

# TROPICAL FISH

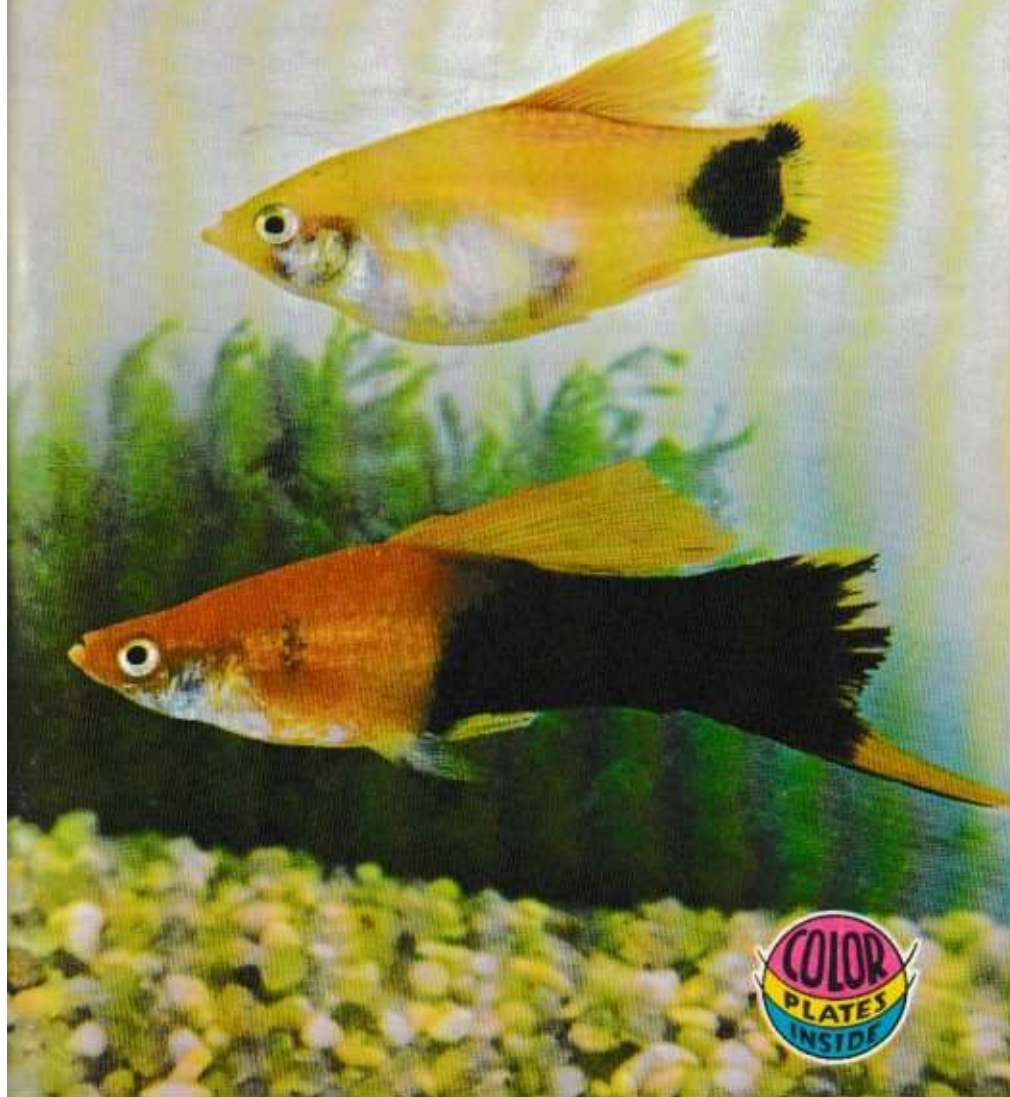
HOBBYIST

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The Colorful Swordtails, by Wilfred L. Whitem, F.Z.S. 50c from your dealer or direct from TFH.

What Wilfred L. Whitem has done for the Platy in his wonderful PLATES AND MOONS, he has also done for the Swordtail in THE COLORFUL SWORDTAILS, again concentrating on the basics of good aquarium management as the means to healthy, lively fish.

Selective breeding is the key to success, and this topic is covered comprehensively step by step through the three main phases. With an eye on practical considerations, author Whitem shows the reader how it is possible to raise good stock with a minimum expenditure of time and effort. Best of all, from the standpoint of the hobbyist, is the fact this information is given clearly and simply.

Nor are other important factors in breeding Swordtails neglected. Careful treatment is given to the essentials of foods and feeding, planting, diseases and remedies, and general aquarium conditions.

One of the main reasons for the popularity of Swordtails is their colorful variety, and the book explains the differences between the major color varieties. But for a real appreciation of these Swordtails, color photos are necessary, and THE COLORFUL SWORDTAILS has plenty, from albinos right up through the new Simpson Hi-fins.

## TROPICAL FISH HOBBYIST

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COVER	
The female platy and the beautiful red jet hi-fin swordtail make up the cover art out of a large stack of plates and words that Dr. Jerome Moros has been working with. The story of how she developed the beautiful red jet hi-fin swordtail strain is told in this issue, beginning on page 12. Her work in developing hybridized dorsal fin varieties of platies will be covered in detail in an upcoming (probably our next) issue. Photo by Dr. Herbert R. Axelrod.	
EXOTIC TROPICAL FISHES SUPPLEMENTS	
Pages 23 and 24, 31 and 32. These pages are reprinted for easy removal and punched to fit into the Classified Edition of EXOTIC TROPICAL FISHES.	

RATES: 25c per copy in the U. S., 35c per copy in Canada or foreign; \$2.50 for 12 issue subscription in U. S., \$4.00 per year for foreign subscriptions. All back issues available at 35c per copy. Index available in every 12th issue.

In Canada Tropical Fish Hobbyist magazine and books are sold exclusively through Canadian Aquarian Supply Co., 1125 Taylor Street, St. Thomas, Ontario. All subscriptions and inquiries from Canadians should be directed to them.

In England and the western European area Tropical Fish Hobbyist magazine and T.F.H. Books are distributed exclusively through T.F.H. Publications (London) Ltd., 13 Watney Lane, Reigate, Surrey, England. All subscriptions and inquiries should be sent directly to them.

© 1965 T.F.H. Publications, Inc., Second Class Postage Paid at Jersey City, New Jersey. Published monthly by T.F.H. Publications, Inc., at 243 Corbillion Avenue, Jersey City, N. J. 07302. Printed in U.S.A.

April, 1965

## EDITORIALLY . . .

It is a constant source of great pleasure to me to know that I have an active connection with a hobby in which there are so many nice people. Almost every mail brings me letters from people who write simply to say that they think that the magazine is great. And you wouldn't believe the number of greeting cards that come in every year from people we'll probably never see! When I show these letters and cards to outsiders, their reactions, in most cases, are something like: "But what do these people want?" When I assure them that you hobbyists are not looking for anything but merely showing your friendship, such outsiders just won't believe me! Their looks of doubt are almost comical.

My own Christmas mail ran into a road-block this past year. Shortly before the holidays, I was taken ill quite suddenly and hauled off to the hospital. By the time they let me out, both Christmas and New Year's Day were gone and my desk was buried under by your greeting cards. To all of you dear friends from all over the world who contributed to that huge pile of cards, my very much belated but sincerest and most heartfelt thanks for your thoughtfulness and my best wishes to all of you in return!

*William Vorderwinkler*

3



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This pair of white convict cichlids has just located a suitable spawning site. The male (front) displays his rainbow-hued anal and ventral fins. The pink in his dorsal fin has intensified to gold.

## THE PERFECT CICHLID The White Convict

by MIKE REED

If you could "design" the perfect cichlid, what features would you give it? If you know cichlids, your requirements would probably be very much like mine. First, of course, beauty. Next I'd want a fish that's easy to care for, having no special feeding or water requirements. I'd like to conserve cichlid boldness but eliminate any possible over-aggressiveness. And along with over-aggressiveness, let's not forget

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to get rid of any plant tearing or uprooting tendencies. Also, I like fish that get fairly large (larger than the average dwarf cichlid), but not large enough to outgrow say an average collection of fishes in a 20-gallon community tank. Last, but not least, I want a fish that is not virtually impossible to spawn.

