line should be permitted to go slack from the tip of the rod, in this way assuring that the baited hooks will rest on the bottom. About the only evidence that a carp has taken the bait at first will be a gradual and gentle tightening and slackening of the line as it works the lure into its sucker-like mouth. Then comes the run, the hook is set and the battle is on.

In preparing carp for the table it is wise, particularly with larger fish, to skin and then remove the lower flank which serves to eliminate much of the objectionable muddy taste.

Sunfish and Fallfish

Now let us turn from the bottom feeders to three Pennsylvania fishes that annually provide a lot of sport for the rank and file of anglers, the common sunfish or "punkinseed," the thongtail sunfish and the fallfish, largest member of the minnow family in Pennsylvania. To get the most sport out of this phase of angling, a fly rod, fairly good level line, a three-foot level leader with one or more loops, and snelled trout hooks, sizes 6 to 8, are called for. After all, the common sunfish in our waters rarely achieves a length over 6 inches, an 8-inch bluegill is something to write home about, and the slender, silvery fallfish commonly attains lengths up to and occasionally exceeding 14 inches. All three are swift in the strike, and the sunfishes are, considering their size handicap, the most adaptable to days astream in the Keystone State.

Dr. C. B. Kershner, prominent Berwick sportsman, trying his luck for trout in Coles Creek, Columbia county, on opening day last season.

CLYDE KING HEADS APOLLO SPORTSMEN

At an enthusiastic January meeting of the Apollo Community Sportmen's Association held in the Council room of the local Municipal building, R. Clyde King was elected president of the organization for 1939. Going into office at the same time were Foster Branthoover as vice-president and W. F. Pauly treasurer. Frank Swats, Jr. was retained as secretary of the organization.

E. A. Beck was elected director for a five-year term and Lyle Clawson was chosen a director for a two-year term. W. F. Pauly was named Delegate to attend Federation meetings while R. Clyde King was chosen as Alternate.

Frank Fulton, 1938 president, before going out of office, appointed an auditing committee consisting of Foster Branthoover, T. King Smith and E. A. Beck to audit the 1938 books.

What does the bride think when she walks into the church?

"Aisle, Altar, Hymn!"

Chief of Police: "Can you give a description of your missing cashier?"

Flamer: "He is about 5 feet 5 inches tall and $70,000 short."
He Measured A Hoop Snake
By WM. ARTHUR BORLAND

"Never saw one act that way before, He must have been sick", said the hired man.

"How about water snakes. Ever have any trouble with these harmless snakes?" asked the snake man.

"I never give 'em a chance. They ain't harmless like some people think. I've seen them eat fish eggs and baby fish and the more they eat the less fish there are for us to catch, so I kill them on sight", replied the hired man.

"Did you ever see a puff adder?" he was asked.

"Plenty of them and I steer clear of them. They are as bad as rattlers and pilots. Years ago on a hot night my Father was walking down to Tosa Shays to 'get his whiskle' I guess and he sat on a log. A puff adder came from under the log and bit him on the ankle and bloood poison in it. His leg swelled up so big he couldn't walk. A man he knew came along and drove him to the hotel. They put him to bed and put a flaxseed poultice on his leg and made him drink a quart of whisky. He was there two days before he could come home. He limped around the farm for a year or more."

"I didn't know that puff adders were poisonous", said the snake man.

"You better steer clear of them if you see 'em."

"The other day I was up at Diigman's Ferry looking around Thundercloud's souvenir shop. I asked Thundercloud if he had ever seen a hoop snake", said the snake man. "He told me that he never had and he never knew an Indian that had, either. He said only white men have seen them."

"Well, Thundercloud ain't lived in these parts as long as I have. I saw one all right and it nearly frightened me to death. I just got my milking done and was carrying the pail to the house—our barn was on the other side of the road. Just happened to look up the road and there about a quarter of a mile away was a hoop snake coming down at an awful rate, making clouds of dust as it rolled along. I dropped the pail and ran two miles to the Delaware post-office (that was before Egypt Mills had the post office) before stopping. I sat on the steps of a place there for a long time and then as the sun was going down fast I walked back slowly. I saw the milk pail where I had left it and when I looked there was the hoop snake all curled up in it. It had drunk all the milk. I was so mad I ran in the door, got my shot gun and gave it the two barrels. I measured it—it was nine feet, six inches long. My Father and I nailed it to the east side of the barn to tan it."

