OUR BEST HOPE—

Most restrictive laws have been promulgated because of abuses to people or other resources. So it was that the old Board of Fish Commissioners asked the General Assembly to enact Section 200 of the Fish Law, which says in part “No persons shall allow any substance of any kind or character deleterious, destructive or poisonous to fish and aquatic organisms, amphibians or reptiles to be turned into or allowed to run, flow, wash or be emptied into any waters within this Commonwealth.”

While this has been our mainstay as the front line in our fight for clean water, the fact is that the Clean Streams Amendments of 1970 are much more detailed and carry with them a bigger fist. These amendments, of course, are enforced by the Department of Environmental Resources, and we are pleased to cooperate with the Department in those duties. The third party in our never-ending fight for clean water is the U.S. Environmental Protection Agency in their implementation of the Federal Water Pollution Control Act, and others. It sounds like a great team, and really is.

However, we are up against some terrible odds. While we have been beneficiaries of the recovery of much good water in recent years, new poisons are being invented everyday at an alarming rate. Some have been with us for some time and are only now becoming known by the public, and the long-range effects are being felt.

None of us in Pennsylvania thought much about Kepone or Mirex, as they are not household words, nor are their uses common in Pennsylvania. However, the poisoning of the James River in Virginia two years ago by Allied Chemical Company of Hopewell, Virginia, not only did a terrible amount of damage to James River fishermen, but effects have spread to the lower Chesapeake Bay. The Pennsylvania Fish Commission was shut off from its source of shad eggs for the Susquehanna River program by the closing of the James River to commercial fishing. Recently, we found the same company had contracted to a firm in State College, Pennsylvania, to manufacture Kepone and Mirex, and the effects of their discharges have been found in stream born trout and suckers in the famous Spring Creek. In early October officials of Allied Chemical Company and of the City of Hopewell pleaded guilty to almost 1,000 criminal charges, and the penalties have run to 13.2 million dollars. Penalties, however, do not undo the damage which could last for decades.

Another more prevalent chemical is in the form of polychlorinated biphenyls which are found in every household and which are particularly useful because of their property of not degrading in the environment. Lake Ontario has been closed to fishing because of the prevalence of PCB’s, and the Hudson River has serious problems. Surveys in Pennsylvania have shown the chemical in existence in fish, but not in any quantities to cause alarm.

These are just a couple of examples of the problems caused by a greedy industry which has refused over the years to police its own ranks and to responsibly monitor the potential dangers of the thousands of chemicals they invent and produce, for quick gains each year.

The recently enacted Federal Toxic Substances Control Act is a great light at the end of the tunnel. Industry is now required to prove, at its own expense, that their products will not harm people or the environment, instead of having the burden of proof on the government.

 Perhaps it is always true that something good comes out of every adversity, and if we are not too late in this new federal Act, it is our best hope.

Ralph W. Abele,
Executive Director
Smoking Fish is Easy by Waterways Patrolman Harry Redline ........................................... 8
Father, Son & Fighting Fish by Gordon W. Tomb ........................................................................ 10
Evolution of a Fly Fisherman by Theodore E. Kiffer ................................................................. 12
Modulus Smodulus by G.A. Mayo .............................................................................................. 17
Pennsylvania’s First Rearing Marsh by James Meade & Dan Bourke ........................................... 20

Front Cover: November sends serious musky men to our lakes and rivers 
and Charles Fox, long noted as a rather devoted trouter, is one 
“convert” who has been doing rather well with those muskellunge in the 
Pennsylvania Fish Commission’s Opossum Lake, near Carlisle.

Back Cover: The Juniata River has been gaining fame for a number of 
years as a great musky producer. Some anglers feel that dawn 
is one of the best times of day to seek out one of these trophy fish.

Photographs by Jim Bashline

MONTHLY COLUMNS

FISHING OUTLOOK ........................................... 2
LEAKY BOOTS ..................................................... 4
TAKING A CLOSER LOOK ..................................... 6

STREAM NOTES ............................................. 24
FLY TYING ............................................................. 26
ASHORE & AFLLOAT ........................................... 30

ANGLER’S NOTEBOOK ........................................ 32

James F. Yoder, Editor
Accomplished fishermen know that they must adapt to nature's ways if they expect to continue being successful in their piscatorial endeavors. And November, which is known to dish out a smorgasbord of weather that ranges from days that are unseasonably warm to those that are bone-chilling and laced with snow or rain, can put the flexibility of any fisherman to the supreme test. Despite this gloomy picture, November is a month of some very good fishing.

While other outdoor activities take the spotlight this time of year, the all-around sportsman works in some fishing during and between his other outdoor excursions. More than one fair weather angler has discovered that good weather doesn't always guarantee a full stringer. In fact, many have found out that the opposite is true, especially when it comes to end-of-the-year fishing.

Though ignored by a lot of late fall and winter anglers, musky fishing is vigorously pursued by a few all across the state this time of year. For this toothy predator, the usual offerings will do until the first cold snap drives the water temperature downward. Afterwards, according to some dedicated musky fishermen, different tactics are required to entice the musky into striking.

Their theory is that once the water's temperature starts to drop, the musky's gums start to swell, thus hindering its ability to chomp down on and hold the larger baits and lures. This condition, they claim, lasts until the water warms up again in the spring and the musky's mouth returns to normal.

To back up their thinking, these anglers say that more muskies are taken during cold weather on bucktail jigs, spinners, small minnow type lures and minnows than on big hardware and baits.

In addition, they point out that more bass are now caught in musky holes than when the weather was more temperate.

The reasoning behind this is that more bass are hanging around since the musky's preference is for smaller fish during this time of year. So the bass stay where they are until warmer weather activates the musky's desire for a gluttonous mouthful. And when this fish is on the move looking for a meal, his neighbors get the message and move out. This is why, it is theorized, that not many bass are caught in a musky haunt during the warmer months.

Of course, there are other thoughts on this and exceptions to the rule, but if you want to go along with what some of the expert musky fisherman say, then try smaller lures and bait to catch this fish in the cold days ahead.

(Editor's note: The theory advanced by the "experts" interviewed by the author represents their personal opinions. Like most all fishing lore, it is but theory and the Angler...
It takes more than a wet, bone-chilling snowfall to make this pair of hearty musky fishermen go home.

Jigs up to 5/8 ounce are in heavy use; and, an all white lead-head is not only the favorite, but the one that seems to be the most productive. Bucktails with a white body and red or yellow head are also popular. When fishing jigs, vary your retrieve and watch out for the last few feet. Muskies sometimes have a habit of chasing the lure all the way to shore before nailing it just as it is pulled from the water.

One of the choice lures for walleyes is also the bucktail jig in all white or white with a red head. Minnows up to three inches long are the natural favorite of the livebait fisherman and the walleye. Most walleye anglers will agree that night time, when the fish feed close to shore, is the best time to fish for walleyes.

When you’re seeking either of these fish, you can double up on your fun since some of the top waters in the state are inhabited by both species. And to make things easier for the angler, both fish can be taken on the same lure and baits.

Places to catch muskies and walleyes throughout Pennsylvania are many. Here are a few that are highly recommended.

One of the best musky and walleye spots in the northwest can be found in the Kinzua Dam tailrace. More Allegheny River action can be had all the way down to East Brady for these two fish. Anglers concentrate much of their activity at the mouths of tributaries like Tionesta Creek and the Clarion River. Downstream, the mouth of Bull Creek near the Fish Commission’s Tarentum Access Area and Chartier’s Run below Lock #4 gets lots of musky attention.

The Juniata is also an alltime favorite. Fish Commission access areas at Lewistown, Mifflintown and Thompsontown make this river easy to reach and easy to fish.

On the Susquehanna, the North Branch from Sayre to Tunkhannock is good musky and walleye water. Getting to this stretch is also made easy by Fish Commission Access areas along the way. The run between Northumberland and Shickshinny turns up nice catches of both fish too. The lower Susquehanna, from Falmouth on down to the Conowingo pool also provides good walleye and musky fishing with very little pressure.

Muskies and walleyes can be found on the Delaware River from Wayne County down to Martin’s Creek. At least eleven public boat ramps are located here and finding a place to fish is no problem.

And finally, for a bonus, all of these waters contain an abundant population of smallmouth bass that will also go for the same lures and baits previously mentioned.

Remember someone with a gift subscription to the Pennsylvania Angler (details on page 32)
“SHALLOW THINKERS,” HE SAYS —

I am a thirteen year old boy who loves hunting and fishing to no end. I have nothing but praise for the Fish and Game Commissions. I feel anyone giving you a problem is a shallow thinker and an ingrate!

I, as an angler, am not too good for I catch few fish. Still though I love to fish because it makes me feel close to nature and God. It also cheers me up when I'm down. I also love boating for we have a boat and I feel the Angler and other information you have helps anyone learn greatly. I am now working on your course Pennsylvania Basic Boating. After college I would like to be a naturalist and I feel I should stand up for my rights as an angler and hunter.

The article in the September Angler by Mr. Abele. Our Heritage is in jeopardy because some little kid did and is. I can provide our readers with turtle-catcher story from one of our readers. Those wishing to submit a turtle-catcher story should submit it in typewritten form (double-spaced, please). It need not be long but it should be complete. Payment will be based on neatness, thoroughness of detail, and your ability to "tell a story" — with fishermen, that shouldn't be difficult! (Photographs of turtle-catching tackle and on-the-spot technique will add value to the article.) All entries must be postmarked not later than January 15, 1977, Ed.

Right you are, Raymond! Most of the word we hear from our readers on turtles concerns cooking them once they're caught. Soo, knowing there must be more out there who feel as you do, we're going to "open the market" for a good story on turtle "fishing" in the hope that we can provide our readers with a few tips on how it's done, perhaps where, as well. To clarify that, we are willing to purchase a turtle-catcher story from one of our readers. Those wishing to submit a turtle-catcher story should submit it in typewritten form (double-spaced, please). It need not be long but it should be complete. Payment will be based on neatness, thoroughness of detail, and your ability to "tell a story" — with fishermen, that shouldn't be difficult! (Photographs of turtle-catching tackle and on-the-spot technique will add value to the article.) All entries must be postmarked not later than January 15, 1977, Ed.

Remember someone with a gift subscription to the Pennsylvania Angler (details on page 32)

MORE BROWN SPOTS!

After reading Hal Plusch's comment on "Catching Worms With Vinegar" in "Leaky Boots," I can offer him my sympathy. I also live in an apartment complex in Sinking Spring, Pa. I also poured vinegar on the grass . . . waited . . . but no worms. A day or so later — a large brown spot of dead grass! I was lucky! A lady tenant took some sod up to plant flowers. I took the dead grass and put the sod in. As of this date, the grass is back to normal and green again. I never did see any worms, but I do think it would be a great weed killer.

CLAIR A. BANEY
Sinking Spring

WORMS ENJOYING VINEGAR?

More bad news on catching worms on vinegar. In reply to Hal Plusch's letter in the August issue. I agree with him a hundred percent. I have used a gallon of vinegar in a park trying to get worms to come up. They must enjoy drinking the vinegar because none ever come up. And, as for the readers of the Angler, they are too lazy to write about it or too ashamed to tell you about it.

I enjoy reading your Leaky Boots. Ed, and look forward every month for it. Keep up the good work.

MICHAEL SUSKO
Philadelphia

P.S. If you haven't tried getting worms with vinegar. Ed. give it a try and let me know how you made out.

It seems to me that the author of the original "Catching Worms With Vinegar" article, Loring D. Wilson, specified that it be from old wine which had not been consumed on schedule and went sour. Could it be that the difference is in "store bought" vinegar you might (that's just a supposition) be using? Another possibility is that after breathing the fumes of his wine vinegar writer Wilson only thought he saw worms, but we really can't say! Ed.

"BY GOLLY . . ."

This is in response to an article in your August issue, "Let 'em eat Pork." Well! I tried L. D. Wilson's method of a Johnson silver weedless spoon with a pork rind frog dangling on the end and by golly it worked. I am 15 years old and love to fish for pickerel (my favorite fish). So, one morning Gary Ell (my friend) and I went fishing and by the end of the day we had caught and released some dandy pickerel. My thanks to Loring D. Wilson, the author of "Let 'em eat Pork," and to the Angler. Keep up the good work!

ERIC GARNER
Allentown

Great, Eric! That's one for Wilson . . . but stay away from his vinegar! (Side note to Loring D. — you win some, you lose some!) Ed.