Hard to find, you say? Well, you're right. Up until recently no such cichlid was available to aquarists. Now, however, we have the white convict cichlid, developed by Gulf Fish Hatchery in Palmetto, Florida. This new cichlid is a color variety of *Cichlasoma facetum*. Let's see how well it fits my design for the perfect cichlid.

Beauty? The white convict is colored a pinkish white with a luster that makes the kissing gourami and the blind cave fish look drab in contrast. As an added color feature, the lower belly region and the anal and ventral fins are tinted delicately but very attractively with a rainbow hue that is mostly blue, yellow, and green. As for feeding and water requirements, the new cichlid thrives on virtually any kind of food and can be kept successfully within the usual temperature, pH, and hardness ranges. In addition, the fish is far from shy. My four adult white convicts constantly stay in the front portion of the aquarium, where they swim actively about while waiting for the next feeding. Up to now, I have never seen any of them attack any of my other fishes or any of their own kind. My largest white convict is about 3½ or 4 inches long and so far as I know, they have never been raised to a larger size.

Judging from my limited experience and others' more extensive work, this may well be the easiest cichlid of all to breed. My fish were easy to sex at 2 inches. The male's dorsal fin became elongated and pointed in typical cichlid style. For the first spawning I attempted, I chose a male that was about 3 inches long and a female that was about 2½ inches long. I used a 15-gallon tank for the spawning. I lined the sides and back of the tank with rocks and lay flat rocks along sections of the bottom. The temperature was 78°F. to 80°F. The pH was 6.8 and hardness was moderate.

I set the pair out on a Friday and by early Saturday morning things were in progress. The pair swam about slowly, investigating every inch of rock as they searched for a spawning site. The pink blush of their bodies had become intensified and so had the rainbow hues in their fins. Finally they selected one of the flat rocks on the bottom and cleaned a small portion of it thoroughly. A typical, but much abbreviated, cichlid mating battle followed. The female then began to deposit her eggs on the rock, stopping now and again and moving aside to allow the male to move in and fertilize them.



The female moves aside so that the male can move in and fertilize her eggs. The eggs are relatively large.

Both male and female care for the eggs. The male (foreground) is picking up a stray egg and will spit it back into the mass.



Even during feeding time, one parent remains close to the eggs. Here the male stands guard. Several seconds after this picture was taken, the female took over and the male began to eat what dry food she had left on the surface.

After the eggs were moved for the first time, the female stood false guard over the original spawning site. Such decey tactics are not unusual in nature.





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When the spawning was over, there were about 100 large white eggs. Both the male and the female stood guard over the eggs, fanning them spasmodically. At one point I put my finger in the water and both fish attacked it with an amazing ferocity. Shortly after that they moved the eggs to a depression in the gravel at a far corner of the tank. The wily female continued a false guarding of the original spot, undoubtedly an attempt to trick any predators into thinking the eggs were still there. The eggs were moved four more times before, after a total of 3 days, the fry hatched out into a wriggling jelly-like mass.

The parents kept the fry well consolidated, constantly picking them up, washing them in their mouths and spitting them back into the middle of the batch. On the fifth day the fry were nearly all free-swimming and those that were not were eaten by the parents. At this point, I removed the parents.

For the first few days I fed the fry infusoria and a prepared liquid food suspension. Next, I switched to newly hatched brine shrimp and fine dry food. I still have 70 or 75 of the fry. They are 2½ months old, eat everything I feed my other fishes and are 1 to 2 inches in length.

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Robust health and rich lustrous coloring seem to be characteristic of Dr. Norton's strain of Red Jet hi-fin swordtails. Photo by Dr. Herbert E. Axelrod.

## Red Jet Hi-Fin Swordtails

BY DR. JOANNE NORTON

Since the original hi-fin swordtail appeared in Simpson's stock, many colors of hi-fin swordtails have been produced, including brick red, velvet red, red wag, gold, gold wag, tuxedo, green, albino, and black.

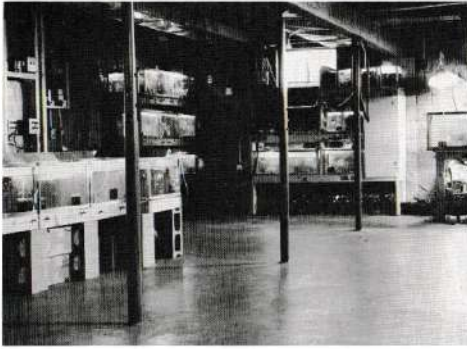
About a year ago, G. E. Stafford found and gave me two male swordtails that were red on the front half and black on the rear portion of the body. These two males were marked like the Red Jet swordtails that Myron Gordon originally produced by first crossing a *Xiphophorus montezumae* swordtail having a black mark in its tail with another swordtail, *X. helleri*. Some of the offspring of this cross had a black mark in the tail, similar to that of the parent, *X. montezumae*. Gordon next crossed one of these hybrid females with a wild *X. helleri* male. One of these backcross hybrids was then crossed with a wagtail swordtail, thus producing Gordon's first good Red Jet swordtails.

Having decided to try to develop a Red Jet hi-fin swordtail, I crossed a red hi-fin female with the male having Red Jet markings. The offspring of this cross were the same color as red swordtails at first, but in a few days some began to get black markings, in many cases in or near the tail. By the time these fish were one month old, most of them had black markings, which appeared as spots, splotches, and bands over part or most of the body and fins. A few individuals had Red Jet markings, i.e., they were marked black on the posterior half, the anterior half of the fish being red. Since the gene that causes a hi-fin dorsal is dominant, many of these fish were hi-fins. The best Red Jet hi-fins were saved to use for developing this strain. These, crossed brother to sister, produced many variably splotched offspring, but this time the percentage of them having Red Jet markings was higher than from the original cross. The colorful splotched hi-fins are worthwhile by-

Dr. Myron Gordon produced a Red Jet strain (with normal dorsals) by crossing *Xiphophorus montezumae* × *X. helleri* hybrids with *X. helleri*.







Views of two sections of Dr. Norton's basement work area give us some idea of the amount of space and equipment needed to do a thorough job in developing a new strain of fish. Photos by Donald Norton.



Dr. Norton spends many hours working with her fishes. Her willingness to work so hard is perhaps more important to the success of her efforts than is her scientific knowledge. Photo by Donald Norton.

products of the Red Jet strain. It is hoped that, with selection, this strain will eventually produce an increasingly higher percentage of Red Jet hi-fins.

Myron Gordon discovered melanomas (black cancer) in the black parts of his Red Jet swordtails. These could cause tumors, loss of tail fin, and death of the fish. Gordon found that this type of cancer is hereditary and non-contagious to other fish or man. My oldest Red Jet hi-fins are seven months old, and so far they have been very healthy and prolific, each of the first generation females having produced young several times. Time will tell whether or not these fish will develop melanomas and, if so, at what age. Even if melanomas should develop in older fish of the strain, this would probably happen after the fish have already passed their prime. Red Jet and splotched hi-fins, which are even faster growing than my red or red wag hi-fins, develop into large, healthy specimens. With this hardy and prolific strain, we have an additional color of hi-fin swordtail, as well as the reappearance of Red Jets, which have been seen more in pictures than in aquarists' tanks.

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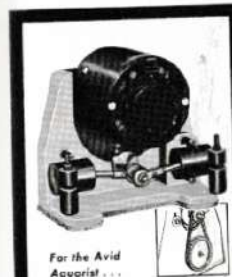
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**The Sins of an Amateur**

BY JACK WEBB

In 1947, I became an amateur aquarist. In 1947, I committed my first sin. With shocking regularity, I have been committing them ever since. Perhaps this brief confession will be of some small benefit not only to the beginner, but also to those countless other amateurs like myself who never seem to learn quite enough from the errors of their ways. On the other hand, I have learned a few tricks and I'd like to pass them on.