"What was its color", he was asked.

"It was blue, purple, red, orange and yellow on the top and white on the belly side, and it had a big horn, with a sharp point on the end."

"Where is the snake now?"

"I don't know. The next day when I went out to look at it—it was early and the haze was still on the mountains across the river—and it was gone. Some skunk, weasel or maybe an owl must have got it."

You say that if a millionaire should happen to propose to you You'd turn him down for love of me You'd be that true? I'm sorry dear, this is the end: I hate to cause you pain But I can't love a woman who admits that she's insane.
A WORTHY OBJECTIVE

There may be a good many people in Western Canada who could not give the exact location of Kingsville, Ontario, but there are very few who have not heard or read about, which Kingsville is famous—the bird sanctuary owned and operated by Jack Miner, the great friend of wild life and of children.

Even those who are only slightly familiar with the great work that is being done by Jack Miner to conserve bird life for the enjoyment of posterity and to promote love and kindness to wild life among adults and children, will be more than glad to learn that efforts are being made not only to preserve the sanctuary for all time to come, but to enlarge it and thus extend the scope of its usefulness by adding to the premises.

FAME IS WIDESPREAD

The fame of Jack Miner's bird sanctuary has extended far beyond the boundaries of Canada, even beyond the confines of this continent. His conservation plans for the benefit of future generations are almost as well known in Europe as in Canada and the United States, and only two years ago he was approached by officials of the Government of Czechoslovakia to make them a chain of sanctuaries for bird life patterned after the Jack Miner sanctuary at Kingsville, Ontario. Indeed, his influence may be said to have spread around the world and his example of bird life has extended far beyond the boundaries of Canada-U. S. boundary.

A succinct summary of the value of the sanctuary itself is a memorial which should be preserved for the nation, for future generations, and as an attraction for visitors from other countries of the world.

WILL BE RECORDED IN THE PAGES OF HISTORY, AND THE SANCTUARY ITSELF IS A MEMORIAL WHICH SHOULD BE PRESERVED FOR THE NATION, FOR FUTURE GENERATIONS, AND AS AN ATTRACTION FOR VISITORS FROM OTHER COUNTRIES OF THE WORLD.

AID IS REQUIRED

Although some assistance has been rendered by governments to Jack Miner's enterprise, unfortunately the work has been carried on at a pecuniary loss and the operation of the sanctuary is encumbered by a deficit of $10,000. He, himself, has passed the allotted three score years and ten and there is no guarantee that the enterprise at Kingsville will or can be carried on after his demise unless some public-spirited individual or organization makes its perpetuation a financial possibility.

It is reported that an endowment of approximately a million dollars is required to ensure this happy consumption, with an additional $250,000 to provide for an extension of the present crowded facilities.

WOULD ENSURE PERPETUAL

An endowment to ensure the continuance of this work and the preservation of what amounts to an international monument would be more than a happy gesture for some such institution as the Rockefeller Foundation which, according to a compilation in an article in a recent issue of Fortune magazine, has already expended some twenty-seven millions of dollars creating national parks on the other side of the Canada-U. S. boundary.

In the expenditures he has already made for similar objectives, Mr. John D. Rockefeller, Jr., has given evidence of his realization of the value of outdoor recreation for humanity and the endowment of such an institution as the Jack Miner bird sanctuary would not only constitute a fine gesture of international goodwill on his part or on the part of some other wealthy citizen of the United States, but would emphasize the international value of Mr. Miner's efforts for the whole of mankind.

A WORTHY OBJECTIVE

The quarterly meeting of the Potter County Sportsmen's Federation was held in the I. O. F. P. hall at Roulette, on Sunday afternoon, January 8th. Between thirty and forty persons were present, representing the seven clubs of the county belonging to the county, Division, and State Federation of Sportsmen.

The membership of the clubs for 1938 was 800. While it is rather early in the year to predict an increase in membership for 1939, yet the fact that the Cranford Hill Club has already enrolled 136 members for 1939, an increase of 88 members over 1938, would indicate that the membership for 1939 will exceed that of 1938.