VOTE OF CONFIDENCE

I am a Pennsylvania angler, and really enjoy your magazine. I am looking forward to an exciting salmon season. I went to Lake Erie last October for the first time and thanks to your magazine I knew where to go and how to fish. This year I am even more informed, therefore confident. Maybe I will even catch a coho this time. My vote of confidence for "FLY TYING" article is: "Yes!!" I'm trying to say that your magazine is great because sometimes we Pennsylvanians need a little help.

ROD CROSS
Monongahela

PENNSYLVANIA ANGLER
LAKE TROUT are few and far between and one longer than a yardstick is really a trophy. Hank Rosen, left, caught that 37” 24-pounder in Crystal Lake.

TRAVELIN’ BROWN!

On Sunday, May 16, 1976, the Marysville Sportsmen Association tagged and released some rather large brook, brown, rainbow and palomino trout which were worth up to $25.00 per fish. One of these, a 17-inch brown, bearing tag PFC 3832, was released in Fishing Creek, Perry County, approximately two miles upstream from the mouth of the creek. This trout was caught by Mr. Elsworth Parson almost two months later on July 12, 1976, about three miles upstream from the mouth of the Little Juniata Creek near Duncannon. In order to reach the Little Juniata, this brown had to travel seven miles upriver to the mouth of the Little Juniata, then upstream to the point where it was caught, for a total of twelve miles!

MEL FORTENBAUGH
Marysville Sportsmen Assn.

OH OH! WATCH OUT!

I think the man’s problem on not catching big trout on flies in your September “Leaky Boots” is if the trout were stocked recently, they are lazy and sluggish. They’re too used to the food being brought right to them, which doesn’t require much energy, so they lay sluggish on the bottom of the stream waiting for small fish and crawfish which are mostly their diet. If they do take flies, especially small flies and midges, they are usually a side dish or dessert which they aren’t concerned in more than halfheartedly anyway. Of all the flies for big trout, streamer flies and similar patterns are good, for both stocked and native trout.

BILL MONTORO
Spartansburg

ONE FOR SERVAIS

May I compliment you on a truly fine magazine? I am not a long time subscriber, but you can bet your favorite fly I will be!

Have just finished reading the September issue, couldn’t put it down, and must say it was tops. I would like to give a pat on the back to Larry Servais for a very funny but true-to-life story. I am sure many of your readers have seen deer hunters also come to camp with half a sporting goods store.

Thanks again to all of you! And you may be sure my friends will be urged to send in a subscription.

JESSE F. HORN, JR.
Clifton, N.J.

Urge ’em, Jesse, urge ’em! Ed.

LOSE SOMETHING?

On July 31, while fishing, I found a woman’s cigarette case with some valuables in it along the beach at the Walnut Creek Access Area, Lake Erie. Did anyone among your readers lose this or do they possibly know someone who did? As there was construction in progress, there was nowhere to post an ad. The owner may have it back by identifying the case and its contents. Thank you for your help in finding the owner.

JIM PARADA
317 E. Meyer Ave.,
New Castle 16105

Thanks to you, too, Jim, for your concern. Ed.

MORE “Leaky Boots”

please turn to page 28.
The word "minnow" immediately brings to mind a small, shiny-scaled fish of some sort. Although most members of the minnow family, scientifically known as the Cyprinidae, are indeed small, some may grow to 50 pounds or more. The carp is classified as a minnow due to physical features which are shared with the tiniest of dace and shiners. These include: a similar body shape, large body scales but no head scales, teeth in the throat but not in the mouth, a single dorsal fin, and a deeply forked tail. Besides the carp, there are two midsize minnows that are familiar to all Pennsylvania anglers.

The second largest Cyprinid in the state is the Fallfish. The fallfish, scientifically named Semotilus corporalis, is well known because of its habit of hitting wet and dry flies, streamers, spinners, and most types of live bait used for trout and small-mouth bass. Once hooked, a fallfish gives a good battle for a short time. But after one or two spirited rushes, the fish tires and can be brought in effortlessly. Because it inhabits clearwater streams and rivers with good trout or bass structure, it’s not unusual to catch a fallfish every time out.

Not many anglers keep the fallfish they catch for they have never gained a reputation as a good table fish. Those who have tried it, however, describe its taste as "sweet and flavorful" — despite the many fine bones. If not cleaned and iced soon after catching, the fallfish is said to become soft and unfit for the table.

Several years ago I spoke to three youthful float trippers who had set up camp along Pine Creek in the Grand Canyon of Pennsylvania. The teenagers had just finished off three large fallfish which were pan-fried and garnished in butter. Each agreed that they were "delicious." Thoreau would have disagreed with the boys, however, for he described the fallfish as "... a soft fish that tastes like brown paper, salted."

The name fallfish is derived from this creature's frequency in pools at the foot of waterfalls although this is only one small portion of its total habitat. Early Dutch settlers in New York called the fallfish "corporaalen" or "corporal," a word which now makes up part of its Latin species name. In Canada the fallfish is a "chub" and it is known regionally as "roach," "silver chub," and "windfish."

A springtime spawner, the fallfish is noted for its unusual nest-building capability. The male first excavates a nest in shallow ripples or rapids over gravel bottoms, then entices a female to lay her eggs in the depression. After fertilizing the eggs, the male covers them with large stones, some up to two inches in diameter. These it gathers from surrounding spots and carries back to the nest in its mouth. By the time it is finished, the nest spot looks like a large mound of stones rather than a depression in the stream.

The Creek Chub (Semotilus atromaculatus) is a smaller cousin of the fallfish with which it shares nest-building talents. Known to every young Izaak Walton in the state, it grows to 12 inches in length but six to eight inches is more typical. The creek chub is essentially a small, clearwater stream resident and is found practically everywhere that this habitat exists.

The chub is as avid and eager a nest-builder as the fallfish. Though the chub may dig more pits and use smaller stones, the completed mounds are sometimes larger than those constructed by the fallfish.

A female usually deposits only three dozen or so eggs in each pit. The male quickly fertilizes them, covers them up, and patiently waits while his mate continues to spawn. Subsequent nests are also covered and the area soon looks like a small colony of stone mounds. The male stands sentry amid the nests until incubation is complete.

The creek chub is readily identified by a black mark at the base of the first three rays of the dorsal fin. In coloration it much resembles the fallfish except for a purplish sheen along the flanks. Spawning males are equipped with six to eight hard tubercles on the head and snout during the spring mating period.

Creek chubs are largely carnivorous and are known to hit wet flies as well as hooks garnished with worms or corn. One U.S. Fish and Wildlife Service survey, in which the stomach contents of specimens were analyzed, showed that their diet consisted of 51 percent insects and 26 percent surface drift. The rest included crustaceans, mollusks, algae, and plant seeds.

Though most serious bass and trout anglers may curse the fallfish and the creek chub (except when using the hardy chub as musky bait), these two "midsize minnows" have provided many hours of angling fun for youngsters and oldsters alike.
The fallfish, above, is Pennsylvania's second largest minnow. A new state record catch: a 19 3/4-inch, was caught in 1976. Although few anglers prize it as table fare, its flesh is flavorful although somewhat bony.

The creek chub, below, is sometimes called the "horned dace" due to the horny protuberances the males get on their heads at spawning time. Sometimes a pest in a trout stream, they provide fishing fun for youngsters.
Smoking Fish is Easy!

by Harry Redline
Waterways Patrolman
S/Lancaster County

"Smoked fish," the very thought starts the salivary glands to working! Trouble is, this delicious natural food product isn't always available everywhere, and when it is, it's expensive.

Any angler in Pennsylvania who wants to can readily enjoy smoked fish that they have caught. It really isn't as complicated as it sounds, and it can be as inexpensive as you wish to make it.

First, catch your fish! That is the second most enjoyable part. The fish can be anything found in fresh water, but the best species are catfish, eels, trout and salmon. Other species such as walleyes, bass, panfish, etc., are smokable, and quite delicious but the more natural oil in the fish, the better it smokes.

Clean your fish as soon after catching them as possible, and keep them cold! Actually, the better care you take of your catch, the better it will be on the table, whether smoked, fried, pickled or whatever.

I heartily recommend an ice chest, filled with crushed ice, be taken along any time you wish to keep some fish for eating. Whatever is caught, and meant to be eaten, should be killed and placed in the ice, but not in the water at the bottom. Open the drain on the chest, or place a rack inside to keep your catch out of the water. Clean the fish as soon as possible, removing gills, viscera and membranes inside the body cavity, including that dark bloody mass (kidney) next to the vertebra.

Next, place the fish which have been thoroughly cleaned and washed in cold salt water, into the freezer. Freezing breaks down cellular walls, and allows the brine to penetrate more easily. If they are to be frozen for any length of time, be sure to double wrap, and force out any air trapped in the wrapping process.

Now you can build your smoker. The actual smoke chamber can be anything that will hold smoke inside, a 55-gallon drum fitted with a rack, an old refrigerator, etc. You can build one of wood, or sheet metal, or buy one of the commercial smokers. I use a 55-gallon drum with a removable lid. The drum was marked around the middle and 5 bolts inserted so that they support a rack. (see illustration) Next I cut a 6-inch hole in the center of the bottom. The top of my barrel has two threaded bung holes, one about 2 inches in diameter, the other about 1 inch. Into the large one, I inserted a 3 foot long piece of pipe to form a stack, and into the small one, I inserted a cork with a hole in it. I bought a cheap meat thermometer and put it into the hole in the cork.

Remember someone with a gift subscription to the Pennsylvania Angler (details on page 32)

An important part of smoking fish is to smoke them, not cook them. Keep the temperature under 100°F for the smokiest flavor, and a firm finished product. Raise it to about 180°F for the last hour or so only.

Okay, you've got your smoke chamber put together. Now you build the fire box. Mine is a pit dug in the ground. The smoke chamber is connected to the fire box by a 2-foot piece of stove pipe that slopes up to the smoke chamber. This can be accomplished by setting the smoke chamber on a mound of earth. (see illustration)

Now that the smoker is set up, you will want to get started. Take the fish out of the freezer and let them thaw while you mix the brine. There are a number of commercially prepared brines on the market, just remember when using them to mix enough dry ingredients into the water that an egg will float, with an area about the size of a nickel exposed above the solution. My favorite brine recipe is 4 cups canning, not iodized, salt and 2 cups of dark brown sugar to a gallon of warm water.
Pepper, onion, bay, etc., may be added according to your taste. I usually add 1 tablespoon of black pepper and a medium onion, chopped, to the brine.

Use enough brine to liberally cover the fish. If the egg doesn't float when you test it, add more salt and sugar, proportionally, until it does. Mix your brine thoroughly until the salt, etc., is in solution. Do not use iron kettles or spoons, the salt will attack them, and make the finished product inedible. I use a crock and a wooden spoon. When the brine is thoroughly mixed, add the partially thawed fish and keep in a cool place until the fish are thoroughly brined. I find 12 to 16 hours about right for average sized bullheads, trout, etc.

If you have large fish, over 15 inches, I recommend splitting them lengthwise for both brining and smoking. Catfish should be skinned, as well as eels. The skin should be left on trout, salmon, and other species. Remember that the brine and smoke will penetrate better, and the excessive oil drains out better if the pieces or whole fish are less than 1 1/2 inches thick. Catfish are excessively oily, but if properly prepared, make one of the best smoked fish products.

Weight the fish down, so that they are totally immersed in the brine, and stir them every few hours.

When the fish have been in the brine 12 hours for 8- to 15-inch fish and 16 hours for larger, take them out and rinse lightly with cold running water. Take them outside and allow them to dry off, in the shade. When dry to the touch they are ready for the smoker.

While the fish are drying, you can get your fire going. I usually start the fire above the pit, and when it is burning well, I rake or shovel it into the fire box. Commercial charcoal briquettes will burn evenly and well, but try to get those which are made from oak or other hardwood.

Good woods for smoking are not hard to find. Apple, Hickory, and Maple work best for me, and are not hard to obtain. Any fruit wood is good, and Wild Cherry is hard to beat. If you get stuck for wood, simply use charcoal. Be careful however to not allow too much bark or any moss, leaves or grasses to be introduced into the fire box. Grass, leaves, moss, etc., will make a bitter smoke that will taint the finished product. So will some woods, so stick with fruit woods, Oak or Hickory for best results.

By now, the fish should be dry to the touch, the fire a nice bed of coals, and you are ready to put the fish into the smoker. You can lay them in, skin side down on racks, or hang them from hooks. If you use hooks, keep the temperature very low or the flesh will soften and the fish will fall. A dense smoke should be built up for the first couple of hours, by placing a layer of fuel over the coals, and cutting off the draft.

Remember to keep the temperature down for the first few hours — dense cool smoke will penetrate and flavor much better than high temperatures and low smoke.