Let's go back to that original sin, because as it happened to me then, it happens every day, and you must be as much aware of it tomorrow as you were the first time it occurred. I was out of the service and writing a novel which, it turned out, no one but myself would ever want to read. I had an upstairs room with a west window which had bookcases on either side and underneath. That top shelf under the window needed an aquarium and I needed something to help me relax. With the money I was making then (\$0.00) a three-gallon tank was the best I could afford. Its occupants were three small Goldfish, a Fantail and two Comets. It was prettily planted and, by the fortunate circumstance of two extraordinarily tall privets outside the window, the filtered afternoon sunlight was exactly right. The fish and plants prospered, and during the next few months I was converted into a dedicated fish watcher.

One day, wandering through a dime-store, I stopped before the Goldfish tank. Among the scores of unhappily massed fish was a mostly blue Shubunkin, lightly flecked with black and silver and gold. It would make handsome contrast to the three I had. I knew I had an extremely limited aquarium, but I also knew that "just one more fish" wouldn't do any harm. I bought the Shubunkin.

Two weeks later, all I had left were one sickly comet, a clouded tank, and flaccid plants from the over-dose of table salt I had used in a vain effort to cope with four ailing fish.

**JUST ONE MORE FISH**—It was my first sin and one which still haunts me every time I visit a fish shop and encounter a new exotic which I haven't kept before. Obviously, in this original adventure, I not only had created an overcrowded condition but had added a sick fish as well. Yet there are many more reasons than these for letting foresight take the place of hindsight before you make an impulsive purchase. What about this fish you are about to buy? How will it fit your community tank? What water conditions does it require? What about temperament, adult size? If you don't know, ask. If the answer doesn't satisfy you, do a little reading.

As recently as last month, I did it again. My Scat at four-inches was dominating a fifteen-gallon tank like a big truck on a crowded freeway. I

had become too fond of the glutton to give him away, so this seemed like an excellent reason to add a larger aquarium. And I did.

To keep the Scat company, the first fish I bought was a large *Anostomus*. The second was a *Monodactylus*. So far so good. One stayed upstairs and one stayed down and the Scat went wherever he pleased without making trouble for anybody. Then, on a recent Sunday afternoon in a local aquarium shop, I came face to face with some Puffers, *Tetraodon lineatus*. They were charming little fellows and I never had owned one. I knew from reading that they were not safe with smaller fish, but the three I had were so large that I was sure a Puffer this size would be no problem. I spent an hour settling him in his new home—a half-hour of floating in the plastic container, then releasing, feeding and watching the four of them together. Everything seemed calm, so I went back to my typewriter for a couple of hours. When I returned, the sight was appalling. Not only did I have the only Scat in Phoenix with a filigreed finnage, but the *Anostomus* had no center at all to its tail and a large square bite out of its dorsal fin.

Once again, I had added "just one more fish"—**THE WRONG ONE!** (The last time I visited the shop where I made my disastrous purchase, the Puffers were living quite happily with some *Abramites* which I suppose would make a fine kettle of fish if you'd like a truly unusual aquarium.)

The books all tell you that outbreaks of Ich are generally caused by a change in water temperature. This is a half-truth. Granted it may be so in the case of power or heater failures during the winter, I am firmly convinced that the chief cause of Ich is impatience. To the best of my recollection, I have had major infestations of the parasite just four times. Three of them were when by finger test I assumed the water was near enough the same temperature to transfer the fish without waiting. My self-disciplined cure in this case, I heartily recommend to all impatient amateurs. Now I borrow Mrs. Webb's timer from the kitchen range, set it for a half-hour, and don't release the fish from their floating plastic container until the buzzer goes off.

The fourth incidence is noteworthy only because most of us pseudo-experts associate the occurrence of Ich with a drop in temperature. This is natural (if not excusable) I presume, because we all know that the best cure for the condition is to raise the water temperature. At any rate, here in Arizona during the summer, my problem in changing water is not warming it, but cooling. With the house air conditioning set at seventy-eight degrees, the aged water out in the storeroom often stands at well over a hundred. (We make our iced tea by setting jars of water containing tea bags out in the sun.) Balancing these two temperatures takes time and patience. Once, worried about some fish which were standing about in gallon-and-a-half battery jars while I refurbished the tank and replaced a little more than half the water, I did not wait long enough. I have never seen Ich hit as quickly as it did



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*Tetraodon lineatus* was one of the author's just-one-more fishes. It turned out to be too aggressive, an unfortunate characteristic of most puffers. Photo by Günter Seiff.

following that immersion in somewhat warmer water.

My second sin, and I still suffer from it—IMPATIENCE.

My third sin was cured by marriage. Nell is an extremely attractive person, but she has a fixed idea that every room in her house should also be neat and attractive. (Obviously, my writing room is outside the house, and she wouldn't dare . . .).

My third sin, of course, is UNSIGHTLINESS.

There are two parts to this sin and they are (first, according to my wife, and now, by me, too) equally offensive in the home aquarium. One is a dirty tank, silt on the bottom, algae on the walls, plants crawling everywhere and getting more straggly all the time. Sure, the fish may be contented, but who's going to look at them except yourself. The two basic causes of this condition are sloth (which is uncommendable) and an extreme desire for naturalism (which, I presume, is not). Konrad Lorenz, for example, in his delightful

book, *King Solomon's Ring*, tells how he will clean only the front glass so that he may achieve the illusion of a natural pond in miniature.

This is all well enough, I suppose, but I think the cure I offer is more important. The cure is pride. With no apologies whatsoever, I take pride in being complimented on the appearances of my tanks whether the compliment comes from a fellow fishwatcher, a casual bridgeplayer, or my wife.

The Webb system for keeping a clean and sparkling tank is not new, but it is effective if followed religiously.

1. Do not overcrowd. Buy a few quality fish rather than quantity.
2. If you use outside filters, clean them at least every two weeks. If you use subsurface filters, plan on taking your tank down completely at least three times a year.
3. Siphon any gathering of sediment as often as it accumulates.
4. Use a soft sponge to remove the algae from the front and side glass when it appears—not two weeks later.
5. Use a window-spray atomizer filled with distilled water on the outside of your glass and wipe with a clean rag.
6. Watch your lighting.

As I have noted, these rules are not new, but they are guaranteed to keep any hobbyist's wife, husband, mother, or mother-in-law in a better state of mind and the aquarium in the livingroom where it naturally belongs.

The other part of the sin of unsightliness has to do with the fact that with the possible exception of a hi-fi fan who can't afford a customized cabinet, no hobbyist in the world can accumulate such a clutter of paraphernalia around the center of his interest as does the tropical fish enthusiast.

Granted that filters, pumps, heaters, thermostats, valves, tubing, and electrical wiring all may be essential to the successful aquarium, are the fish themselves worth it if you can hardly see them for the equipment, or if the background to your tank looks like a test setup at Cape Canaveral? I say (having been well trained by Nell) that they are not.

So, what do you do? You accommodate the essentials, but you resort to subterfuge. The pump for my larger tank in the family room sets inside a Japanese hibachi on a pad of sponge rubber. Its wiring and tubing run out the small ash disposal door to the rear. The single air tube running up to the bank of valves passes in front of light, unpatterned drapes. Sure, you can see it if you look for it, but the effect in entering the room is seeing the aquarium, not the peripherals. The back of this aquarium and the side toward the sunny east windows are covered with a simple green, lightly stippled gift-wrapping paper. This serves both to control the light and conceal two outside filters on the back of the tank. It also affords an attractive background for the fish and plants. The tank in the dining area sits on a black Chinese chest in a relatively shady location. This, of course, assists in covering



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There is no denying that an aquarium is usually a part of a room's interior decoration. As such, it should be made and kept as attractive an addition as is possible. Photo by G. J. M. Timmerman.

a multitude of the facets of this sin of unsightliness, because when you're working with a solid piece of furniture you have a lot more on your side in the art of concealment than is ever possible with open framework.

Sure, I can hear any number of you saying, "He doesn't care about the fish at all. All he wants is an interior decoration." If that is true, well then, so be it. Still I get a great deal of pleasure in living with my fish, and having them, too, in the rooms where I live. Unsightliness is one of the cardinal sins of fish keeping I have come closer to conquering than most of the others.

As I wrote in an earlier article, my sole reason for keeping fish is to watch them, to enjoy them, and in an individualized way, to know them. Perhaps this arrangement is even reciprocal, because I've noticed that a number of my fish spend a great deal of time watching me.