During 1938 a vermin control contest was carried on among the various clubs of the county. The Oswayo Valley Club was declared the winner of the contest for 1938 and awarded a ten-dollar prize given by Judge Lewis for the purpose. A similar contest will be carried on during 1939 with a prize of ten dollars from Judge Lewis again being offered to the club killing the most vermin during the year.

As this is the time of year when resolutions are offered by the various clubs to be conveyed to the Division and State Federations by the official delegate the following resolutions were offered and adopted:

1. To permit hunting woodchucks later in the evening.
2. To make it unlawful to carry a high power rifle during the season after killing a deer or a bear.
3. To prohibit the use of 22 long, short, of middle rifle in hunting bear or deer.
4. To place bounty on red fox in Potter County.
5. To have Game Commission pay keep of game law violators while in the county jail.
6. To have Game Commission carry on a program of cutting for winterfood in deer territory on State Forest land as well as on State Game land.
7. To change law to permit use of snare in hunting predators.
8. To change method of taking beaver on State Game fund for use in counties where beaver were taken.
9. To have Game Commission carry on a program of cutting for winterfood in deer territory on State Forest land as well as on State Game land.
10. To change law to permit use of skin in hunting predators.
11. To change method of taking beaver by having all trapping done by employees of the Game Commission with money for skins turned over to Game fund for use in counties where beaver were taken.
12. L. L. Smith, of Roulette and C. A. Robertson of Ulysses were reelected President and Secretary-Treasurer respectively for 1939.

POTTER SPORTSMEN BACK VERMIN CONTROL

The above is an EDITORIAL Jan. 22, 1938.

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THE ART OF LYING

Appended to a poem on "The Art of Angling," which makes one of "A Collection of Scarcely, Curious, and Valuable Pieces" collected by W. Ruddiman, from "the fugitive Productions of the most eminent Wits of the present Age," and published by him in 1773, is "An Introduction to the Art of Lying." The following is an illustration of the author's technique:

It requires no great skill to become master of it, and extends only to the marvellous. . . . I have known it practised with success by a friend of mine frequently, who has laughed, and been heartily laughed at, for the fruitfulness of his imagination. If you tell a story which happened in one county, he immediately repeats the same, with a trifling variation, that happened in another. If you carry it to the possible, he extends it to the probable; if you sink it to the improbable, he lowers it to the impossible; in short, it is the art of refining epicyclos.

Example: One said he saw a pine in a small pond in Kent, weighing 40 pounds, and that one of 30 pounds was taken out of its belly. My friend immediately replied. That was nothing; he had seen in Wilts one of 50 pounds sight, and a pine of 40 pounds taken out of its belly; and not only that, says he, but another entire pine was taken out of the belly of it, which weighed 27 pounds and a half. This was between the probable and possible.

The gentleman, finding himself outdone, replied, It was strange, but yet he had heard something beyond that; he had a friend of his in Northamptonshire, who stopped at a little public house, and called for a bottle of ale: it was set on the table, and, being ripe, forced out the cork, which went through the ceiling and roof of the house, and hit a small bird which was that instant flying along; the bird dropped perpendicularly down into the bottle, the cork followed plumb into the neck again, stopped the bottle and drowned the bird.

My friend was greatly delighted, replied, that was nothing; for he had heard his father say, that such an accident in Wiltshire, he caught a deer in a pond weighing three pounds; he went into the pond, and hit a small bird, which happened in one county, he immediately replied. That was nothing; he had seen in Wilts one of 50 pounds sight, and a pine of 40 pounds taken out of its belly; and not only that, says he, but another entire pine was taken out of the belly of it, which weighed 27 pounds and a half. This was between the probable and possible.

A DEER "USES HER HEAD"

By E. E. Watson

SOME time ago, while fishing in Indian Creek, in Missouri, there came a series of hard rains, almost cloudbursts. We were camping on high ground, so it did not wash us away. The water in the usually small stream rose very fast. Between downpours I went to see if a small island was yet flooded. The water in the usually small stream, the latter now being a deep, raging torrent.

