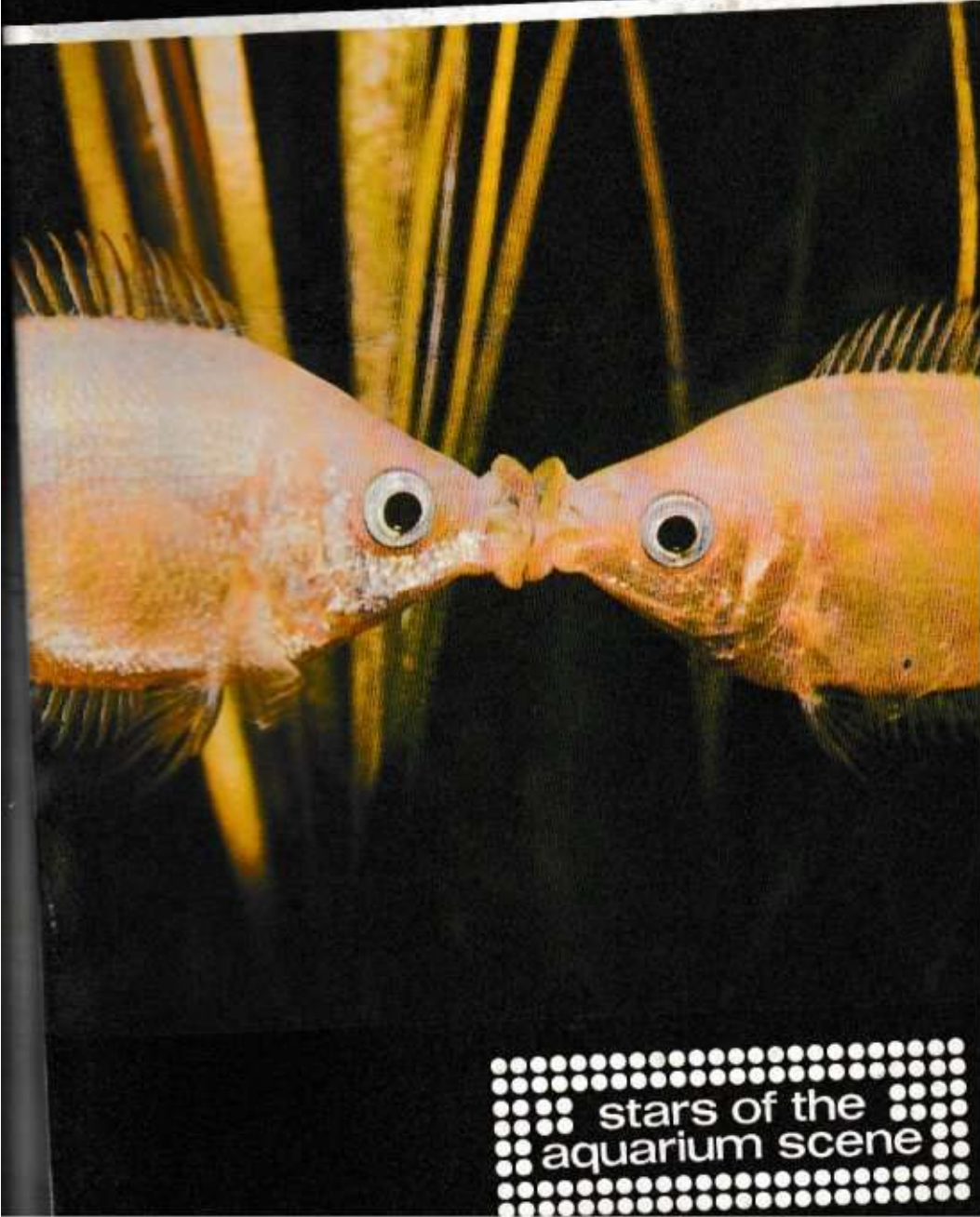


November, 1968

tropical fish hobbyist

DOMESTIC 40¢ / British Isles 3/6



stars of the
aquarium scene

tropical fish hobbyist

Vol. XVII, Nov., 1968 (#153) No. 3

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cover

This month we're going to do some stargazing. Not the kind where you peer out into the night skies, but the kind of heavenly watching where you look into the aquariums of the world to observe our aquatic celestial celebrities . . . we're going to visit with some of the tropical fishes who are really stars in their own right. For as that famous poet once said, "All the aquarium is a stage, and all the fishes are actors". (I couldn't resist the pun, forgive me). No matter how large our hobby gets, and it's definitely getting bigger, there are some tropical fishes who have withstood all the ravages of time and adoration, remaining forever popular with aquarists. These fishes who are perennial favorites have fan clubs (aquarium societies) all over the world to attest to their stardom. Also, on the aquarium scene there are new importations and species discoveries which are daily lighting up our marvelous hobby, giving the aquarists new challenges and vistas. For the wonderful thing about tropical fish hobbyists is their ability to simultaneously love the old and the new. They don't discard long time favorite fishes because there are excitingly new fishes being offered, but at the same time they are not prejudicial in remaining faithful to the ever popular box-office attractions, for they do and will attempt to maintain the new, beautiful species . . . the new stars on the horizon. Our hobby has perspective, an appreciation of all that came before us, with an enthusiasm for the "new" and happy expectations of what the future might offer. That's what makes up the scene, and keeps our aquariums star-spangled.

Pages 33 and 34, 67 and 68. These pages are perforated for easy removal and punched to fit into the Looseleaf Edition of EXOTIC TROPICAL FISHES.

rates

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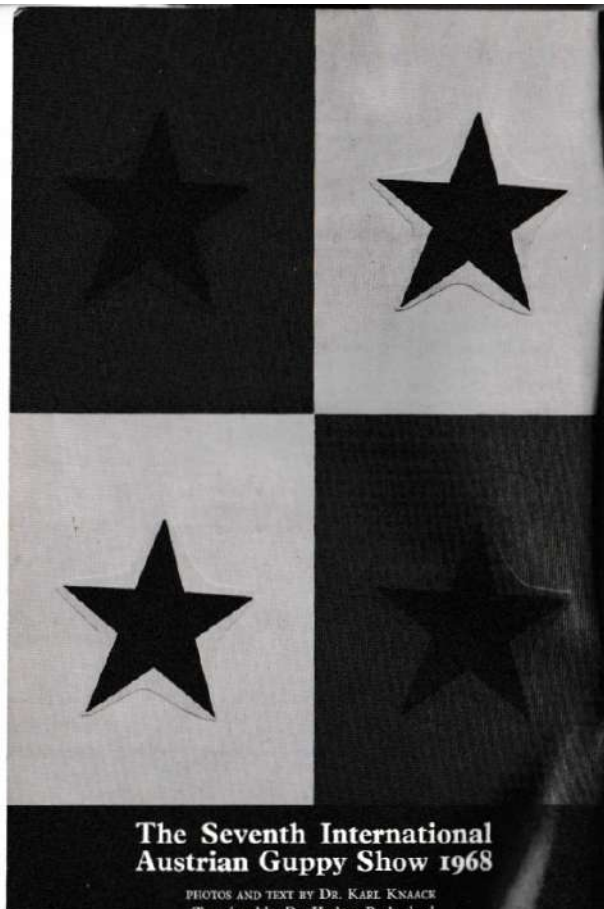
November, 1968

editorial

Did you ever sit on a crowded bus or subway . . . you know the kind I mean . . . the one where you're squeezed in between some large lady in a polka dot dress who has on her lap an immense grocery bag with stalks of celery hanging out . . . and on the other side of you sits this gentleman who insists on reading his newspaper while he rests his elbow in your gut and turns the pages like there is no tomorrow. Does this agonizing commuter situation ring a bell? I'm sure it does. And I'm also sure, that while you were in this tight spot, you were saying to yourself . . . "How did I ever get into this! Why doesn't someone open a window!! When is my stop coming up?" Then you console yourself with words like "Oh well, things can't get worse, somebody is bound to get off." But instead of someone getting off, more people get on, and now a mother with 2 of her small active children decide to stand on top of you. Little junior then points his toy revolver at you and says, "You're dead!" Well if you were a guppy, or a swordtail, this little boy's words wouldn't be far from the truth.