Considering my sins, you hardly can blame them.

## The Upper Xingu River in Central Brazil

BY HARALD SCHULTZ, Sao Paulo, Brazil

Photos by the author

Have you ever tried to look for fishes in a completely strange region? It need not be in some foreign land. I do not even make such demands; it is enough that it be a place outside of your usual fishing spots. If a good friend does not tip you off as to where this or that fish species can be found, how could you possibly find out at once where the proper places were? How can you know where the shallows, ponds, pools and lakes are which hold the interesting species? The best maps cannot help you.

In the tropics it is somewhat more complicated. Here we do not even have the detailed maps of the more civilized countries. I usually travel by maps which were made by the American Air Force and where the scale is 1 to 1,000,000. This is wonderful for fast-flying planes; however, when one creeps along at earthworm speed in the jungle or travels along the huge streams in a slow boat, this means that each millimeter on the map is equal to a kilometer, which is considerable when one is interested in every small body of water where tiny, at best not longer than 2-inch, fishes may be found.

It is a wonderful experience if one has the good fortune to discover a fish which is new to the hobby or perhaps even to science and beautiful as well... such beauties are what we are looking for!

The tiny Piper plane rises steeply into the air. It flies over the Araguaia River, where the sandbanks and grayish-green shores frame a picture which shows a thousand little channels and a thousand little lakes which are otherwise hidden and whose colors look as if they are mixed on a palette, wild, tropical, brilliant!

And now I see the savannah below me. Gray, yellow and brown from the fires of the summer's height, it stretches out endlessly, crossed here and there by a few winding streams on whose shores there is an always-green strip of vegetation, which holds back the savannah fires. Here we never see a pond, almost never a larger lake, only the gray-green bush-dotted flatlands which stretch always nearer to the plateau of the *Serra do Roncador*, or the "Snoring Mountains." These are frequently mentioned in the rich local folk-lore. Here before us lived the warlike Shawante Indians, who had now made peace with the whites. Their downfall! There is talk of lost cities in the jungle, remains of the legendary Atlantis. This may be legend, myth or an actual world-forsaken, faraway region!

Slowly the savannah is replaced by forest. It becomes always denser and greener, like a carpet of moss. The streams are bordered by giant trees whose limbs cut off our vision... Amazon landscape, even if we are still far more

than 600 miles by air from its waters. We fly over the region of the Upper Xingu, a place practically untouched by the white man and a spot which is one of the few jungle paradises of modern times, where races which are still peaceful live. There are also unfriendly Indians in the unexplored stretches and along the countless untraveled tributary streams which find an undisturbed existence here. And what about the many small streams, the glassy green lakes, the waterholes, ponds, brooks and swamps? What new species are to be found there?

Our motor drones drowsily, Shiko, the pilot, and I, his only passenger, scarcely exchanged a single word. Each is engrossed with his own thoughts and the mighty jungle landscape below. Finally he points ahead: "Up there, the crooked silvery-gray arm is the Xingu! And there to the left, by the large lake there, live the wild Suya Indians. Only for the past year have they had anything to do with the whites. They wear big discs of light wood in their punctured lower lip and round rolls of straw in their punctured ear-lobes!" Shiko becomes quiet again. He sets the course of the Piper to exactly 30° northeast and then continues: "For a long time nobody has been to their villages!"

Below us the forest opens into a clearing with waving bacayuva palms, and at the sides of the rectangular clearing there were houses with thatched roofs. The brave jungle-pilot Shiko makes a tight turn above the now wide stream, buzzes closely over the tree-tops and sets the plane down, bumping over the hard landing-strip until he comes to a stop in the middle of the clearing with the houses at the edge.

"I want to visit the Suya!" was my greeting as I gave them my letter of introduction.

"Impossible!" was the prompt answer. "Nobody knows where their village is located right now. They have moved upstream... but you could visit other Indians!"

I had been able to take along only the bare necessities for living and working in the tiny Piper, but this also included my fishing equipment—but unfortunately not the pH kit and the German kit for measuring hardness. There were supposed to be more things coming in three days, but actually I had to wait a whole month for my outboard motor. That's the way it is in our country, which in spite of this is a blessed paradise.

From here to the Xingu it was only about 200 yards! Every stream has its face. The Xingu is serene, its waters are always clear, even in the rainy season. Surely the water is soft and somewhat acid, to judge by the amount of soapsuds when bathing. The banks of the river are bordered by dense jungle but they are clear-cut without mud-banks, floating grass thickets or other aquatic vegetation. One can climb out anywhere, and there are wonderful, gently rising sandbanks, pools and lakes.

Our first glance falls on swimming, playing, closely crowded feeding





The Juruna Indians came to Diuarum, the last outpost of civilization. When I showed them Tropical Fish Hobbyist with the pretty fish pictures, they immediately understood what I was after, and organized a fish-hunt with poison in a rocky shallow spot.

Indians take their pets along everywhere, even when they go fishing. What better place to fill the ever-hungry gullets of these young gulls! Timbó poison is absolutely harmless to warm-blooded animals.



April, 1965

Characins, colored a plain silver with the upper tail lobe spotted yellow and black. Here the banks are lined with rough rocks, and looking down one sees large *Hemiodus semitaeniatus* gliding through the water, wonderful swimmers whose bodies are covered with tiny scales and with a deep black horizontal stripe which extends down through the lower lobe of the tail, at which place it is edged milky white. In the shallows a few of the cosmopolites of tropical Brazilian waters, *Cichlasoma festucosum*, scurry away. At first sight they all look alike, but it is possible that if all were compared there would be a number of local varieties.

But down there, among the clefts in the rocks, there is something really pretty to be seen: swimming head-down are some of the most beautiful *Leporinus fasciatus* which I have ever seen, with deep black and gleaming gold bands and black pectoral, anal and caudal fins. Close by but still separated from them are groups of two or three of the less attractively colored *Leporinus frederici*, with grayish-silver bodies and rows of black spots of various sizes on the sides of the body. Otherwise there is nothing else to be seen. Nothing!

But the Indians who live here tell of red-spotted Pacu (*Merymionis*) which can be caught with hook and line at the outset of the rainy season, and of the grayish-silver Piranhas (*Serrasalminus*) with blood-red eyes, quite large ones. But this does not stop anyone from swimming happily in the deep waters of the river!

"Where is there a brook? Where is there a lake?" I asked. They told me that not far from here a little jungle brook emptied into a dead river arm. This is what they call these dead-end streets of the lake waters.

It is dark in the jungle, in spite of the blazing sun above. Whenever a few sun rays find their way through the foliage there is a golden light. The water of the little brook is crystal-clear, and it flows quite briskly. The bottom is covered with decaying leaves, mired with twigs. In places the current is impeded by tree limbs. Here there are little stoppages and whirlpools. When anything is thrown into the water schools of inquisitive fish immediately show up. But if one moves they all swim away frightened and for a while they are no longer to be seen.

There seem to be two species, both of which swim in schools and are good swimmers. A try with the net, which is nylon and has an aluminum frame, results in only a few tiny ones; the bigger ones are much too quick. But it is enough for me to see what they are: *Moenkhausia sanctaeflorentiae*, with red eyes and a half light and half dark spot at the tail base. The other species is unattractive, silvery, probably a *Hemigrammus*. Even after a long search along the length of the brook and far into the jungle no other species are found, except a gray *Pyrhulina*. There were not even any Catfishes like *Loricaria*, *Furcraella*, *Corydoras* or *Burrocephalus*, nor even any *Aptisogomma* species which are otherwise found almost everywhere. Nothing! My expect-

41

### Tropical Fish Hobbyist

tations began to shrink. What might the upper Xingu bring? I tried a pool which was left by the rainy season. Nothing else; either old acquaintances or nothing attractive.

But then it happened: a few days later five boats came up the stream, laden with all sorts of household goods and food. Men, women and children, the Juruna Indians. Excellent fishermen who know every nook and cranny of the river and every secret it holds.