After about 8 hours, the fish should begin to change color and firm up. Thoroughly smoke-cooked fish will appear almost black. You can check your progress by occasionally sampling the product, but remember that smoked fish tastes best cold. When they are done to your satisfaction, take them out, invite some fishing buddies over, and have at 'em.

Smoking fish or other meat products is a method of preserving. If done properly, foods can be kept indefinitely if kept dry. For my own purposes, I wrap the fish and keep them in the refrigerator. Proper smoking means low temperatures in the smoker, drying between brine and smoker, and a good thorough brine bath. Keep these things in mind, and you will enjoy a superior food for very little investment.
"Any luck Mr. Tomb?" "One just rose to my fly," I answered quietly. I was barely aware of the 10-year-old boy’s question and my answer for my heart was pounding from the sight of the trout. And I was hoping the cahill on this deep, slow stretch of stream was the combination that finally was going to set my rod quivering after two hours of studying what seemed by now to be a lifeless creek.

But my excitement ended abruptly as my friend’s son, recently acquired hip boots and all, tramped in beside me and began tossing his heavily weighted worm over my line.

Now both the boy and I probably would have been better off if I would have pointed out the error of his ways right then and there. But I generally prefer to let a child’s parent handle the discipline, keeping it in the family as it were. So, I merely clenched my teeth (In fact, I think I forced a grin!) and returned to my own son and the father of the errant child.

Before anybody gets the idea that I have the patience of Job, I must confess that I might have blown jugular veins had it been my son violating my territorial rights.

I’m quite sure I made a mistake by not explaining to my eager little friend why he shouldn’t crowd a fishing partner. After all, somebody is going to have to tell him sometime.

But I think I would have committed a worse transgression by overreacting if my son had been the cause of the problem. Angling with one’s child has a way of sometimes
Any fisherman knows that patience is an essential ingredient in pursuing his sport. Add a youngster who has more kinetic energy than a bass trying to take lure and line into submerged brush and the need for forebearance increases geometrically.

For instance, have you ever noticed that the shrill announcement of "Hey Dad, I have a bite" is followed more often than not by the discovery of the exact location of a bottom-dwelling rock.

I admit that I too have caught my share of rocks, tree limbs (underwater and terrestrial) and other objects that have no place in a creel. But, such misfortune is even more frustrating when you have to reel in after making "the perfect cast" so you can rescue a young angler on the verge of breaking his rod in a losing battle.

The trials and tribulations of parent and child following the piscatorial pursuit are many and, I suspect, universal within the ranks of my fellow dads. Therefore, I won't catalogue these woes. I will instead jot down some thoughts on how fishing excursions might be made more pleasant for all concerned.

Parental attitude probably is the single most important factor in this business of keeping fun in a day of fishing. I'm not going to take the stand of a permissive child psychologist. Discipline certainly has its place at streamside just as it does at home.

Nonetheless, the father who takes his young child fishing and at the same time plans to methodically and quietly stalk the big one is only kidding himself.

Dad had better decide at the outset that his primary benefit of the day will be companionship with son or daughter; that his principle role will be that of teacher; and, that he either will handle more sunfish than be thought possible, or will become all too intimately acquainted with the nature of the lake bottom.

Of course as junior grows older and more skilled, Dad's own fishing time will increase. It is simple truth that our days of solitary and uninterrupted fishing are bound by natural law to be longer than the days of our child's youth. The fact seems to prove the importance of making the most of the present.

So when father finds himself regarding his child's dependency as a nuisance it will serve the elder well to look ahead to the time when he might welcome the occasional company and humor provided by a novice fisherman.

There are of course more obvious ways of keeping father and son happy. A lot of grief can be avoided by making some good choices in selecting tackle and methods.

Closed face reels will practically eliminate those infamous rat nests which come with open face reels. Relatively inexpensive spin casting outfits are quite adequate for children. Intricate weaves of monofilament will neither catch fish for junior nor do Pop's failing eyes any good.

Bobbers are handy gadgets for keeping hook and bait away from underwater obstructions. However, I usually fit my son's line with small split shot because I more often find success on the bottom than I do near the top. Whatever you do though, stay away from the heavier types of sinkers as much as possible. The big weights are inclined to become anchors.

Relatively heavy lines will cut down on the number of times new hooks have to be tied on to replace the one imbedded in an inanimate object. Although bluegills and small bass are the standard quarry for my son, his reel is wound with 8- or 10-pound-test line. I know it isn't very sporting, but I've elected to let him experience the pleasure of playing a fish after he has picked up some of the more basic skills.

Although small hooks are the only practical tools for dealing with such tight lipped creatures as bluegills and perch, the child will be able to grasp and remove hooks more easily if somewhat oversized hooks can be used.

Live bait will give the youngster the opportunity to catch virtually any species of fish that's interested in eating. Worms and small minnows are most often the key to keeping panfish and children busy with one another. And, happiness is a busy child.

Where you fish of course depends on a great many things, including species being sought and driving distances. As for myself, I prefer to take Matt to a nearby lake where there is plenty of casting room rather than to our area's narrow, brushy streams. In other words, don't cramp junior's style with bushes and overhanging branches.

One day last June my son and I engaged in a "cooperative" effort that paid off with a 15-inch largemouth (a respectable enough fish for our Pennsylvania waters) for the understudy of the team.

Matt was equipped according to my formula for kids, a small minnow suspended about 18 inches below a bobber. Although bass of considerable size could be seen regularly cruising near the shore, my plastic worm had reaped only a small fish, which was returned to the water.

However, after 20 minutes or so, Matt's red and white bobber shot for the bottom and I began coaching: "Let him take up the slack . . . now, set the hook!"

Matt was cranking furiously and the drag was slipping with just as much vigor. We had neglected to check the mechanism and tighten it properly. By now my rod was on the ground at a safe distance from our shuffling feet. I reached around the struggling boy to correct the problem. With that done, Matt began to gain quickly on the fish.

But the closer the fish got to shore, the closer it came to stumps which were clearly visible six feet out and four feet down. The zigzagging bass was determined to duck under some of the roots and was dangerously close to succeeding.

I mustered all the finesse I could and jumped in the water, hip boots and all. Grabbing the line, I jerked the fish away from the obstructions and hollered to Matt to run a few yards down the shoreline.

Well, we both acted as though that bass was the lake record. Matt had reason to be a little giddy. It was the biggest fish he had ever caught: "Boy, is Mom going to be surprised!"

Me? I was just exceedingly pleased.
Evolution of a Fly Fisherman

by Theodore E. Kiffer

Fishing for trout with the artificial dry fly has long been recognized as one of the most satisfying, relaxing, and rewarding pastimes that a human being can engage in. For fishing for trout with the dry fly is something more than just an attempt to catch fish, it is part of a total human experience, an experience that often has a profound effect upon the individual involved. One can read the classics on the aspects of the sport, one outstanding example being, of course, Izaak Walton and Charles Cotton's Compleat Angler with its appropriate subtitle of 'A Contemplative Man's Recreation,' which records the development of the angler.

Today it is relatively easy for one to become initiated into the mysteries of fishing for trout with the artificial fly. Colleges and universities offer courses in the sport; local chapters of Trout Unlimited or sportsmen's clubs offer classes on fly tying and fishing with the flies through adult education or extension sessions in local high schools. Expert advice and counsel is easily obtained, and in a very short period of time a person who has never held a fly rod in his hand before can be catching trout consistently using flies that he has actually tied himself.

Excellent equipment is readily available. Major manufacturers offer balanced equipment with line weights that are carefully matched to the flexibility and strength of a rod. Featherlight glass and graphite rods are within the price range of almost anyone desiring to fish. Then, too, the Pennsylvania Fish Commission has provided many miles of prime water designated as Fly-Fishing-Only water. Such areas are generally well stocked with fish, some of considerable size. All this means that today it is relatively easy to become a fly fisherman and to reap all the accompanying personal satisfactions that come with it.

But it was not always so. In my own case the evolution from worm drowners to consistently successful fly fisherman was a long, arduous and, at times, almost impossible process. I have been an avid fisherman since I was six years old, spending every possible moment when I was with my grandparents on their farm in Forest County fishing for native brook trout in the little streams that abound in that area. Like the boy on the calendar picture, I really did catch fish with a limber rod cut from a convenient bush and a piece of braided line with snelled hook tied to the end of it. By the time I was 13 or 14 I had a cheap telescoping steel rod with red glass eyelets, and I was proud of those glass eyelets. With this rod I caught a few more fish. Then I began to notice that while fishing in the beaver dams and in the larger pools of these very small streams I would occasionally see a trout breaking the surface. I had read enough in outdoor magazines to realize that these trout were taking flies from the surface of the water, and I decided to become a fly fisherman.

So it was that one day in late May shortly before school was to close and we were to be set free for the summer that I found myself in the ruins of an ancient sawmill dam. As the flies were tied on six-inch snells we each tied a snell to the end of our braided line. Not knowing quite how to proceed or what to expect, we crept up to the beaver pond using the high mass of sticks and mud as a shield, and whipping our telescoping rods back and forth, almost simultaneously tossed our flies out onto the mirror-like surface of the beaver pond. And miracle of miracles, both flies disappeared in the swirling take of native brook trout. We each responded by jerking our rods perhaps a little too vigorously and when we reeled in our empty lines we discovered that we had been the victims of some sort of fraud that I have not yet figured out to this day. Those cheap flies were tied or glued directly onto the snell, there was no eye in the hook; and when the fish struck and we struck, we pulled the snell out of the body of the fly! And
there we were, heartbroken, no more fish. Our frustration not lessened by the sight of a seven-inch brookie jumping and jumping, trying to shake the fly from its jaw.

We tied on some hooks, kicked old stumps apart until we found a few worms, and continued to fish. We caught a few trout (it was almost impossible not to), but the magic had gone out of the morning, and of course we had none of the lightning-like responses to our offerings that had accompanied our clumsy presentation of those flies. How appropriate it would have been for a Ray Bergman or some other descendant of Walton to come along at that time and give me the advice (and the few flies) that would have confirmed and brought to full fruition the desire to be a fly fisherman that had sprung up within my being. But at least fifteen years were to pass before I bought another fly; and in that period of time war had come, fishing had been laid aside, and then the demands of college had taken away all but just a few fishing trips. So I had concentrated on plugging for bass and pike in nearby lakes. And then I met a true disciple of Izaak Walton.

Carl Krantz — the proud possessor of several very fine handbuilt, split-cane rods, single-action reels, double-tapered lines, and many fly books whose pages were covered with an indescribable variety of wet flies — was past eighty years old when we met. He rarely used dry flies, but he convinced me by demonstration that trout can be taken consistently with artificial flies. Opening day in 1954 found us on the Brokenstraw. The weather was cold, the stream was fairly low, and not many fish were being taken. I was using worms and salmon eggs and did not have a single bite. Being quite cold as well as frustrated from lack of action, I decided to walk back to the car where we had a thermos of coffee and some sandwiches. For perhaps two hundred yards above the bridge where we had parked the stream was fairly shallow, quite swift, and bordered on both sides by high, brushed-covered banks. I had noticed a couple of other fishermen wading through this stretch of water to get back to the bridge so they could more easily exit the stream, so I did the same thing. I waded down the middle of this unlikely looking water, climbed up out of the stream at the bridge wing, and made my way to the car. After getting the sandwiches and a cup of coffee from the car, I walked back to the bridge and leaned on the bridge railing and looked up stream. There I saw old Carl, his rod bent almost double as he fought a fairly heavy trout. He finally brought the fish to net, released it, and came on his way. As he approached the stretch of water just described, he did not put his rod away and splash through it the way several other people and I had done. Instead, he worked his large white streamer fly from side to side of the swift water — flicking it near the bushes, working it back across to the other side, and then reversing the procedure. I almost fell off the bridge when I saw his rod arch against the pull of a good trout. It took him some time to land the trout in that swift water but he finally did, released him, and came on his way. I watched him repeat that performance two more times. In other words, he took three nice trout from an unlikely looking stretch of water that had been fished by several and then had been disturbed by others wading through it. That demonstration should have convinced me.

On another occasion, perhaps a month later, we were again fishing the Brokenstraw, and Carl was using one of his favorite setups — a large streamer fly on the point of the leader with a small wet fly generally of a light brownish or white color attached to a six-inch dropper some eighteen inches above the streamer. He told me once he thought it worked so well because trout would see the streamer thinking it was a minnow chasing a smaller minnow or insect through the water and would become interested enough in the chase to strike either the streamer or the fly on the dropper. At any rate, as I came round a bend, there he was again, his rod bent double, the line jumping and slashing about through the water. I approached him and said, “I see you’ve got another one on.” He looked at me . . . grinned, and said, “No, it’s a double header!” Sure enough, he had a trout on the dropper as well as on the point fly. After he had finally brought these fish to shore he told me that doubles happened not rarely but quite often.