What I'm trying to say is that a crowded subway scene is similar to the conditions of a crowded community aquarium . . . those poor fish in close quarters are experiencing the same tortures . . . no room to move . . . no air to breathe . . . the poor fish are listless, just swimming in place, waiting and hoping that things will get better, that maybe somebody will get off. But what happened in the crowded bus also happens in the crowded community tank . . . instead of somebody getting off, the aquarist has decided to add "just" one or two more fish. And in comes the extra guppy or pair of chubby platies, all very nice fishes . . . but all now destined to the same perilous fate of a crowded tank. The next time you're tempted to put "just" another fish, or pair of fish into your already crowded community tank, think of the torturously crowded subway scene, maybe that grueling image will prevent you from overcrowding your tank the next time you're tempted to do so. No one intentionally overcrowds a tank; it's just that sometimes we run away with our own enthusiasm and forget. I hope that our many wonderful readers feel as we do at TFH in that beautiful fish deserve more than "just enough" room to live and breathe. Please join us at TFH in our crusade to give fishes the accommodations they really need. Please.

Joseph M. Bellanca



The Seventh International Austrian Guppy Show 1968

PHOTOS AND TEXT BY DR. KARL KNAACK

Translated by Dr. Herbert R. Axelrod

SUPER STARS OF A SUPER SHOW

The Seventh International Guppy Show was held in Vienna, Austria from the 21st to the 28th of July, 1968. It took place in a beautiful room in the Natural History Museum. There were about 5,000 visitors to the Show during its week-long duration, many of whom came from other parts of the world. The Vienna Guppy Society, the hosts of the Show, were disappointed that more foreign entries didn't arrive, but they attribute this to lack of communication with American, Canadian and other Guppy clubs. This Seventh Show, was, however, the best they ever had with many entries from behind the iron curtain. The next Show will be held in 1969 and American and Canadian guppy specialists are invited to enter their guppies and to attend in person. For more information write to: Dr. Karl Knaack, Untere Augartenstrasse 1-3, Vienna II, Austria.

The fishes sent to the show from America were solely those of Joseph Bertagni, 428 DeWitt Avenue, Brooklyn 11207, N.Y. His guppies were the finest we had ever seen as far as intensive blue coloration and finnage was concerned. Unfortunately the color photos hardly do justice to the coloration. Bertagni's guppies made more points than any guppy in the history of the Viennese shows, and he won "Best In Show."

For the first time, the Vienna Guppy Society gave the honorary title "Austrian Master Breeder." Unfortunately this title is only available to Austrian breeders.

It would be impossible to describe in words all the beautiful guppies that we had at our show, but the accompanying photos show something of the wonderful fishes we had in Vienna. Everyone is invited to next year's show



First Prize
Triangle, Varicolored

Second Prize
Triangle, Varicolored

Third Prize
Triangle, Varicolored

(the date will be announced in the May, 1969 issue of this magazine along with instruction on how to enter your own fish).

Further information may be obtained now from Dr. Knaack or the President of the Austrian Guppy Society, Rolf Kaplan, Roseggerg. 46, A.1160, Vienna, Austria.

All the English entries were sent under the address of Mr. Delingpole. The results, by groups, were as follows. The point system used was based upon 100 points.