From now on we set out every day: Bibina, the leader of the group and his two sons Bisehá and Tenem. Bibina paddled the canoe, sitting in the stern. His older son stood in the bow, bow and arrow always in readiness. I showed them in the TFH books what fishes I wanted, and they understood right away. Besides, they had to get some fish for their own needs anyway. There were some huge *Macodon* species with well-armed mouths which were so big that a man's fist would fit inside. These were very numerous here. At breeding time when they are guarding their brood in shallow depressions on the lake bottom these otherwise lazy creatures become formidable propositions which eagerly and easily pitch into battle. Also among the daily catch of the Indians are *Cichla ocellaris*. Here they have very pretty gold and green colors.

Not all Indians are particularly good marksmen, but Bisehá hardly ever misses. The arrow when it is released from his bowstring disappears below the water's surface. When it comes up again the water splashes up and the arrow disappears again after being thrown up in a high arc out of the water, pulled by the wounded fish which jumps six feet into the air to free himself of the deadly arrow. Finally at a distance the arrow feathers appear at the surface. The fish is slowly tiring. A second and then a third arrow bore into him and finally his struggles come to an end. Not infrequently does it happen, however, that both fish and arrow disappear below the surface and much later the broken shaft floats to the surface . . . without a fish!

In a narrow strip of water which extends far into the bank we found some floating grass, but very little. Surely not more than a square yard! This served as a shelter for the smaller fish species such as *Parapocilia hollandi*, the same live bearer which is found in the Araguaia. It greatly resembles the Mosquitofish *Heterandria formosa*. And there was another fish which is found in the Araguaia, a little *Anostomus* species with a very narrow mouth and two dark horizontal stripes. It attains a length of scarcely 4 inches. Another old acquaintance from the neighboring stream was an *Otocinclus* species which resembles *O. affinis*, but becomes considerably larger.

Why is it that these species occur in both rivers, which have no connection with each other and whose fauna are so different? Finally there were some species with which I was acquainted: a *Thayeria* with a black stripe like *T. sanctaemariae* from the Araguaia and some robust and not so pretty *Aequidens*, possibly a color variety of the beautiful *A. cerviceps*. With these the fish

April, 1965

species ended. Ended completely! There were no *Exodon paradoxus*, which occur by the millions in the Araguaia. Also no attractive *Hypheosbrycon* species as yet.

Bibina stopped the dugout with a single stroke. He poked a long pole to the bottom, which was only about 3 feet down, and came up with an old log which was full of holes and hollowed out. He lifted it into the boat and banged the open end against the bottom. A black-striped purring something came tumbling out and remained almost motionless in the bottom of the boat; an *Acanthodoras*, beautifully striped with yellow and gold.

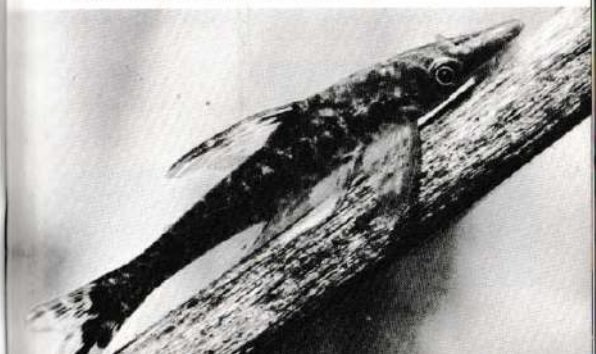
The next afternoon the Jurunas came for me: "Haroldo, timbó! Let's go fishing with poison; the women and children are already waiting for us at the river!" It seemed to be impossible to fish in the river with poison, as the current would take away the slow-working poison so quickly that it would hardly have a chance to work.

They chose a spot where there were many rocks in the water and the current was very light. Everybody was there. Timbó vines lay in bundles atop the rocks which were jutting out of the water. The Indians beat them against the rocks with hardwood clubs. The tattered bundles were then rinsed into the clear water.

Women and young girls stood in the water, gathering the dying fish in small baskets. The men shot the fish with arrows, and every time they thought that a species was particularly pretty, they brought it to me.

And then it happened! Among all the dead and dying fishes there was a

*Otocinclus* species was found in the rare floating grass patches or on rotting wood.

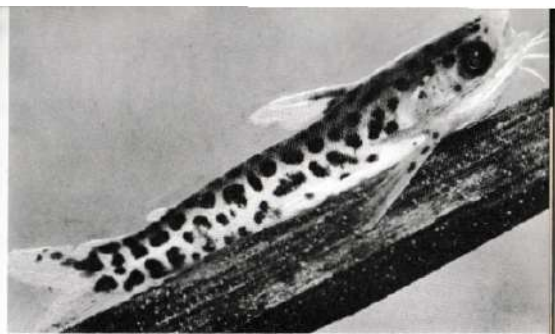






Scarcely had the poison entered the water when countless small fishes came to the surface. At first they tried to escape when the Indian women and children went to gather them; soon they died after coming half-dead to the surface. This beautiful *Synaptiolemus cingulatus*, one of the "Banded Leporinus," was among them. The fins are whitish and transparent and the body deep black with blood red bands. This is one of the rarer fishes.

*Anostomus ternetzi* or a closely related species were the most numerous. Grown specimens are never more than 4 inches long, making it one of the smallest *Anostomus* species.



A tiny and very pretty Catfish, *Santor respectus* with yellowish green metallic body and black leopard spots.

gorgeous black-and-red banded *Leporinus*. Never before had I heard of such a fish, and never before have I seen anything like it. In shape it resembles *Leporinus fasciatus*, but the vertical bands of this fish are actually deep black and blood red; right after this there was another *Leporinus* species: the entire body was almost black and all the fins blood-red. It reminds one of *Laboo bicolor*. But our *Leporinus* have a unique characteristic which distinguishes them from the usual species and makes it questionable as to whether they are actually *Leporinus* or perhaps another genus: the mouth is pointed straight upward and not at an angle and pointed like the well-known *Leporinus* species. It still remains for someone to make closer investigations into this fish with the unusual mouth!

These fish seem to be very rare. Of the several hundred fishes which were caught, there were only a few of these. All were preserved in formalin, so that scientifically exact findings can be made public about them at an early date.

While I stood on a rock in shallow water and was in the act of photographing a Juruna girl feeding her young pet gull something long came swimming along, a beautifully colored watersnake (*Xenodon merremi*). At first I thought it was a young constrictor (*Eunectes murinus*). It was not aware of any danger and picked up the poisoned fishes, always coming closer. Instead of photographing it as it was feeding, my old collector's instinct came over me from my youthful years. I tried to pin it down with the thin aluminum handle of the net and grab it behind the head with my hand. But the arm-long, very powerful creature made a quick frightened motion and fled to the rocks along the shore where my Juruna friends were collecting one fish after the other. Gone!

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## MAIL CALL

By William Vorderwinkler

If you have an aquarium question and cannot find the answer in any of the standard reference texts, send it to MAIL CALL. Each month this column will publish the most interesting questions received and their answers. Letters containing questions cannot be acknowledged or answered personally. Address all questions to: MAIL CALL, T.F.H. Publications, Inc., 245-247 Cornelison Ave., Jersey City 2, N. J.

### Complaint

Q. About 2 years ago I would write you for answers to my questions. I always enjoyed writing because you and your staff furnished me with personal answers to all questions. Now I read in your Mail Call: "We will publish the most interesting questions received" and "Letters containing questions cannot be answered personally." I interpret this as saying, if we like your questions we'll publish them, and if not we won't answer at all. Why is this policy in force? This is very disappointing to me.  
Bob Studmick, Oak Lawn, Ill.

A. Bob, I wish you could see the huge pile of letters that come in all of the time, some of them with about ten questions on them. Many of these questions have been answered over and over again in Mail Call, but they keep coming. There just isn't enough time to sit down and answer them all, much as I would like to. What I

must do is read them all and choose the ones I feel would be most interesting and useful to run in the column. On those rare occasions where time permits, I answer as many as I can personally.

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afraid of fishes for the rest of their lives. I do so want to sell him before one of my little ones loses a finger.

Mrs. Karl Heffner  
R.R. #1, Box 173A  
Germantown, Ohio.