Needling no more convincing, I hurriedly borrowed some leader material from him, borrowed one of his streamers and spent the rest of the day trying to learn how to work that streamer. I did raise one substantial fish, in fact I pricked him enough to feel his weight, but that was all. About a week later I caught my first trout on an artificial fly, a wet fly, that Carl called the Jeff Special. It was a kind of dirty white, winged fly that he said was tied by a friend of his named Jeffrey who lived somewhere in the eastern part of the state. Before we went home that day I had caught six trout on the Jeff Special and was apparently really hooked. But as summer wore on, I turned my attention to fishing for bass and the “blue pike” in Lake Erie and did not spend much more time trout fishing.

The next spring found me back at my usual practice — drowning worms in riffles, floating salmon eggs along the current, and occasionally catching a trout. On rare occasions, I caught many; but inconsistency marked my efforts, and when the immediate benefits of the stocking had all been harvested I found myself unable to catch fish.

Perhaps if I had tried harder, I could have learned to fish wet flies, difficult as that is, for I am convinced that a fisherman who will take the time and expend the effort to really become the proficient wet fly fisherman will consistently catch more fish than are caught by any other method. I realize that minnow fishermen will catch larger fish and that there are times when bait will really produce. There are those times when natural bugs, the real trout bugs, are the only effective lure, but year in and year out the wet fly will produce well. I think one reason for Carl’s success was that, as mentioned before, he was in his eighties and was afflicted with the palsy that often accompanies old age. His hands were never still, but were always in motion, shaken by the tremors of old age. I believe that
this constant shaking was transmitted through his delicate rods to the flies giving them a lifelike quality that I could not transmit to them with my intermittent jerking through the water.

At about this time I moved from the area where Carl lived and never saw him again, but I remembered his success with artificials. But something was lacking in his method despite his unqualified, oft-demonstrated success: catching trout on flies under the surface did not have that electric quality that I experienced at the beaver dam so many years earlier. Armed with information gleaned from my reading, I purchased several dozen of the right kinds of trout flies — the dark and light Cahill, the Adams, the Hendricksons, the Coachman — and began to fish these dry rather seriously. I had no one to teach me, so I read Ray Bergman and practiced. And that practice paid off, for there have been those times when I have taken many, many trout while my bait fishing companions have not taken a fish. There have been other rewards as well.

Remember someone with a gift subscription to the Pennsylvania Angler (details on page 32)

First of all, fishing the dry fly is a marvelous form of recreational activity. One does not stand motionless, but is constantly moving, whipping the fly through the air, creeping slowly from likely looking spot to likely looking spot, trying to flick the fly under some overhanging branches, getting it to float at just the right place in a ripple, throwing a left or right curve to keep the line hidden from the trout. There is a great deal of satisfaction in simply making a series of good casts and presenting the fly in the right spot. The concentration involved makes one forget everything else, and that is really what recreation is all about.

Second, successfully fishing with the dry fly is a tremendous boost to one’s ego. There is very, very little that one can really feel superior about these days. We live in a society that is increasingly mass-oriented. The individual does not have too many opportunities, but being a good dry fly fisherman is one. I have personally found nothing much more rewarding than to land a nice 12- or 14-inch trout, and then look up and see perhaps some youngster or some less successful bait fisherman looking my way and hear him call, “Hey mister, what are you using for bait?” It is most satisfying to respond, “A number 18 Adams spent wing” or “A number 16 Ginger Quill, lightly dressed.” Generally a look of consternation and puzzlement crosses his face as he says, “What’s that? I never heard of that.” But by that time I am back to my casting and probing another likely looking spot. Lately, I have been using smaller and smaller flies, down to size 24, and have discovered a new satisfaction in landing even a twelve-inch summertime trout on such miniscule hooks. In short, I have done something unique — something that most people have not experienced.

Next, fishing the dry fly is filled with the unexpected. Let me cite a few examples to show you what I mean. One evening while fishing Spring Creek above Lemont, I noticed (as I had learned to over these years) that a substantial brown trout was coming out from his hole in the bank to take a fly from the surface at regular intervals. I timed him and confirmed that approximately every fifty seconds he would rise. I noted also that the fly he was taking could be matched by the light Cahill.

I bent on a light Cahill, dipped it in my silicone bottle and flicked it back and forth until I figured 50 seconds had gone since the last rise and then made the cast. It was the most perfect cast I have ever made in my life, about two feet above where the trout had been feeding and about a foot from the bank right in his lane. As the fly settled gently as thistledown towards the surface of the water I got ready for the strike that I knew would come. Suddenly, a bird swept down from nowhere and when my fly was no more than six inches off the water, grabbed it, and tried to fly away. There I stood. I felt like a small boy at the circus waving one of the papier mache birds back and forth on the end of a stick, for there was that bird above me doing “figure eights”! I could not believe my eyes.

I called to another fisherman and said, “Do you see that bird above my head?” He said, “Yes.” I said, “He’s on my line.” He said, “Did you snag him?” I said, “No, he took my fly in midair.” I reeled him in and as gently as I could held his wings while I worked the number 18 light Cahill from the corner of his mouth and released him. I suppose he would have enjoyed telling the story, too, as much as I have enjoyed telling it.

Then there was another occasion along Stone Creek in Huntingdon County. There was a pool that was inaccessible except from above and I had to float the flies downstream. I much prefer to cast them upstream. But I would float the fly downstream and try to raise it, lift it off the water, dry it, and float it again. I had floated it several times with no success. Thinking I should move upstream to a better place, I started walking up the shallow riffles dragging the fly behind me in the deeper water. Suddenly the rod was almost jerked from my hand by a very solid strike of a brown trout that actually had struck that skipping, skittering fly so hard that he had hooked himself. I have tried that deliberately a couple of times since, but it has not worked again.

On another occasion I was fishing Tionesta Creek and had a large flat dead backwater about six or seven inches deep behind me and as I backcast once I felt a break in the finish of my line where I held it in my left hand, so I let the fly settle to the surface of this flat water behind me and inspected the break in the finish. Imagine my surprise when I started to power the rod forward to begin a cast and found that I had securely hooked a fat brown trout. These things do not happen very often, but they happen often enough in fly fishing to set it apart from the regular, sometimes monotonous, events of fishing.

Let me describe one of my more successful casts — also marked with a bit of the unusual. While fishing continued on page 19
Risking the slings and arrows of outraged entrepreneurs, editors, readers and writers . . .

the BIT of FLUFF THEATRE presents —

MODULUS SMODULUS

A Scenerio by G. A. Mayo

SCENE: Heidenberg Diploma Mill
TIME: The Millennium
PLOT: Material, design and construction of fly rods has finally reached its ultimate level of sophistication. Professor Phfurrel is addressing a pre-doctoral class, who, having completed the required thirty years of study will soon receive their PhDs in fly roddery.

"Und so, gentlemen, ve zee zat ze coefficients of nonlinear differential thermal expansion conform nicely with ze theoretical models under discussion."

The professor pauses, glances at his watch, then leans over the podium, and with a menacing stare at one of the students, resumes.

"By ze way, Mr. Rheel, graphite is not spelled viss an "F"! These lapazes could get you into trouble! Class dizzmizzed!"

Rheel stiffens, he blanches to a slate gray (or is it iron blue?), a violent tremor wracks his frail body. The class rises to leave, carefully avoiding the now cataleptic Rheel.

Later, at the faculty lounge, Professor Phfurrel is enjoying a kick in the wrist with some of his associates when the Dean enters.

(He addresses Phfurrel)

"Too bad about Rheel . . . by the way, wasn't he the fellow who knitted the nine-foot salmon rod out of six ounces of steelwool?"

"Yez," replied Phfurrel, "a brilliant tehnizhun, but no dizipline . . . never would have made it in ze real world!"

And so the plot thickens; or, does it congeal? No matter, mankind has been served and another potential misfit weeded from the ranks.

(See above)

"Sound a bit Orwellian? Perhaps, but flipping through various periodicals, I find more and more space devoted to the cosmic wonders science has provided the angler while less and less is assigned to full-color photos of grinning tourists holding aloft giant trout and salmon. It is with the former the balance of this article is concerned; I have no quarrel with the latter. Tourists should be allowed a little grin now and then.

"Who," you ask, "the devil, is this guy?"

Fair question. My qualifications are as follows:

EDITORIALLY: Almost nothing-to-nil.
TECHNICALLY: Slightly less.

These claims are based on the following:

1. I have never written or published anything to do with the Nile perch, Himalayan trout, alligator gars, or any form of angling whatever.
2. I have never fished the Gallitan, the Firehole, the Alta, or the Roratorua. In fact, the closest I've come to New Zealand, is New England. This has been confined, for the last twenty-five years, to outwitting the hand-fed civil servants dispensed by the fishery departments in New Hampshire, Maine, and Vermont, with an occasional foray into Canada.

Pedigree established, we proceed.

FLY LINES —

Now here we have an area that might confuse the casual observer. Lines that float, lines that sink, some sink fast - some slow; on others, just the tip goes down! Possibly there are some which sink halfway down while others float halfway up. Double taper, triple taper, rocket and bug taper . . . even some with no taper. Your choice! Materials from nylon and dacron to burlap. Some have fifty million bubbles (count 'em, folks, they're all there!). All have finishes slipperier than a Vegas faro dealer. Well and good. But, it's the guarantee that really holds my interest:

"This line will last a lifetime or forever." (Presumably, one will come first!)

I bought my first one five years ago. One season and it was in for replacement. A new line was delivered posthaste. With it came an admonishment that certain bug repellants and various other chemicals would compromise the finish. I immediately inventoried my repellants and chemicals. Unable to determine which was the "finish-compro­miser," I discarded the entire lot and
restocked with new brands. The following year I purchased two more lines. These three strings have made the replacement trip on an average of two a year. The new line always delivered with the same form letter that accompanied the first!

In order to expedite my end of the shipping cycle, I drafted my own missive which explains that the line has never been in contact with sheep dip, liquid plumber, or other harsh chemicals — including those packaged in the familiar one-fifth gallon flagon. (This document, printed in raised Gothic letters, on fine vellum, will soon be available to interested readers at a modest cost plus shipping and handling.)

I look at it this way: starting with three lines (costing about fifty skins) and parlaying them into ten lines in five years — the return on the investment assumes rather attractive proportions, so all is well.

We all know you don't hitch a fly directly to the line. You need a leader.

'Now, Sir, these tippets were chewed to exquisite softness by the women on the island of Martinique.'

FLY RODS —

Aside from the bewildering array of material used in rod construction: bamboo, boron, graf (OOPS!) phite, glass, etc., the model availability is in itself mind-boggling. Manufacturers advertise up to sixty styles, lengths and actions from which to choose, the rationale being, I suppose: 1) fly rodders, like golfers, need a different club for every shot; or, 2) Hey — if you can sell 'em, that leaves about forty-five sticks for the serious fisherman. Now anyway, that's where the school is. I think in theatrical circles he would be a casting director.

How much of anything does one really need to enjoy a pastime? I don't know; few of us do. Ulysses S. Grant must have been an exception. When asked his opinion on a new crop of popular songs, he replied, 'I only know two tunes: one is Yankee Doodle and the other isn't.' This may have limited his value as a critic but I doubt he was confused by any background music.

THE LEARNING CURVE —

(Schools for Fly Casters)

A two-hour drive in a westerly direction from my home in Peterborough, N.H., will bring you to what I believe was the first nationally advertised fly casting clinic in the country. They also manufactured the two rods I own. In fact, one — the seven and a half footer — I trolled a set in the second year of use.

One wet Saturday morning I logged it back for straightening. Since no one else was available, Wes Jordan, with the aid of an alcohol lamp, took the kink out himself. As I recall it, the year was either 1962 or '63. That morning they were painting the interior of the factory and between the alcohol burner and the paint brushes, he and another gentleman were discussing the state department's embargo on anything from Red China, including bamboo. Like war, politics can be hell. Well, anyway, that's where the school is.

Some years later, while selecting a few items in their showroom, a group of students accompanied by an instructor repaired to the pool in the back of the shop for a lesson. Never one to pass up a pointer or two, I ambled around to check the action. The students, armed with rods, reels, and all the necessary accoutrements, were watching the instructor demonstrate some cast or other.