During some other flood a large log, with its branches, had lodged against a tree, three feet above the rocky island. I noted that the water was now almost up to the top of this log. But what was so surprising to me was that a large doe was standing on the solid island with her hind feet, while her front feet were on the log. What was still more surprising, she had managed in some manner to get her little fawn up on the log, and was steadying it with her head. The baby did not appear to be more than two or three days old, for it was very wobbly. I felt pity for both animals as I knew that the water would go at least two feet higher before it stopped rising.

The current was not so wide nor so swift on the other side of the island, but I could see no way to save even the fawn, though I felt the doe would be able to swim out, were it not for her baby.

None of us could have made it half way to the submerged island from our side. The others came down to me at my call. We could watch but we could not help. That mother deer had not given up—far from it.

The island and the tree on it had formed a sort of cleft so that the current was far less swift there. When it evidently became apparent to the mother that the water would continue to rise, especially when a new downpour started, she deliberately pushed the fawn off the log and, before it could sink or float down stream, secured a firm hold on the loose skin along its back with her teeth and struck out, swimming and holding the fawn in such position that its head was above water, for the opposite shore.

And she made it, too. She carried the baby clear up to the rocky shore and even helped it along to the timber, for it was, seemingly, too wobbly to walk. THAT was intelligence plus mother love, and we were thrilled at the sight!—Our Dumb Animals.

REEL DOPE FOR BAIT CASTERS

Practically every fisherman has at some time or another during his career experienced a reel breakdown. Right now I will wager you have a reel somewhere among your duffle that due to a broken or worn part has been cast aside. Possibly the appeal of new tackle is partly responsible for the fact that many times you have given up on it and returned it to the factory for repairs, comments Bob Glover of Allentown, owners would just take the time to have them fixed.

Wrapping and posting is a task that few people enjoy, but unless you know the name of the part needed and are mechanically inclined this procedure is almost necessary.

To overcome the first deficiency this writer has obtained a price and descriptive list of reel parts from a well-known tackle company. It states my intention to make the names and functions of the various parts known to you through this column but after looking the booklet over I come to the conclusion that illustrations are almost a necessity. This much I can do however, I have the booklet and if anyone has a reel that a new part will fit back in working order but is at a loss as to how the part should be ordered give me a call and I will be glad to lend a hand.

While we are on the subject of reels I came across an item appearing in a recent sports publication that is interesting and at the same time gives rise to an emphasis "So What." It does however give a fellow a rough idea of the work a hard used reel actually does.

Charles W. Patterson of Cleveland has estimated that in one year's fishing and tournament work his reel has functioned thru 115,000 casts averaging 30 feet each, meaning his plug has traveled 9,200,000 feet out and the same distance back or a total of 3,484.8 miles. At the same time the handle turned 18,400,000 times, the spool making 65,933,300 revolutions and the level winding arm and block traveling 2,200,000 across the face of the reel.
A mighty nice catch of pickered was made in Pine Creek, Schuylkill county, on September 28, by H. C. Romberger, Mandata merchant, who caught his limit of pickered.

The suckers in Bald Eagle Creek, Centre county, were biting well early in January, according to word received from Warden Dave Dahlgren, of Philadelphia. James R. Taylor, of Tyrone, caught 8 fine suckers on January 2, that ranged in length from 12 to 16 inches. Six suckers, ranging in length from 10 to 14 inches, were caught by E. Sweitzer, also of Tyrone.

A fine largemouth bass was taken in North Jersey Lake at Goldsboro, by Thomas McBride, of East Mauch Chunk, according to word received from Ralph Lemon, special warden, also of East Mauch Chunk, Carbon county. The big fellow weighed 5 pounds 4 ounces.

According to word received from Warden H. P. Custard, of East Stroudsburg, waters in the Pocono region provided some excellent catches of big bass and pickerel during the 1938 season. He noted as outstanding lakes producing good catches Stillwater Lake, Na- morie Lake and Lake Nephewin or Brown's Lake.

November fishing for walleyed pike was great last year, some of the reports we have been receiving would indicate. Here's a fine report from Russell Tomlinson, of Mansfield:

On November 20, while fishing with Dr. William Jaquish on the North Branch of the Susquehanna River at Mifflinoppen Creek, he writes, we caught 10 walleyed pike on minnows and plugs. They hit the bait they got to first. I had one take a plug when it was reeled in to the end of my rod. These fish measured 23 inches, 24 inches, 22½ inches, 20 inches, 16 inches, 17½ inches, 16½ inches, 19 inches, 14½ inches and 13½ inches and had a total weight of 22½ pounds.