A. Mrs. Heffner, if I had three children who were in danger of being bitten by a piranha, I wouldn't try to sell it, I'd give it away! The few dollars you might get

for it certainly aren't worth a child's finger. And in the meantime, please move the tank to a spot where the kiddies can't get at it!

Bala sharks

Q. I would like to get my questions answered on *Balantiocheilus melanopterus*. I bought two of them only to have them die within 3 or 4 days.

1. At what pH should their water be?

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*Balantiocheilus melanopterus*

color are this species' eggs, what size are they, and are they easy to see on the spawning mop?



*Aphysoscion callurum*

2. Temperature?
3. What do they eat?
4. What group of fishes do they belong to?
5. Can they be put in with other fishes?

Mrs. James Hoeflicher,  
East Gary, Ind.

- A. 1. Neutral to slightly alkaline.  
2. 74 to 78° F.  
3. They like all live and frozen foods, and are partial to an occasional meal of boiled oatmeal.  
4. The Cyprinidae, closely related to the barbs.  
5. Yes; they are very peaceful but are active jumpers and their tank must be kept covered.

**Aphysoscion callurum**

Q. I have recently purchased a pair of *Aphysoscion callurum* to breed and have made a spawning "mop." What

2. If they do spawn can I leave the eggs and fry with the parents?

Richard McKillips,  
Walnut Creek, Calif.

- A. 1. The eggs are almost totally clear and about the size of a pinhead. To examine for them, remove the "mop," shake out the water and put it on a paper towel. Then separate each strand individually and watch for eggs clinging to it. To remove an egg, take a pair of tweezers and close down, not on the egg but on the spot where it adheres, then lift it off gently and place it in your hatching container. After a little practice you will become an "expert."  
2. No; the stupid parents might think their own eggs and fry are some kind of live food.

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**Hoplias, not Macrodon.**

It appears to me that science is stuck with the name *Hoplias malabaricus*, whether we like it or not, even though Bloch made a mistake in thinking the species came from the Malabar coast of India. Bloch, in 1794, described this new species, *malabaricus*, in the genus *Esox* (northern hemisphere freshwater Pike and Pickerel), but shortly thereafter he and Schneider (1801) transferred it to *Synodus* as *S. malabaricus*, at the same time describing an additional species *S. tateira*, as quoted by Marcgrave. (*Synodus* is the genus of marine Lizardfishes, but a lot of them were erroneously thought to be freshwater fishes.) Next Agassiz and Spix (1829) transferred these two species to the Characin genus *Erythrinus* (creeping closer to a correct classification), describing a new species at *E. brasiliensis*. At the same time they arbitrarily sub-

stituted the species name *macrodon* for *malabaricus*, because they knew the fish was not from Malabar. Müller and

*Hoplias malabaricus*, first classified in the genus *Esox*.



Troschel, in 1848, recognizing that these fishes were neither *Esox* nor *Synodus* nor *Erythrinus* but constituted an undescribed genus, cast around for a new generic name and came up with *Macrodon* (using Spix and Agassiz's earlier specific name as a generic name) without knowing that it had been used earlier by Schinz in a generic sense for a still-valid genus of Croakers. That *Macrodon* for *malabaricus*, etc., was preoccupied was recognized by Gill (1903), who set up *Hoplias* for these fishes. This is the first available valid generic name and must be used.

Now, as to *malabaricus* and *tateira*. The first use of the latter was as *Synodus tateira* Bloch and Schneider, 1801, which they considered to be distinct from *S. malabaricus*. Agassiz and Spix used the combination *Erythrinus tateira* in 1829, and Müller and Troschel used the name *Macrodon tateira* in 1846. Cuvier and Valenciennes, in 1846, used *M. tateira*. Günther, in 1846, uses *M. tateira*, not *tateira*. However, latter authors have considered that *tateira* in any variant form is a synonym of *malabaricus*. In fact all of the specific names applied to *Hoplias* except *malabaricus* and *microlepis* do not refer to valid species in nature, and such names as *tateira*, *brasilensis*, *ferax*, *auratus*, *patana*, *amara*, *macrodon*, etc., are synonyms of *malabaricus*. Therefore, since the fish is neither an *Esox* nor a *Synodus* nor an *Erythrinus*, and *Macrodon* is preoccupied, we must use the first valid generic name, which is *Hoplias*, and I fear we're stuck with it!

Dr. Martin R. Brittan,  
Professor of Life Sciences,  
Sacramento State College,  
Sacramento, California.

A. Thank you, Dr. Brittan, for setting us fish fans straight. Seems to me the way to achieve lasting fame is to be an ichthyologist and pull a bower like Bloch did in

this is no exaggeration:

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afraid of fishes for the rest of their lives. I do so want to sell him before one of my little ones loses a finger.

**Mrs. Karl Heffner**  
R.R. #1, Box 173A  
Germantown, Ohio.

**A.** Mrs. Heffner, if I had three children who were in danger of being bitten by a piranha, I wouldn't try to sell it, I'd give it away! The few dollars you might get

for it certainly aren't worth a child's finger. And in the meantime, please move the tank to a spot where the kiddies can't get at it!

**Bala sharks**

**Q.** I would like to get my questions answered on *Balantiocheilus melanopterus*. I bought two of them only to have them die within 3 or 4 days.

1. At what pH should their water be?

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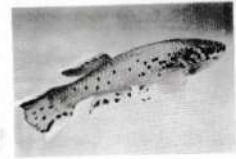
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*Balantiocheilus melanopterus*

color are this species' eggs, what size are they, and are they easy to see on the spawning mop?



*Aphysosemion calliarum*

2. Temperature?
3. What do they eat?
4. What group of fishes do they belong to?
5. Can they be put in with other fishes?

**Mrs. James Hoefflicher,**  
East Gary, Ind.

- A.**
1. Neutral to slightly alkaline.
  2. 74 to 78° F.
  3. They like all live and frozen foods, and are partial to an occasional meal of boiled oatmeal.
  4. The Cyprinidae, closely related to the barbs.
  5. Yes; they are very peaceful but are active jumpers and their tank must be kept covered.

**Aphysosemion calliarum**

**Q.** 1. I have recently purchased a pair of *Aphysosemion calliarum* to breed and have made a spawning "mop." What

2. If they do spawn can I leave the eggs and fry with the parents?

**Richard McKillips,**  
Walnut Creek, Calif.

- A.**
1. The eggs are almost totally clear and about the size of a pinhead. To examine for them, remove the "mop," shake out the water and put it on a paper towel. Then separate each strand individually and watch for eggs clinging to it. To remove an egg, take a pair of tweezers and clamp down, not on the egg but on the spot where it adheres, then lift it off gently and place it in your hatching container. After a little practice you will become an "expert."
  2. No; the stupid parents might think their own eggs and fry are some kind of live food.

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**Catfish**

**Q.** I have had a catfish for 2 years and it was alone in my tank. By this I mean that there were no other catfish in the tank. A few days ago I bought another catfish. Ever since I put it into the tank both of them seem to be kissing and swimming together. I would like to know if these two can be two males, two females, or a pair. The reason for this is that I have never had catfish breed for me and I would like to watch out for babies.

**Uri Berghbaum,** Flushing, N.Y.



Spawning *Corydoras*

**A.** There are very many catfishes, but I presume you mean some sort of *Corydoras* species. Two catfish kept together are often very friendly, but that does not necessarily mean that they are a pair. Look down at them from above: if one fish is wider and heavier in the body than the other you have a pair. No use watching for babies if there are other fish in the tank. To breed them, give them their own tank and watch the glass sides for eggs. They seem to prefer laying them there, but sometimes choose plant leaves or rocks.

**Persons get fish diseases?**

**Q.** I would like to know if any of the diseases which might affect tropical fish could in any way be transmitted to humans. I am thinking primarily of contact by handling a diseased fish or by actual, accidental consumption of materials that have been in contact with a diseased fish. I was also wonder-

ing if any of the materials used to treat tropical fish are harmful. It is possible for young children to come into contact with substances such as terramycin, methylene blue, formalin and others. Are these materials harmful?

**Lee R. Snyder,** Neenah, Wis.

**A.** I have not ever heard of a human getting any disease from contact with a diseased fish or its water. Treat all medicines as you would a bottle of iodine in your medicine cabinet and keep them out of reach of small children. This may mean a little extra trouble, but think of the headaches it could save!