Although I distinctly remember he really knew his stuff, the fine points were lost. Somehow, the image of a man wearing an African bush jacket topped in a leopard-banded safari hat, casting with a rod made from Chinese bamboo on a hot August afternoon in Vermont was too much for a country boy to handle!

ARTICLES, BOOKS, DEATHLESS

PROSE, ETC. —

Fully equipped and tutored, a fledging fly finger gets his first nibble, he rears back. 'Fish on!' But, what kind? He need not be concerned. The antics of each species is totally predictable and totally documented: bonefish sizzle, grayling dimple, bass lunge, trout and salmon arch gracefully, while tarpon explode dramatically. His has been known to be 'bone crunching,' while reels occasionally 'scream' or 'smoke.' In sequence, this can be a painfully unnerving experience. Obviously, recalling the exact maneuver while under stress will be difficult for the beginner. Professionals suggest the following: note the species of interest, consult the literature and jot down the necessary information for each: lunge, sizzle, arch, etc. Then, either, a) have the pertinent data laminated in clear plastic for suspension around the neck; or, b) tattooed on the forearm. I prefer the latter. It doesn't flop around on a windy day, makes an interesting conversation piece, and there is always a ready reference guide just above your fingertips.

A POINT OR TWO —

Combinations can confuse even the experts. A 'sizzling' line on a 'smoking' reel can mean many things but it's probably a fire in the tent.

A few fish have been omitted. For instance, do parrofish 'squeak'? With a hook in the jaw it seems reasonable to assume they do, but I have never seen it referenced. Attention to detail can be tedious, but mastering the basics is essential to a good casting platform.

Steeped in lore, tradition and debt, our intrepid angler is ready to wade forth. But, where, with what,
with whom? How and why? Take heart, the literature abounds with just information. I had planned on covering this, but pouring old wine into new bottles is a specialty item best left to the experts!

The technical articles should be made required reading. Though I do wish they wouldn't leave out the good stuff. For instance:

$$f_{max} = \frac{W(l)^4}{8 \pi d^4} = \frac{64 Wl^4}{8 \pi d^4}$$

for those few of you who may have forgotten, is the maximum deflection for a cantilevered beam with uniformly varying load (fish pole). A handy thing to know when you're slogging through the alders to a beaver pond.

'SUFF SAID ABOUT EVERYTHING —
Soap box oratory, though lacking substance, does have surface area; such is the nature of foam. Gravity being what it is, all things return to earth. Even bubbles upon bursting leave the audience with nothing more substantial than a damp spot on the rug. For the wet carpets, I apologize. For the raised hackles (what else?), I sympathize. And now, with a cop-out, I rationalize. No one should tamper with brand new tradition.

FLY RODS —
In Perry Frazier's "Amateur Rod Making," published in 1928, bamboo is cited as being the best material for fly rods. Could it still is. But then, some folks may disagree — I guess that's why they make rainbows in more than one color!

FLY LINES —
My line return frequency may be well above the national average. Still, that's what happened. However, coupling a fuzzy knowledge of polymer chemistry with the pounding I give a fly line, the quality of these new finishes is indeed significant. These guys are really doing their homework.

CASTING CLINICS —
Attending one of these courses is no doubt an enjoyable and rewarding experience. But, if, after graduation you would like a frame of reference for your progress, try this: in John Alden Knight's "Modern Fly Casting" there is a photo captioned "Mr. Charles Ritz of Paris Casting a Tight Bow."

Study it. Then, when you think you are pretty good, remember it. I know with me it's bad for the ego; but, as a bench mark it's one of the best!

THE MEDIA — BOOKS & SUCH —
What can I say? My apologies to the fourth estate . . . the fifth and sixth, also.

Evolution of a Fly Fisherman

continued from page 15

quite late one evening, with but moderate success. I came to a broad, quite shallow pool. As I worked my way slowly through the pool, I realized that there were no rising fish visible. I had reached the conclusion that I was just exercising my right wrist when off to the left as I faced upstream, I noticed some darker water indicating a deeper area, not large, no more than six feet long and about two feet wide right next to the bank; and I thought if there is a trout in this entire area he should be in that pool. A fairly large ash tree grew there and the pool had actually been washed out under the roots of the ash tree. Just beyond the tree at the upper portion of this dark water a dead limb stuck out from the bank. I measured my cast as accurately as I could by false casting, for I wanted the fly to alight just short of the projecting limb, but misjudged. The fly settled about two feet beyond the limb and I thought if I try to work the fly up over that limb it is going to snag and then I will have to wade up there and disturb the pool. So I started pulling the line in very cautiously wiggling the rod tip hoping that I could somehow flip the fly up over the limb. As I pulled the fly closer to the limb it was skittering a bit on top of the water and just as I lifted it clear of the water a lovely brown trout tore out from under the bank and grabbed the fly in midair. His momentum carried him out into the stream, the leader was flipped free of the limb, and I found myself doing battle in that shallow water with a very fine trout. I finally brought him to net. There he was, 14½ inches of brown trout, all through an accident.

One normally tells about the larger fish he catches, but let me mention the best fish I caught last year. In August, while fishing the upper stretch of Spring Creek, I noticed a tiny rise in the still backwash of a rather large pool. Knowing that a large trout does occasionally feed almost imperceptibly, I cast a number 20 Adams to the rise. The take was immediate and as I gently set the hook, I felt a fish, but an exceedingly small one. Thinking I had caught a minnow or small chub, I hurriedly stripped in the line. To my great surprise and pleasure, I found myself inspecting a perfect miniature brown trout exactly two and one-fourth inches long. I consider that trout the best of last year because it proved to me that anti-pollution and conservation efforts do pay off. Brown trout are again spawning in Spring Creek. Only the fact that I was using a tiny dry fly enabled me to gain that bit of evidence. As I carefully removed the hook and placed him in the water, I mentally made reservation for a future engagement.

These gleanings of unusual catches with the dry fly are but indications of the unexpected. Add to the unexpected the visual sighting of the rise, the quick response, the hookup, and the immediate flurry of surface action as the trout is hooked, and you gain a dimension not provided in any undersurface type of fishing. I have been hooked by it. And at last, over a period of some thirty-five years, I have slowly evolved into a fly fisherman. You do not have to follow my way. You do not have to follow a trial-and-error method. Join a trout fishing group somewhere or get a friend who is willing to teach you, but learn how to fish with the dry fly. You will find that the entire sport takes on a new exciting dimension and that you as a human being will be changed also. Fishing for trout on light tackle is the highest form of fishing. Taking trout on the dry fly is the best kind of trout fishing.
IS IT POSSIBLE THAT A LAKE COULD STOCK ITSELF WITH SUPPLEMENTAL SPORT FISH, RESULTING IN INCREASED CATCHES FOR THE ANGLER?

AN EXPERIMENT IN AN OLD PENNSYLVANIA MARSH HAS THROWN SOME NEW LIGHT ON WARMWATER FISH CULTURE AND MANAGEMENT.

by James Meade
Aquatic Biologist
Research Section
&
Dan Bourke
Fisheries Technician
Management Section

In recent years, fishery workers in Michigan and several other states have reported favorable results from sport fish rearing attempts made in protected marsh areas. Following their lead, the Pennsylvania Fish Commission developed its first marsh rearing site at Glendale Lake, Cambria County, in 1974. Approximately 2,250 tiger muskellunge (Northern pike X muskellunge) fry were reared to 3 inches in the marsh with little or no care required. The tiger muskellunge fingerlings were then released into Glendale Lake.

The Function of a Controlled Marsh in a Hatchery Production System

Limited warmwater hatchery space in Pennsylvania, as elsewhere, requires that only a given number, or poundage, of fish be reared to a desirable stocking size. While there may be plenty of room in the hatcheries for egg incubation and even for the hatching and nursing of fry, fast growing warmwater sport fish, such as members of the pike family, require enormous amounts of food and soon outgrow the available space unless their numbers are strictly limited.

When the carrying capacity (amount of fish a certain unit can hold) of a rearing unit is exceeded the numbers of fish must be thinned. Thinning and culling (removal of the small and weak) may be done periodically by hatchery personnel. This is usually accomplished by either stocking or discarding the surplus fish. Natural thinning, by disease, parasitism, physiological stress, or cannibalism, may also reduce the numbers of fish down to — or below — the carrying capacity of the supporting environment. One alternative to the expensive business of hatchery rearing and direct stocking is found in the idea of stocking fry into an area where predation and cannibalism are held to a minimum. Such a protected area is the rearing marsh.

The Glendale Marsh; Development and Operation

In the fall of 1973, marsh areas around Glendale Lake were investigated, and with the assistance of two Pennsylvania Fish Commission en-
engineers, Roy Frank (now retired) and Ken Hoy, a suitable site was chosen. The site, an old but relatively intact beaver dam area, was surveyed in early February and design plans were drawn up. Construction on the area was begun in late February.

A major obstacle in the construction or development of a controllable marsh rearing facility was the presence of a stream flowing through the site. This stream had carved a large hole through each of two old beaver dams, one dam being approximately 200 yards upstream from the other. A necessary first job was to dig a ditch which would divert the stream from above the upper dam to below the lower one. This step allowed the marsh to dry. Water control devices or "bulkheads" were installed in the holes of both dams, between which the rearing marsh would eventually lie. Construction of the diversion ditch and both bulkheads was rapidly completed by the Pennsylvania Fish Commission's southwest region maintenance crew, under the supervision of foreman Clyde Buhl.

As it turned out, site preparation was not quite finished. Two floods in early April caused extensive damage to both dams and to the diversion ditch. However, with the basic construction completed repairs were quickly made, enabling the marsh to be filled shortly thereafter. Once the marsh was completely filled the water entering the marsh was reduced to a small flow necessary to maintain proper water level in the marsh. The marsh flooded about an acre and a half and averaged about 30 inches in depth.

Now that the marsh was completed, only one problem remained: that of assuring an adequate food supply. On April 18, a culture of water fleas, or Daphnia, was introduced into the marsh to supply a suitable forage base (fish food) for sport fish fry.

On May 17, 25,000 tiger muskellunge fry, each less than one inch long, were stocked into the marsh. Except for making minor flow adjustments, nothing more was done to the marsh for the next five and a half weeks. During this rearing period the marsh attracted many kinds of wildlife, especially waterfowl and water birds. The waterfowl and water birds inhabiting the marsh included several kinds of ducks, two types of herons, kingfishers, and even a swan. Some of these birds, especially the kingfishers and herons, were suspected of feeding heavily on the small tiger muskellunge in the marsh.

Biweekly checks on the marsh indicated good growth of the infant tiger muskellunge. They doubled their size in the first two weeks. Finally, the tiger muskellunge were released into Glendale Lake during a slow ten-day drawdown of the marsh. An estimated 2,250 fish, or nine percent of the initial stocking, survived and were released. These fish averaged just over 3 inches in length. Three individuals, suspected of being cannibals, measured between 5 and 6½ inches.

**What Did It Prove**

This study proved that in one instance, 2,250 tiger muskellunge could be reared to fingerling size without care or artificial feeding in a Fish Commission personnel stock marsh with tiger muskellunge fry.
1. A suitable marsh site.
2. Installation of an impoundment with a water level control device.
3. Sufficient manpower to regulate the marsh — relative to water level, general maintenance, and release or harvest of fish.
4. Sufficient sport fish fry to stock the marsh at a density of 10,000 to 20,000 fry per acre.

From this study it would appear that marsh rearing is a suitable method of increasing warmwater production without the need for additional major investments of time and money always incorporated in new hatchery construction. If marsh rearing areas were included in construction plans for such large impoundments as Lake Raystown (Huntingdon County), many desirable sport fishes which do not reproduce satisfactorily could be reared economically to bolster the lake’s sagging sport fish populations.

But does marsh rearing really make any difference? Why even bother with a protected marsh? Why not just stock fry directly into the lake? Well there are some very good reasons for using marshes. The marsh rearing study is truly a study in aquatic ecology. For instance, biologists who surveyed Glendale Lake could find no natural reproduction of northern pike, even though spawning requirements were apparently met. In fact, numerous sittings of spawning pairs of northern pike had been made. It was finally surmised that massive panfish populations, particularly those of brown bullheads and black crappies, were eating the pike eggs and fry. None were surviving to become fingerlings and adults. And, there was no place that the northern pike could go to get away from these predators.