Tomlinson believes in fishing for sport primarily. Last season, he caught twenty-one brook trout, killed 7, sixty brown trout, killed 31, thirty-two rainbow trout, killed 11, fourteen black bass, killed 8, twelve calico bass, all retained, six rock bass, killed two, and six walleyed pike, all retained.

The Brokenstraw Creek in Warren county produced some nice catches of trout and bass last year. William Prine of Corry, scored in the Brokenstraw during the trout season with a 17½ inch rainbow trout weighing two pounds nine ounces. The same stream yielded a smallmouth bass for his creel that measured 19 inches in length and weighed three pounds two ounces.

Will a barbless hook serve as well in landing fish as one with a barb? Apparently, Bob Shawkey, of Warren, one of the outstanding conservationists and fishermen in the state, has a record strongly backing the pros in the argument. Fishing only with barbless hooks during the trout and bass seasons in 1936, he landed 76 trout, of which he killed six, and, get this, 799 bass, killing three.

As usual last year, the Beautiful Creek in Centre county, was biting well early in January, according to word received from Deputy Game Protector Samuel Coons and Howard Calvin Fletcher, made a catch of 25 suckers weighing 31 pounds in Bald Eagle creek, Centre county, in one hour and 39 minutes.

Word received from Dr. I. G. Doak, of Altoona, by Commissioner of Fisheries, C. A. French, indicates that the record smallmouth reported to date in 1938 has been topped. Wrote Dr. Doak: "I want to report to you a fish which I caught on October 14, 1938. While fishing in the Juniata River on the above date, I caught a smallmouth bass measuring 21 inches in length, 15 inches in girth, and weighing five and one-half pounds. The fish was caught in the river near McVeytown, Mifflin county."

A struggle between a 30 inch watersnake and a 9 inch brook trout was witnessed last trout season by Wood Weimer, Waterford fisherman, and Charles McLean, Ligonier police officer. The brookie, according to the witnesses, put up a game battle, managing several times to regain the water after the snake had pulled it ashore. Finally, McLean and Weimer took a hand when the tide was apparently going too strongly against the fish. Only slightly marked, the char was turned to the water in Denton Run and there's one snake less for it to evade in the future.

Towards fly fishermen, as usual last year, this area scored with some mighty fine smallmouth bass in the North Branch of the Susquehanna River. Miles Conrad, of Towanda, landed a smallmouth at Rocky Riels measuring 19 inches in length and weighing 3 pounds 12 ounces. A 17¼ inch smallmouth caught by Leroy Robbins, of Towanda, tipped the scales at 2 pounds 4 ounces.

A 20 inch pickered weighing three pounds and a fullhead catfish comprised the catch of Harry Warner, 9 years old, of Reeders, in Trout Lake Pond, Monroe county, one day last season, according to Warden Harry P. Custard.

A mighty nice catch of pickered was made in the Poconos region provided some excellent catches of big bass and pickerel during the 1938 season. He noted as outstanding lakes producing good catches Stillwater Lake, Namerie Lake and Lake Nephewin or Brown's Lake.
**BOARD OF FISH COMMISSIONERS**

**FISH FUND—Calendar Year 1938**

Balance January 1, 1938 ........................................... $ 475,139.03

**Receipts**

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<th>Description</th>
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<td>Fish Fines</td>
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<td>Commercial Hatchery Licenses</td>
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Total Funds Available .......................... $1,132,011.85

**Expenditures**

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<td>Boat Patrol (Lake Erie)</td>
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Balance January 1, 1939 ................................... $ 648,663.62
FISHERMAN'S
1938

HATCHING, PROPAGATION
AND
DISTRIBUTION OF FISH
57 19

DOLLARS

SALARIES AND
EXPENSES OF WARDENS
20.91

NEW CONSTRUCTION

DEPT. REVENUE
DEPT. STATE
INSURANCE

PUBLICITY AND
RESEARCH - BOAT
PATROL - PURCHASE
OF LAND & WATERS

3.48

4.78

5.41

8.23