**He feeds them turkey!**

**Q.** 1. Recently I was told that a breeding trap is bad for livebearers. Is this true?

2. I supplement dried food, live food, and frozen roe with frozen shredded white meat from a roast turkey. Is this turkey good in small amounts? In large amounts?

3. What is your opinion on adding calcium carbonate to food to aid in building bones?

**Raymond Brown,** Greenwood, N.S., Canada.

**A.** 1. A breeding trap which is small is very bad for livebearers. If a female does not have ample space to swim around in at this time, she will frequently feel confined.

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more than enough calcium to build up good bones in fish.

**Plant eaters**  
Q. I have two silver dollars in a 20-gallon community tank. Every time I try to keep plants in the aquarium, they chew them up within a few days. Is there any way to keep them from eating plants or are there any plants besides artificial ones which they will not eat?

Dennis Gehman, Reading, Penna.



A silver dollar

A. They're big and very attractive, but they love to chew on those plants! Some have had moderate success putting in tough-leaved plants like the Cryptocorynes, but the fish usually get them too. You can plant the back of the tank and then close it off with a glass partition; to keep your fish from being too frustrated and unhappy you can give them an occasional lettuce leaf, which they will nibble greedily. The only other answer is plastic plants or no plants at all.

and get panicky at a time when she should be calm and relaxed.

2. Fish, if the meat is not greasy. I would not feed any large amounts, however, just what the fish can clear up in 5 minutes twice a week.
3. Your water in most cases contains


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Ownership of tropical fish may be restricted in Oregon . . .

**Proposed Law Threatens Tropical Fish Hobbyists**

by MIKE REED

Oregon Senate Bill 68 (read before the Senate for the first time on January 19, 1965) proposes enactment into law the requirement that \$1 permits be obtained for every fish in the family Characidae that enters the state. This means that dealers would have to have such a permit for every such fish he has in his shop and hobbyists would have to obtain such permits to keep the fishes. The proposed law is aimed most directly at piranhas but includes such favorites as neons, cardinals, head-and-tail lights, *Metyrinis* species, hatchetfish, all tetras and many African fishes.

The law would also apply to a number of reptiles (any that the State Game Commission decides are "potentially harmful to humans"). To add insult to injury, the law would give state officials the right to barge into petshops and private homes to check permits and see that your fishes or reptiles are being kept in such a way that they cannot escape. Such nonsense is not only ridiculous but also an unnecessary violation of privacy.

Should this law be passed, it is not unlikely that other states will enact similar laws. The added expense and red tape created would undoubtedly force many petshop owners out of business. Most of the others would stop selling the fishes listed above and the dealers that did handle these fishes would have to get ridiculously high prices. The resultant adverse effect on us as hobbyists is obvious.

As you can see this is not Oregon's fight alone. The law must be squelched before it spreads, affecting hobbyists throughout the country. Dr. Herbert R. Axelrod, President of T.F.H., has already called and sent a telegram to Senator Naterlin, the man who introduced the proposed law.

**LATE DEVELOPMENT!**

As we go to press, Dr. Axelrod reports that he has just received word from Senator Naterlin. The senator has indicated that he is reconsidering the senate bill in question. Further developments will be reported in coming issues of this magazine.



**Guppy Corner**

By Paul Hahnel

**Three diseases.**

Q. I am about to give up trying to raise guppies. I have no less than three diseases that I can't cure or get rid of. Please tell me the cure of each if you can identify them by my brief description.

1. A red bloody spot appears on the body.
  2. The females blow up to an extremely large size.
  3. The male's fins and tail start getting narrower and shorter and he shakes like the "shimmy," usually by the airstone bubbles. Also, he has a transparent string hanging from his anus. Body colors are distorted. I have tried many medicines but none help. What can I do?
- R. Sizemore, Fort Worth, Texas

A. The water conditions in your tank are completely out of hand. If guppies reach this state where one or several diseases have taken over to the extent that you describe, not much can be done to cure them. I suggest you start all new, but before you do, read up on how to set up a tank properly and how to maintain healthy water conditions in this tank. If you keep it clean and provide the proper food for your guppies, you will not have a single sick fish because of poor environment.

**All females**  
Q. Although a relative newcomer to raising guppies as a hobby, I have

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one experimented with hormones. But there may also be other reasons. The food, pH, and hardness stated in your letter sound OK.

**A youngster wants to know**  
Q. I am 11 years old and have a 10-gallon aquarium with aeration, filtration and a thermostatic heater. I have 13 fish of which seven are guppies.

1. What is a good kind of guppy (swordtail, fantail, etc.) for a beginner to start with?
2. What do you feed your fish?
3. At what age do you spawn your guppies?
4. Is one 10-gallon tank and one 5-gallon tank enough to raise a few fancy guppies?

**Bobby Rhyne, Beavard, N.C.**  
A. I am always glad to answer questions sent in by youngsters, because I was 11 years old myself when I got my first guppy. I would advise that you keep your guppies separated from your other fish.

already heard and read a great deal about you. I would like to ask if you can tell me why my guppies are giving birth to virtually nothing but females. In fact, the last three batches of fry from three different mothers and fathers have been exclusively female. The tank water is slightly acid (pH 6.8) and has a 9-degree hardness. I use dry food together with generous portions of live baby brine shrimp, frozen daphnia, frozen chicken liver and occasionally Tubifex.

**Larry B. Marton, Fairfax, Va.**  
A. Many other hobbyists have the same problem as you, that of getting mostly female fry. This could be due to a disturbance in the sex chromosomes or possibly the age of the fish. Temperature or the chemical composition of the water or food might be the culprit. Maybe in some previous generations some-

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1. Any healthy strain of guppies is worthwhile to begin with.
2. Eight to ten different types of dry foods, four to six kinds of frozen foods from the petshop and



two to four different live foods, which I consider very beneficial.  
 3. Females are biologically ready to be fertilized at an age of 6 weeks but it is advisable to wait until they are 3 to 4 months old.  
 4. Yes, a few.

**Odd-looking female**

**Q.** I have a female guppy and I see she is black on one side of her head. What is wrong with her?  
**A.** One of my two female guppies just had babies and they disappeared. Did the mother or the other one eat them?

**Joanna Welch, Santa Rosa, Calif.**

**A.** 1. The fish is healthy if it is otherwise normal. With guppies you can always expect an occasional oddity.  
 2. Probably both females helped themselves to some nice tender meat; put plenty of floating plants in the tank for the babies to hide in next time.



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*Salts From  
 The Seven Seas*



By Alfred A. Schultz

**Q.** 1. Where can I obtain the proper gravel or sand for use in conjunction with a sub-sand filter?  
**A.** 1. Silicate sand should be used in a salt water aquarium. It can be purchased from petshops or it can be obtained from the seashore. However, it must then be boiled and rinsed at least three times to prepare it for a marine tank. I prefer not to use ordinary gravel because unclean food may lodge unseen in it, decay, and then cause your tank to go bad.  
 2. Neither charcoal nor a substitute is a "must" in a marine tank.  
 3. It is advisable to change 1 gallon of salt water per month. It helps remove some of the soluble fish wastes.  
 4. No, I have kept some species of marine fish for over 7 years. There are some fishes which are a bit tricky to keep alive. But, on the

whole, with proper maintenance, marine can be kept as successfully as fresh water tropicals.