The controlled marsh provides protection from fish predators and eliminates interspecific competition (competition of two different fishes for the same food or resource). By flooding a field or marshland and allowing zooplankton and minnows to grow, but at the same time screening out the predaceous fishes as well as the competitors, the sport fishes stocked in the marsh can feed safely and are able to grow rapidly. By releasing these fish as fingerlings, which are generally too large for most panfish predators to tackle, the chances of survival to creel size increase tremendously (this is the theory behind hatchery rearing). The marsh-reared fingerlings are soon able to forage on the smaller panfish, which in turn provide catchable panfish of a more desirable size as well as more large sport fish for the angler.

The lower head maintained water level; served as catch and holding box.
Lebanon County’s Quittapahilla Nursery

This view of the nursery shows its screening arrangement. The club has experienced some vandalism and theft of fish by partial destruction of the screens.

The nursery itself has some unusual characteristics that makes it a bit unique among other raceways in the area. Initially, it was constructed of over 100 railroad ties and then covered with aluminum sheeting. The combination has worked well and is a first of its kind although some other clubs have used ties for basic construction. Screens cover the raceway, keeping out normal predators; and the seventy-five foot length is divided into three bins.

Thus to all intents and purposes a rather typical arrangement other than the aluminum. There are, however, some other distinguishing features, which deserve attention. As Joe Waybright, nursery manager, pointed out: “We grow eight-inch trout in eight inches of water.” And that’s about the truth of the matter. The level of the spring that feeds the raceway, and the level of Baughman’s run that parallels it and provides an auxiliary water supply, are about on a level with each other. The drop in the raceway is so slight that to get an exchange of water and an outlet that works, the depth of water in the raceway is, of necessity, shallow. Joe was a bit wrong in one statement: the “eight inches of trout,” the fish are bigger than that at the end of the growing season and are of good body shape.

Now all this sounds rosy and great and it is; but, as has been customary, some gloom sooner or later falls on all clubs. The Quittapahilla Club has had its share of trouble. Nitrogen produced a problem and a minnow-saver at the head of the raceway solved the issue. Then Agnes and Eloise, each in turn inundated the area, burying the raceway and most of the springhouse under several feet of silt-laden water. These adversities were also met in turn. The most recent, and by far the most annoying, has been the human predation and vandalism, which seems to be on a steady increase across the state, according to reports. So the club is human after all . . . has had, and is having its problems, and yet is surviving.

The results of the survival are stocked to the pleasure of local anglers in such streams as Baughman’s Run, Trout Run, Conewago Creek, and the Quittapahilla Creek. This latter stream has had some pollution problems and the club has been doing some stream improvement work, trying to get it back into shape. Waybright and his son, Dale, both felt that the group’s efforts were not entirely in vain.

And more needs to be said of the trout themselves. The growth is excellent with one of the factors being the nearly year-round constant temperature (48-50°F), allowing for continuous feeding and growth. The diet, pellets, works well and doesn’t seem to indicate any reason for change. As an extra bonus to area anglers, the club retains about 400 holdovers each year, which adds a reasonable sprinkling of trout in or near the 20-inch range with each batch of yearlings released. Total count for a given stocking year is in excess of 3500 fish with about two-thirds being browns and the remainder brooks. A sprinkling of rainbows may show up in the holdover trout.

And that’s it for the Quittapahilla Rod and Gun Club and their benefactor, Jim Karnitz, and what they are collectively doing about trout fishing in their part of Lebanon County.
NOTES from the streams

REAL GLUTTON!
While on patrol on Conneaut Lake over the Labor Day weekend, I met a fisherman who found a dead northern pike and brought it ashore because of the unusual circumstance causing his death. The 23-inch northern had tried to swallow a 12 1/2-inch largemouth bass. In the process, the bass, instead of following “Jonah’s route — to the belly of the whale,” somehow was diverted out through the gills of the pike, causing them both to die in that position. It seems that the pike’s eyes for food were bigger than either his mouth or stomach could handle!

Warren Beaver
Waterways Patrolman
W/Crawford County

INDOMITABLE!
While on my way to the Northeast Division Headquarters last summer I had to take a second look at a very heavily bearded, long-haired person who was hitchhiking along Route #118. Now, although I have seen many people hitchhiking in this vicinity, I have never seen anyone hitchhiking with: two back packs, two life preservers, and a canoe that must have been 16’ or 17’ long! I noticed that the hitchhiker also had a pair of cartop racks laying alongside of the canoe. Later the following day I had a conversation with the proprietor of Sheldon’s Lunch, a business which is near the road where the hitchhiking canoeist was seen. Shelly told me the hitchhiker came into his establishment for refreshments and related this story.

He was canoeing from New York, via the Susquehanna River, south and west; and, when it appeared that a large storm was inevitable he removed his canoe at Tunkhannock and was given a ride to the Sweet Valley area. He told Shelly his destination was the West Branch of the Susquehanna at Williamsport and then north.

Later in the day when I returned to that area where I first saw the hitchhiking canoeist, he was gone. His overland portage in this 1976 year was almost 80 miles. Bon Voyage — and good luck from the Pennsylvania Fish Commission whoever you were. Even with all of the odds against getting any motorist to stop for a hitchhiker with a large canoe, I can’t help wondering how much quicker this 1976 portage was made than one made over the same route in 1776?

Claude M. Neifert
Waterways Patrolman
N/Luzerne County

A FIRST!
This incident was related to me recently by James Kazakavage, Game Protector from Washington County. It seems Jim was fishing a small lake in the northeast which contained a good bass and pickerel population. He noticed feeding activity in the lily pads and decided to try one of those small, rubber, artificial frogs we’ve all seen. On his first cast with this frog he had a tremendous strike and experienced a hard fought battle for the next five minutes. “Kaz” was certain he’d hooked a nice bass or pickerel and as it began to tire, he excitedly scanned the water for a look at his prize. Upon getting a look at his catch, he was amazed. There, with that rubber frog buried in its throat, was the largest bullfrog he had ever laid eyes on! I’ve heard many “fish” stories, but that was my first “frog” story.

Gary E. Deliger
Waterways Patrolman
Greene County

LUCKY EDDIE?
The pleasures of fly fishing are many, but recently I observed an angler enjoying none of them. I had just pulled into our FLY-FISHING-ONLY area when a certain fly fisherman was beginning his performance. His first cast caught in the tall grass behind him. After unhooking his fly from the weeds, his second cast resulted in his line wrapped and twisted around his rod. It took some time to untangle this mess and he wasn’t looking too contented with this pastime.

When on his third attempt to land a fly on the water, his fly instead hooked into the back of his vest, he packed up and left, probably to purchase a cane pole and worms!

Fred Mussel
Waterways Patrolman
Lehigh County

TAIL? OR TALE?
One is always hearing about strange things that happen: like the big one that got away; or, “Boy, you should have been here yesterday they were really biting!” Well, this story drifts out of Southern York County. The story, as I heard it, centers around Lake Marburg. It seems that a man was exercising his miniature poodle along shore and the poodle disappeared from sight. Hhhmmm! Well, that’s it. No names were mentioned here to protect the sane.

Warren W. Singer, Jr.
Waterways Patrolman
Adams & N/York Counties
**NO DEAL!**

Deputies Hudy and Horton were on motorboat patrol one evening on Raystown Lake when they spotted a boat in a restricted area. Inspection revealed a rather serious PFD violation and the defendant was informed that a citation would be forthcoming.

While all this was going on, the deputies spied a sixteen-gallon keg of beer that was partially empty and a live rattlesnake in a see-through plastic bag. The occupants of the boat joyfully told the officers how they had captured the rattlesnake and offered to “Make a Deal.” Just like on TV. They wanted to swap the live rattler for their fishing license, but if they would forget the citation! Needless to say, they didn’t accept.

James T. Valentine
Waterways Patrolman
Huntingdon County

**SNEAK ATTACK?**

Deputy Stanley Long and I were floating our canoe down the Upper Jordan Creek on patrol before the opening of trout season. We had just passed under an overhanging tree when a good-sized object fell out of the tree and landed in the creek, just missing the canoe.

Hearing the splash, we turned to see what this flying object might be. We both spied a soaked and scared-looking gray squirrel paddling like mad for shore. He looked quite undone as he reached land and slugged up the nearest tree. We can’t figure out if this was a boichet ambush on his part or if he was just a clumsy climber.

Fred Mussel
Waterways Patrolman
Lehigh County

**SURPRISE!**

While on patrol at Sylvan Lake, Deputy Waterways Patrolman Kipp and I observed a young man fishing from a dock and he was not displaying any fishing license. When we approached him, he placed the rod down on the dock and started to walk away. When I requested to see a fishing license, the man pointed to his ears and mouth shaking his head in a negative manner indicating that he could neither hear nor speak.

After asking around at a nearby cottage, I was able to find the man’s sister who explained to me that the man could only read lips. When I explained options of settlement for the violation, arrangements were made for the young man to meet with me at the Northeast Region Headquarters at a later date to pay his fine. When I met the man and filled out the necessary paper work, I handed it to him to read — indicating where it needed his signature. When he had done this, he stood there looking at me and I pointed out on the slip as to his paying me the $25.00. He took the money from his wallet and handed it to me. Then, much to my surprise, he said in a very distinct voice, “I would like to buy a fishing license.”

Claude M. Neiwort
Waterways Patrolman
N/Luzerne County

**“FISHED OUT”?!**

Several of the “fished-out” streams in Adams County produced brown trout in the 3-pound to 6½-pound class in late spring and early summer. It is really surprising how these fish survive the pounding these streamstake. Just by sheer percentage they should have been caught well before reaching the 18-inch mark instead of the 20-inch plus category. “Mother Nature” takes care of her children well.

Warren W. Singer, Jr.
Waterways Patrolman
Adams & N/York Counties

**TROPHIES GALORE**

For the past two years on the opening day of the regular trout season, Harveys Lake has been kind to the angler in giving up some of its trophy fish. Last year on the opening day a local angler caught and recorded a citation lake trout. This year another citation lake trout was caught during the early opening hours: 35½” in length. Along with some more large lake trout which I saw caught was a walleye which measured 26 inches in length. It was quickly released as this species was not yet in season.

Claude M. Neiwort
Waterways Patrolman
N/Luzerne County

**VISITOR FARM AFAR**

Last year I mentioned that an angler from Alaska had fished this area. It seems that another Alaskan has visited us here in Pennsylvania. While going through license applications, I saw his application. Maybe the “grass” is greener here.

Warren W. Singer, Jr.
Waterways Patrolman
Adams & N/York Counties

**LITTER-LY KILLED!**

Last October Herbert Turberville and Mark McClain of Emporium found a 24-inch brown trout about dead in Sugar Bay of Kinzua Dam and turned it in to my headquarters. This trout was caught in a piece of bedspring which it had worked about half way up into the body. The wire had worn through the backbone and caused the death of the nice trout. I guess even the fish face many hazards in life.

Stanley G. Hastings
Waterways Patrolman
Cameron County

**HOW COME?**

I checked a canoe with two persons on board. Both had personal flotation devices. Their dachshund was wearing a life preserver especially made for him! Other people I checked today could not even see the need to have devices in the boat for them or their children. How can some people care so much about their family members, including their “wiener dog,” and others so little?

Robert Lynn Steiner
Waterways Patrolman
N/Luzerne County

Remember someone with a gift subscription to the Pennsylvania Angler (details on page 32)

**“LIGHTNING” STRUCK TWICE!**

On July 11, 1976 at 5:00 p.m., I had to arrest a young man for fishing without a license at Harveys Lake. This is not an uncommon occurrence while enforcing the Fish Law, but it was interesting to note during a check of the division office files that on July 11, 1975 —at 5:35 p.m., I arrested the very same person, at the very same spot, on Harveys Lake for fishing without a license. The morale of this story is: law breakers beware, history does repeat itself. Had we not had a difficult time in docking the patrol boat in very shallow water, we would have probably made it out come out “one-year-to-the-minute!” What a way to celebrate and remember the Bicentennial year!

Claude M. Neiwort
Waterways Patrolman
N/Luzerne County

NOVEMBER — 1976
One for the bassers . . .

Fly Tying
the
"stonecat"

by Chauncy K. Lively
photos by the author

When I was a youngster I had heard stories of big bass snatching baby ducks from the surface, leaping out of the water to intercept low-flying birds and, on occasion, engulfing water snakes. I wasn't sure I believed all this; those were the days when the tall tales of Baron Munchausen were popular and I suspected it was all an embroidery of the truth. I had never seen a really big bass and the smallmouth of my experience on Ten Mile Creek, spunky though they were, didn't seem capable of such monstrous deeds. But later, when I was in the service, I caught a Texas bass that had devoured a baby squirrel and I became a believer. Now I'm convinced that, at some time or another, a big bass will throw a haymaker at just about any living being he can get his hungry maw around. The infinite list of bass lures, a dazzling array of sizes, shapes and colors, would seem to support this contention. But the lures whose success as bass-catchers has kept them popular over the years seem to share a common characteristic in the water: the ability to convey the suggestion of life.