**Q.** 1. You said in the April 1964 edition that starfish could not be kept with dwarf sea horses. I have a leaflet which offers sea horses, hermit crabs, pipe fish and starfish for sale and it says that they can all be kept together and make perfect companions. Can you explain this and tell me who is right? I have a starfish and two hermit crabs in a 5-gallon aquarium with two pairs of sea horses, and nothing has bothered them.  
**A.** My male sea horse is ready to have some little "colts." Can you tell me if they can be raised successfully? Any information about them would be welcome.  
**Mrs. Darlene Hartzel, Granite City, Ill.**

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**A.** 1. There are many things that can be done and although you may get away with them for a while they may not make for the best conditions. Sea horses and starfish require vastly different foods and are best kept by themselves. A small hermit crab, however, can be used as a scavenger with the sea horses.  
 2. With a little care, you should be able to raise some "colts."  
**Q.** 1. I am planning to buy two dwarf sea horses. Please tell me what I can keep them in without trouble.  
 2. Some advertisements say that all you need is water. Does this mean that they do not need salt water?  
 3. How much heat do they require?  
**Steve Austin, Ferndale, Wash.**  
**A.** 1. Any container of glass or

plastic that holds over a gallon of water. An added filter is a definite advantage.  
 2. No. What they mean is that they will send you a measured amount of marine salt to which you add tap water. Only when the water and salt are mixed thoroughly can you add your sea horses.  
 3. About 70°F.  
**Q.** In your August 1964 column you answer a question by stating that a blue devil and a blue reef fish are one and the same. As far as I know they are two separate fish, the blue devil being a Pacific species and the blue reef fish coming from Florida and the Bahamas.  
**Craig Barker, Pompano Beach, Fla.**  
**A.** Although these are two very different species, dealers sell either type as "blue devils."

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Short Notes on Short Trips.

**The Midas Touch**

By WM. A. KYBURZ  
 Ititaco, Colombia

Dr. Axelrod and Bill Riese arrived in Cali on a flying visit early in November, 1964, but their tight schedule allowed them only a few days, and in the rainy season when landslides blocking the road to the coastal area are frequent, you can't achieve much in a few days. So, one afternoon we went to the country residence south of Cali of a friend of mine, to whom I had loaned some of my fishing equipment. Then, outfitted for serious business, we drove towards the new road to Puerto Tejada. Right at the junction of the Puerto Tejada road with the main highway runs a most unpromising little ditch, but Dr. A. wanted to check it, and came up with a small collection of catfish, and one which he proclaimed to be the abomination of all fish—that creature with a weird taste which penetrates the human urethra and dies in the bladder, usually also causing the death of its unwilling host. This I refused to concede, as that particular fish simply does not exist in the Cauca Valley, but there is a

The Red Ribbon Tetra, collected by Dr. Axelrod with Kyburz and photographed in the mountain paradise of Fred Kyburz. The male has the red lower margin; the female is plain colored. The scientific name of this fish is *Glyphyprochax caucensis*. Photo by Dr. Herbert R. Axelrod.





fair possibility that Dr. A. actually found a rather rare little fish, a blood-sucking parasite preying on larger fish. Local fishermen miscall it "leech" since it has the same nasty habits. Scientifically, it is *Branchioica phaneronema* (Miles), subfamily Vandelliinae, family Pygididae.

A few miles further we stopped at another, larger ditch, with a nice, quiet pool at the outlet of the culvert. "There are fish here," said Dr. A., and he and Bill Riese slid valiantly down the bank into the cold water (68°F.—at 3000' altitude the Tropics steam only in the imagination of the "TIME" feature writers) and on their second try with a narrow-meshed seine came up with a number of the same type of lovely little fish, so fine-scaled and shiny that they looked like gobs of quicksilver, many of them with a vivid red edge along the belly roughly between the pectoral and anal fins. I looked at the fish and scratched my head; after years of asserting that the Cauca Valley harbored not one single species pretty enough for the aquarium, there comes King Midas—a rank outsider—and thrusts one under my very nose! And he got almost all of them living in that location, for when I went back a fortnight later, all I caught were five females, after which the very uncooperative weather prevented me from ranging farther afield. But in the meantime I checked up on the matter, just to make sure there was no magic involved. There wasn't. The little fish does belong to the Cauca Valley Ichthyofauna and goes by the name of—(suit yourself for pronunciation) *Gephyrocharax caucano*. Eigenmann caught it about half a century ago.

We drove back to town with the assorted catch alive in two plastic bags, and there another interesting feature presented itself: the mercurial little new "Red Ribbon" tetra belongs to those happy fish that say "Phff" to pH and temperature. Dr. A. added tap water recklessly to the bags, and next afternoon all were still happily alive and ready to be photographed. As to the few females I was able to catch, I took them up to my place in the mountains, and they took the following abrupt changes in their stride: temperature, down to 63° F, pH down to 6.4 from over 7, altitude up to 4500' from 3000'. Now all we have to do is to find more of them!

Next day we drove up to my place over a road that starts out as an ample two-lane asphalt to finish up as a single lane red mud horse trail. We were in the height of the rainy season, and the weather was miserable, rain and fog most of the day. It was impossible to check the local waters and we were reduced to chewing the fat and cooking a bachelor's lunch till early afternoon, when the sun came out for long enough only to photograph the Red Ribbon tetra. The magic touch again. . . .

Now as to my place, it is a pretty little place, with its run-down shacks surrounded by flowers and fruit trees, but I fear that what impressed my visitors most was the roof of the house. This roof is just corrugated tin, but more than twenty years ago I planted several climbing plants along the walls: a climbing cactus (*Medinacaecus* sp.) the kitty-claw toecuna, an aristoloquia,

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The new *Pseudochalceus* species which Kyburz collected independently. This rare species is the second of the genus to be found. It is characterized by having external teeth on its lower jaw running the entire perimeter to the gill cover. Photo by Dr. Herbert R. Axelrod.

Another Emperor Tetra, *Nematobrycon amphioxus*, also collected by Kyburz in the Rio Atrato basin of western Colombia. Photo by Dr. Herbert R. Axelrod.



The Emperor Tetra, *Nematobrycon palmeri*. These actual specimens were collected by Kyburz. Photo by Dr. Herbert R. Axelrod.





WILLIAM A. KYBURZ

Two days before this magazine was due to go to press, we received word that William "Fred" Kyburz had passed away. No details on how he died accompanied the short note we received and we are now trying to get more information. Those of us who knew him were stunned with a sense of real loss. It is always particularly sad when one of the all-too-few people who know how to get and appreciate the really meaningful things in life has life plucked away.

and a wild vine. All these plants got up on the roof, and liked it much better there, building up a layer of humus from their rotting leaves, and then catching wind-borne spores and seeds of ferns and orchids to have more company. The metal roof has disappeared under tons of vegetation. When the cactus blooms, it is a breath-taking sight (that is, provided you go out into the chilly night with a powerful flashlight) with huge white flowers. This cactus produces a fruit of exquisite flavor, and I was happy to present the very last one of the crop for the enjoyment of my visitors.

We drove back to town in the early afternoon, and it was just as well, for at the highest point of the road (6000 ft.) and, curiously, the Atlantic-Pacific water divide, the fog was unpleasantly thick. Next day, very much to my regret, my visitors took off for the eastern part of Colombia, leaving me stuck with the task of finding more Red Ribbon tetras for Gulf Fish Farm to deliver to those of its customers with insatiable appetites for new fishes.

#### More Short Notes on Kyburz' Short Notes

BY DR. HERBERT R. AXELROD

William Kyburz prefers to be called "Fred." Please don't ask me why, for this is just another paradox about the most personable, capable genius I have ever met. I have to smile when Fred calls me "King Midas" because he infers that everything I touch turns to gold. What can I call Fred, who lives in a mountain paradise, with bananas and other delicious fruits growing wild all about his property, with 3 or 4 species of antheriums growing by the thousands under his capable cultivation (including a species named in his honor)? Oh yes, I called Fred a genius. His article is presented almost untouched by our editorial pencil. I did this purposely, for Fred does not claim English to be his "first" language. I guess Spanish comes first, followed by German . . . and other tongues. Fred not only knows languages, he knows fishes, plants, trees, animals, birds and what-have-you that is Nature.

Sitting in his mountain paradise, the most gaudily colored birds come within inches of you to feed on bananas that Fred offers them at his feeding station. I think he told me that he knows 40 different species that come regularly to feed there. And his hobby is breeding his female toy Dachshund who was carrying her pups all over the place.

Fred gained world recognition as a collector for Gulf Fish Farms. He was the first one to bring back alive the elusive Emperor Tetras, and he certainly was the discoverer of the new *Pseudochalceus* which is now being described by Dr. Leonard P. Schultz of the U.S.N.M.

Fred knows where to find the pearls of Nature, and I can only recite the song that goes like . . . "The best things in life are free." And Fred has the best things in life!