In fly rod lures the choice is narrower than that of spinning and plug-casting lures because of limitations on the amount of weight that can be thrown by the long rod. The lifelike action of sinking fly rod lures becomes a function of lightweight materials that can be activated by the current or by the angler's retrieve, rather than by mechanical means, like the propellers or metal lips built into plugs. Soft plumage like marabou, ostrich or peacock is in common use, as is hair of several types.

A number of years ago I began experimenting with a different application of fur to represent the delicate gills of the burrowing mayfly nymphs. A narrow strip of muskrat belly hide was cut, with fur filaments still attached, and this was wound around the length of the hook. The result resembled palmer hacking, with the fur standing out at right angles to the hook. The fur was then trimmed close to the hide both top and bottom, leaving a thin row of filaments on each side. The method produced the desired effect and I was fascinated with the action of the fur in the water because it was more responsive than any material I had ever used. A few flies were also dressed with the fur untrimmed and while these didn't resemble mayfly nymphs, they had a certain "bassy" appearance and I felt the approach had promise.

We gave the untrimmed fur-on-the-hide flies their first trial on the Allegheny River and near the mouth of Sandy Creek they gave us a sporty afternoon with the riffle bass. The trouble was, the trout-sized flies were too small to attract the bigger bass and I felt that a larger version, with longer fur, was in order. So, back to the drawing board we went and the "Stonecat" was the result. Dressed on a size #4 hook, with long, flowing fur over a formed underbody, it is a wiggly, shimmering mouthful for braggin' size bass.

Rabbit fur is ideal for the main body of the Stonecat, with a shoulder of shorter and denser muskrat fur in front. To prepare the fur strips for dressing, select a piece of the appropriate hide with a straight edge. Clamp one end of the hide solidly (a clip-board works fine here), with the fur side facing down, and hold the other end taut. Then, with the corner of a sharp razor blade, cut a narrow strip ('/12" or less) from the straight edge of the hide. The blade should barely penetrate the hide to prevent cutting the fur. It takes a steady hand and a little practice but you'll be surprised how quickly and accurately the job can be done. Of course, soft hides, scraped as thin as possible, are easiest to work with. Most of the stiff guard hairs should be plucked from the muskrat strip because they inhibit the action of the fur in the water.

Any bass bug outfit capable of handling #7 to #9-weight forward-taper lines will cast the Stonecat adequately. It should be soaked well before use; otherwise, it will sit on the surface like a haystack. It fishes just under the surface with a floating line, or, with a sinking line its buoyancy makes it rise between pulls. In flat or still water the retrieve should be in subtle twitches to activate the breathing of the fur; but in riffles, little more than guiding the lure through likely spots is necessary. The uneven current does the rest.

I don't know what bass take the Stonecat for; a little stone catfish, perhaps, or maybe a tadpole. But whatever, the tantalizing, taunting motion of the free-flowing fur suggests mealtime.
Dressing the Stonecat:

Left: cut a narrow strip each of rabbit and muskrat hide, with fur attached. Rabbit strip should be about 4” long and the muskrat, 2”. The muskrat fur should be darker than rabbit’s. (See text for detail.)

Right: bind black thread near bend of a size #4 regular shank hook and tie in a small bunch of stiff, black hair (skunk or bear) as tail, slightly longer than shank. Wind thread forward over hair and trim excess butts.

Left: tie in a 4” strand of heavy yarn (any color) and wind thread over yarn, back to bend. Cut a taper in the tip of the rabbit strip and tie in at bend.

Right: wind yarn to build a tapered underbody and tie off well behind eye. Wind thread over underbody in firm, spaced turns back to bend and then forward to front of yarn.

Left: grip end of rabbit strip with hackle pliers and wind forward in close turns. Tie off at shoulder and trim off waste. Fur should stand out like palmer hackle.

Right: tie in muskrat strip at shoulder and wind two or three turns. Tie off and trim excess.

Left: stroke muskrat fur back and build a neat head with thread. Whip finish, trim thread and apply head lacquer.

Right: here’s the wet Stonecat, ready to fish.
A LONG TIME AGO!

A few days ago, a few friends and myself were discussing when Pennsylvanians first needed fishing licenses. Would you please print a reply. Thank you very much.

I have been a reader of your magazine for nine years and have enjoyed them very much. Keep 'em coming — I have just renewed for 3 more years.

SAMUEL L. PIZZUTO
Reading

Anybody who went fishing on January 1, 1922 needed a fishing license. Sam. Ed.

TAKES EFFORT

I would like to compliment you on a fine magazine. The fly tying articles are excellent. There are some selfish people who feel that this magazine should contain only the articles that pertain to their interests. However, since many fishermen tie flies and own boats, the articles which help these people should continue in your magazine. In reply to J. Slawich's letter in which he calls pan fishermen "Dorks," I feel he is completely wrong. It is true any person with a pole can catch one, but, with a fly rod and nymph it is entirely different. It takes a lot of effort to work through some of Lake Arthur's shoreline, but the reward is good, two 8 1/2-inch bluegills, which fought admirably on my 6-foot telescopic fly rod. Try it sometime, Mr. Slawich, you might be surprised.

LAWRENCE J. LESNIAK (age 12)
Pittsburgh

SEEKS ANSWERS . . . ACTION!

Dear Mr. Abele:

It is extremely ironical that your editorial "Shad in the Schuylkill? It's not too far away!" arrived here via Pennsylvania Angler in the same week that the Pottstown, Pa. Mercury disclosed "River Pollution!" It was very gratifying to read your editorial and so terribly disheartening to read the Mercury article.

With mixed emotions I submit this article to you as information from, as you put it, "water quality watchdogs." For too long a time southeastern Pennsylvanians have put up with the polluted black scar known as the Schuylkill and we don't want to see the Fish Commission's plans jeopardized. now that the ball is rolling with Philadelphia committing itself to the construction of a fish ladder at Fairmount Park Dam.

Accordingly a lot of essential primary work will have to be accomplished first. Is the coal silt contained and the acid coal mine seepage really sealed off along the upper Schuylkill branches? Is critical industrial waste runoff being monitored? Have oil sludge impoundment dikes been rebuilt foolproof, such as at Douglassville?

Do the watersheds of feeder streams come up to par to abate soil erosion and/or pollution runoff? Could Possum Hollow atomic-electro plant ever create a thermal barrier problem in adjacent Schuylkill waters? Are there other municipalities cheating on sewage treatment?

SAMUEL L. PIZZUTO
Reading

Remember someone with a gift subscription to the Pennsylvania Angler (details on page 32)

Are the Army Corps of Engineers going to remove islands in the Pottstown area soon? Will the (devil mud) coagulate formed by the combination of soil and coal silt plus sewage, oil sludge and chemicals be removed also or at the same time? Will Pottstown continue to ignore the Clean Streams Act for another decade or two?

What ever the answers be, I wish you Godspeed on your Anadromous Fish Restoration Program.

Very truly yours,
FREMONT U. KEIM
Pottstown

(Add. Note: The article to which reader Keim refers, "River Pollution," by William G. Reinecke, Mercury Staff Writer, dealing with an inadequate municipal sewage treatment facility, appeared in the August 2, 1976 edition of the Pottstown Mercury.)

WHY? HERE'S WHY—

Recently in the mail I received a copy of "Pennsylvania Basic Boating." I feel this is a very worthwhile text which every boat owner in Pennsylvania should read thoroughly and completely. However, as I read the inside of the front cover, I see that this text was published by "OUTDOOR EMPIRE PUBLISHING COMPANY" in Seattle, Washington.

Seeing as how part of my boat registration fee went into the publishing and manufacturing of this text, why was it published in Washington? Surely there are many competent printing shops in Pennsylvania that could have printed and mailed this book!

Also, the bottom paragraph of the inside front cover referring to specific state laws contained herein have been compiled from sources believed to be the most recent is not too reassuring. If this book were printed in Pennsylvania, the laws could have been quoted word for word.

In these times of escalating costs, I feel that the Pennsylvania Fish Commission could save considerably in the cost of manufacturing and printing any further such publications. Thank you.

TERRY ALTENOS
Hosopple

Early this summer Pennsylvania's registered boaters received a home study course entitled "Pennsylvania Basic Boating." Its purpose was to satisfy a longstanding need to provide basic boating safety information free and direct to the boater and his family. This mass mailing program was developed by the Bureau of Waterways and funded cooperatively through the Fish Commission's Boat Fund and a federal grant-in-aid program administered by the U.S. Coast Guard.

The text was developed by modifying a boating safety text, Better Boating, copyrighted by Outdoor Empire Publishers of Seattle, Washington (the copyright restriction REQUIRED that Outdoor Empire do the printing). By including information about the Pennsylvania Fish Commission and specific references to Pennsylvania's boating laws and regulations, the Better Boating text was adapted for the state boater. Production and distribution was accomplished at a cost of less than 57c a copy.

All information regarding Pennsylvania's boating laws and regulation is current and accurate. The disclaimer printed inconspicuously in the inside front cover advised the reader to relieve the printer of responsibility in the event a legal question is raised.

Thus far the response to the program has been gratifying. Numerous final exams and thank you notes are being received daily. If this continues we will be satisfied that a real and beneficial service was provided to the registered boaters of Pennsylvania.

Alan B. Kegerise,
Marine Education Specialist

CHRISTMAS PRESENTS—

In your June issue of the Pennsylvania Angler, there was an article "Plugman of Ellwood" that I was particularly interested in. If at all possible, could you please send me this gentleman's address.
The reason for my interest concerns my father. He is 74-years-young and has been a dedicated musky fisherman since 1924, fishing both in Pennsylvania and the Kiwatha Lakes in Ontario, Canada. His most productive lure was a wooden Heddon vamp that I identified in the picture of the “Plugman” article. Since this lure has been out of production for over 20 years I can’t think of a better gift for my father than several of his old favorite plugs under the Christmas tree this year.

Just a side note. I have been a member of the Air Force for the past 15 years and presently on a three-year tour of duty in Okinawa, Japan. The past 10 years I have been an enthusiastic subscriber to your magazine. I have read every article with deep satisfaction knowing at least one state has an energetic fishing and environmental program for its residents. My only regret is that each year fishing is becoming more fantastic and because of my job I can’t enjoy the benefits of your work. Even though I have fished all over the world nothing gets my adrenalin flowing any better than your stories of some of the great fishing in several of my old familiar streams and lakes. I hope the Fish Commission continues to maintain their high professional philosophy and avoid today’s ever so common occurrence of political interplay. I have one small request in closing: just save one of those monstrous muskies for my line when I retire. Keep up the outstanding work both in the field and on paper.

A Continuous Supporter
MAJ. JAMES L. WALTERS
Okinawa

Those muskies are so thick now, Major, it’s getting hard to get your plug back without teeth marks in it! Fear not - we’ll save one! Ed Latiano, “The Plugman of Ellwood,” lives at 317 Ninth St., Ellwood City, Pa. 16117. Anyone wishing to contact him should write to that address; or, call him, if you wish, at 412-758-7141. Sorry we skipped the details in the original story. Ed.
Early this past summer, after unavoidably overhearing a few dockside conversations, I began to question this whole boating business. Highly heralded as the greatest combination of recreation, relaxation, enjoyment and adventure ever packaged by man, I wondered if people really enjoy the sport or try to convince themselves they do? Like many pursuits, does the sport lose its luster after the novelty wears off?

To this point, I selected at random about twenty boats and spent countless hours in the shadows of the boatyard... camera and notebook at hand. I wanted to see how these boats were used and how often. The marina owner helped in the selection by informing me which boats were not only docked there for the season but also which trailered boats were regular and frequent users of the ramp. Thanks to an assortment of telephoto lenses, ears like radar and some strategically placed bushes and trees, I was able to remain largely unnoticed. Only during the last several weeks of the observation period did I venture forth and strike up conversations with the boatowners and occupants. Even then, I did not mention my association with the Angler less the respondents coach their answers and comments in what they might feel were more favorable perspectives.

Feeling much like one must when involved in clandestine spy operations, I accumulated pages and pages of notes to accompany the photographs. When I came into the "open," my coding system allowed me to decipher my scribbling in a manner that divided the boats by owners/occupants into three classifications or groups. Coupled with my best Mike Wallace interview style, I pursued my labor of love. Group "A" came to be the persons who were new to boating; this was their first year on the water. Group "B" were persons in their second year of boating and the third classification, appropriately enough called Group "C," had three or more years on the water. Since I here and now disclaim any pretense of conducting a scientific sampling, you are also free to use your instinct in a liberated manner. Search the accompanying photos and see if you can tell which boaters fell into which group.

Without exception, those who had boated three or more years intended to keep right on doing their thing. The only thing they owned up to was slowing down the pace somewhat. That is to say, they were not racing up and down the river like a busy ant colony on the water's surface. They planned to spend even more time next year at anchor, swimming, fishing or just plain relaxing.

Group A, the new boaters, as might be expected, were racing up and down the river like someone was going to pull the plug any minute and drain all the water away. (Now, before you write the editor, I know not all new boaters are continuously...)

PPNNSVLAANIA ANGler
"Hoping" that everything is going to be fun and games — without proper preparation — is folly.

in motion but my group admitted to it and I saw them do it.) This group was also the most perplexed of those under observation. Simply stated, in many cases they didn’t know what they were doing but they didn’t know they didn’t know what they were doing ... or not doing. (That sentence will simply drive ye olde editor up his birch-paneled walls!)

With one exception, this gang would be back on the water next year, for better or for worse. The one exception says, because of his family’s wishes, his boat goes up for sale next spring. Talk to Mom and the kids and you’ll get a different reason. Endless hours fishing at anchor under a sweltering summer sun ... kids bored and restless ... Mom burned like she was just retrieved from a malfunctioning toaster ... and no rest room. Guess who’s really to blame for this new boating family being in such a desperate state of resignation?

Which brings us around to our third group. Here, in the second year of boating, the seven-year itch appears five years ahead of its time. This group had a summer of mixed situations and mixed reactions. This was the year they really felt at home on the water and Dad had "the feel of the wheel." There was more order, more routine, more confidence. Mixed in with the joys, however, was a sprinkling of nagging problems and things going wrong. Overconfidence led to shoddy preparations and poor seamanship. Too often it was jump in the boat, hit the key and go. Too-infrequent checks on wind and weather conditions and forecasts. No checks for gear, personal supplies, full fuel tanks, dependable batteries, extra shear pins, etc. No inspection of trailer winch lines, wheel bearings, trailer rollers, etc. As a result, a summer peppered with unnecessary family dissensions if not downright feuding.

A final observation. By trend or coincidence, none of the first-year boaters in my sampling had a single hour of boating instruction although most insisted they still planned to take a course. In the second-year boaters, only 3% had received any boating instruction. Among those with three or more years on the water, 17% had received some boating instruction. All percentages include family members as well as the regular skipper. Glean what you will from my sampling and statistics but one thing is unequivocal from my observations and conversations: those with even a smattering of boating education not only intended to stay in boating, they definitely enjoyed it more!

Although this column was written at least partially tongue-in-cheek, it follows that if you are a boater you fall into one of the three categories I witnessed. What you do during the coming winter months, how you spend your nonproductive time, could have a major influence on whether or not you and your family remain boaters and how much real enjoyment you get from the sport. There are monthly boating magazines to be read; supplier’s catalogs to be scanned; scores of informative and interesting books on the subject and countless boating courses (correspondence and classroom) to be taken to enrich and expand your knowledge.

You invested hard-earned cash in your boat, trailer, and equipment. Why not invest some time in yourself and reap the dividends from boating you originally anticipated?

Sometimes you have to work a little harder to play a little easier!
FISHERFACT: No matter how shy they are when they are resting, brown trout will roam all over a stream when they are on a feeding spree. They will even prowl in water scarcely deep enough to cover their backs. Most of this seemingly reckless foraging is done under the cover of darkness.

Spinnerbaita are good lures for use in heavy cover if they are worked at top speed. Hooks ride with the points up, and the spinners attached to wire above the lure body will not often snag if the retrieve is fast enough. This means that spinnerbaits can be fished in places impossible to fish with other lures.

Cleated rubber boots are not 100 percent safe, particularly after they are worn for a season. If the cleats are worn smooth, use marine glue to cover them with strips of indoor-outdoor carpeting, which will provide as much security as felt soles.

Wet flies with snells attached are not good buys. For one thing, the flies usually outlast the snells. It is better to buy wet flies and to tie snells on them, using stiff nylon and an improved clinch knot.

Most stream minnows are three inches or less in length. Buy or make streamer flies to match.

Glass rods are tough and durable and do not need great care in storage. But during the nonfishing season, ferrules and line guides should be carefully inspected. Worn hardware should be replaced, and new wrappings put on metal parts if the old wrappings appear worn in the slightest.

Don't throw away beaten-up, bedraggled wet flies. Keep them in a box for frequent use, for trout may regard them as "buggier" than brand new flies.

Moths will have a feast on artificial lures made of fur and feathers if they are not stored properly when not in use for extended periods. They can be kept in plastic boxes or glass jars into which a few moth crystals have been dropped. Containers should be large enough that the lures are not packed together.

Change a double-tapered line frequently during the fishing season, and always at the end of the season. That will keep the tapered end that is attached to the reel from developing kinks that are hard to remove.

Check weed guards on spoons. Make sure the tip end of the guard is just in front of the point of the hook.

Limp monofilament is ideal for use as a leader in casting, and it can be used as a leader even on a trolling line if it tests 18 or 20 pounds. Limp mono is flexible and almost invisible in the water.

Color in a fly-casting line does not disturb fish. Tests have proved that fact. The advantage in using a light green, cream, or even white line is that it is more visible to the angler and can be a help in keeping close attention on the lure being used.

Six-foot leaders are good enough in surface fishing for bass. But a longer tapered leader is best. Try this formula: a butt section of 12-pound test nylon (.019 in diameter), a middle section of 7-pound test (.014) and a tippet section of 5-pound test (.012).

A floating line is an absolute must in fishing for bass with fly rod surface lures. When fish are in deep water and likely to be feeding on the bottom, a sinking lure should be used, and with it a sinking line is best.

Color is of little importance in lures used in night fishing for bass, trout, or any other species of fish. In darkness, fish cannot distinguish colors, but they do see the size and shape of the lure outlined against the sky.
Pennsylvania Fish Commission Directory

State Headquarters: 3332 Walnut Street, Progress, Pa. (Mailing Address: PO Box 1673, Harrisburg, Pa. 17120)

Executive Office
Ralph W. Abele, Executive Director

Assistant Attorney General
Peter J. Ressler

Administrative Assistant
Howard T. Hardie

Comptroller
Edward T. Durkin

Office of Information
Willard T. Johns, Director 717-787-2579

Conservation Education & Training, Stephen B Ulsh ... 717-787-7394 Pennsylvania Angler, James F. Yoder, Editor ... 717-787-2411
Special Publications, Larry Shaffer ... 717-787-7394 Angler Circulation, Eleanor Mutch ... 717-787-2363

Bureau of Fisheries & Engineering
Edward R. Miller, P.E., Director
Box 70, RD 1, Bellefonte, Pa. 16823 Tel. 814-359-2754*

(*Unless otherwise indicated, all offices within this bureau may be reached at this same address and telephone number.)

Fred W. Johnson, Water Resources Coordinator ... 717-783-2808
Dennis Ricker, Administrative Officer*

FISHERIES DIVISION*
Delano Graff, Chief

Trout Production Section, Ken Carl, Chief*
Warm Water Production Section, Shyl Hood, Chief

Box 127, Linnsville, Pa 16424 814-683-4451

Fisheries Management Section, Robert Hesler, Chief*
Benner Spring Fish Research Station, Box 200-C, Bellefonte, Pa. 16823

FISHERIES CULTURAL STATIONS
BELLEFONTE, John Baw, Superintendent 814-359-2754
RD 1, Bellefonte, Pa 16823

OSWEGO, D Ray Merriman, Superintendent 814-698-2001
RD 2, Box 84, Coudersport, Pa 16915

PLEASANT MOUNT, Zenas Beem, Superintendent 717-448-2101
Pleasant Mount, Pa. 18453

REYNOLDSDALE, Ralph Kersey, Superintendent 814-839-2111
New Park, Pa. 15554

TIONESTA, Charles Mann, Superintendent 814-755-3524

FAIRVIEW FISHERIES CULTURAL STATION, Neil Shea, Superintendent
2000 Lohrer Road, P.O. Box 531, Fairview, Pa. 16415
814-474-1514

ENGINEERING DIVISION*
Wilbert E. Hobbs, P.E., Chief

Construction & Maintenance Section, Eugene Smith, Chief*
Architectural & Engineering Section, K. Ronald Weis, Acting Chief*

Fisheries Environmental Services Branch, Jack Miller, Chief*

BUREAU OF WATERWAYS
(State Headquarters)
Capt. Charles E. Leising, Director
Gene Sporl, Administrative Officer

LAW ENFORCEMENT DIVISION
John I. Buck, Chief 717-787-2350
Edward W. Manhart, Deputy Chief 717-787-2350

SOUTHWEST, Thomas F. Charters, Supervisor 814-445-8974
RD 2, Box 84, Coudersport, Pa. 16915

SOUTHEAST, Norman W. Sickles, Supervisor 717-626-0228
RD 2, Box 119-A, Lititz, Pa 17543

WATERCRAFT DIVISION
Paul Martin, Chief 717-787-7684
Alan B. Kegerise, Marine Education Specialist 717-787-7864

SOUTHWEST, Thomas F. Charters, Supervisor 814-445-8974
RD 2, Somerset, Pa 15501

SOUTHEAST, Norman W. Sickles, Supervisor 717-626-0228
RD 2, Box 119-A, Lititz, Pa 17543

REGIONAL LAW ENFORCEMENT OFFICES
NORTHEAST, Clair Fleeger, Supervisor 717-477-5717

RIDGEWATER, Robert F. Weller, Supervisor 717-477-5717

NORTHEAST, Clair Fleeger, Supervisor 717-477-5717

Mailing Address ... 717-477-5717

Box 128, Lock Haven, Pa 17745

Location ... 717-748-5396

NORTHEAST, Clair Fleeger, Supervisor 717-477-5717

NORTHEAST, Clair Fleeger, Supervisor 717-477-5717

Mailing Address ... 717-477-5717

Box 128, Lock Haven, Pa 17745

Location ... 717-748-5396

RIDGEWATER, Robert F. Weller, Supervisor 717-477-5717

Mailing Address ... 717-477-5717

Box 128, Lock Haven, Pa 17745

Location ... 717-748-5396

SOUTHWEST, Thomas F. Charters, Supervisor 814-445-8974
RD 2, Somerset, Pa 15501

SOUTHEAST, Norman W. Sickles, Supervisor 717-626-0228
RD 2, Box 119-A, Lititz, Pa 17543

RIDGEWATER, Robert F. Weller, Supervisor 717-477-5717

Mailing Address ... 717-477-5717

Box 128, Lock Haven, Pa 17745

Location ... 717-748-5396

SOUTHWEST, Thomas F. Charters, Supervisor 814-445-8974
RD 2, Somerset, Pa 15501

SOUTHEAST, Norman W. Sickles, Supervisor 717-626-0228
RD 2, Box 119-A, Lititz, Pa 17543

RIDGEWATER, Robert F. Weller, Supervisor 717-477-5717

Mailing Address ... 717-477-5717

Box 128, Lock Haven, Pa 17745

Location ... 717-748-5396

SOUTHWEST, Thomas F. Charters, Supervisor 814-445-8974
RD 2, Somerset, Pa 15501

SOUTHEAST, Norman W. Sickles, Supervisor 717-626-0228
RD 2, Box 119-A, Lititz, Pa 17543

RIDGEWATER, Robert F. Weller, Supervisor 717-477-5717

Mailing Address ... 717-477-5717

Box 128, Lock Haven, Pa 17745

Location ... 717-748-5396

SOUTHWEST, Thomas F. Charters, Supervisor 814-445-8974
RD 2, Somerset, Pa 15501

SOUTHEAST, Norman W. Sickles, Supervisor 717-626-0228
RD 2, Box 119-A, Lititz, Pa 17543

BUREAU OF ADMINISTRATIVE SERVICES
(State Headquarters)
Paul F. O’Brien, Director

Personnel & Employment, Leon D. Boncarosky 717-787-7057
Budget Analyst, Vincent Rollant 717-787-2359
Real Estate, John Hoffman 717-787-6376
Purchasing (Harrisburg) Avril Richardson 717-787-2732

License Section, Mary Stine 717-787-6237
Federal Aid Coordinator, Glen C. Reed 717-787-5291
Office Services Supervisor, Chester Pfeifer 717-787-2353
Purchasing (Bellefonte) Budd Sampsell 814-359-2754