Continued on Page 83



First Prize
Triangle, Red



Second Prize
Triangle, Red



First Prize
Triangle, Blue



Second Prize
Triangle, Blue



First Prize
Triangle, Green



First Prize
Triangle, Half-Black



Second Prize
Triangle, Half-Black



First Prize
Fantail, 3/4 Black



First Prize
Fantail, Varicolored



Second Prize
Fantail, Varicolored



Third Prize
Fantail, Varicolored



First Prize
Fantail, Red



Second Prize
Fantail, Red



First Prize
Fantail, Green



Second Prize
Fantail, Green



First Prize
Fantail, Blue



Third Prize
Fantail, Blue



First Prize
Fantail, Gold



Second Prize
Fantail, Gold



Third Prize
Fantail, Gold



First Prize
Fantail, Bronzo-
Green



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Fin Problems
 Q. I. About a month ago I purchased a male betta. At that time he was in good condition. I put him in a 20-gallon community tank in which there was a large red-tailed black shark. I found the betta's fins torn in a few days. Could this have been done by the shark?
 Steven M. Greenberg
 Brooklyn, New York
 A. There is no doubt that the shark did the fin damage. The betta's flowing fins are too tempting for

barbs, large tetras and other fishes that tend to be nippers.
No Luck
 Q. I have five male bettas and five females. I have tried many times to spawn them, always with no results. I have used tanks from two to fifteen gallons, filled with aged and fresh water and water temperatures from 78 to 83 degrees. I condition the fish with brine shrimp and white worms, and I have used mosquito larvae. The fish are in good condition and the females are heavy and their ovispositions are showing. I divide the breeding tank so the pair can see each other. I have used set up tanks and a leave tank with only a plant. When the male builds the nest I put the female in with him which they have been quite interested in each other. The male ends up mauling the female and no spawn results. What procedures could I be leaving out or not doing right?
 @Karen Martin
 Seattle, Washington
 A. I don't believe you are leaving out any procedures, but I wonder



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if you are too anxious about the female. Some "mauling" is the rule rather than the exception with bettas. Torn fins and missing scales are the lot of the female betta when she is used for spawning. If the female has enough plant cover, there is usually little real danger that she will be killed. Some breeders have reported that unusually aggressive males become more gentle when kept in an aquarium of mixed species for about a month before breeding is attempted again. At least one breeder uses two females to one male. Perhaps this would decide the "mauling" up until the male got the breeding idea.

Albino Bettas

Correspondents of "Bettaophile" frequently refer to albino bettas. There is another albino. It is owned by Bernard Kindrick of Fort Wayne, Indiana who purchased it from its breeder. Like other albino bettas reported to date, this one is nearly blind. Its color is described as iridescent yellow with green overtones. The eyes are red with one apparently darker than the

other. Because of its poor sight, the fish searches the bottom like a catfish for food. As yet the fish, a male, has not been bred.

More Butterflies

Q. I have seen pictures of the Tutwiler butterfly betta in Beautiful Bettas and Senses Fighting Fish. Where can I purchase such a betta?

Mike Schroyer
Greencastle, Pennsylvania

A. There are two rather different fish being called butterfly bettas. Both are modifications of the Cambodian pattern, with one form having red coloration extending about half way to the margins of the fins with the rest of the fin transparent. The other, exemplified by the Tutwiler butterfly, has a band of color through the fins bordered by transparent sections. To the best of my knowledge these are not generally available from commercial sources. A number of breeders have them, however. At least one advertiser in this magazine sells above bettas to fanciers.


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The Smithsonian Institution and T.F.H. Publications, Inc. are pleased to announce the publication of a reprint, including the color plates, of the Philippine Bureau of Science's three Monographs on Philippine fishes: No. 1, Jordan and Richardson's Checklist, 1909; No. 23, A. W. Herr's Gobies, 1927; and No. 24, Montalban's Poma-centridae, 1927. These rare historical works are available in a clothbound volume for \$5.50.

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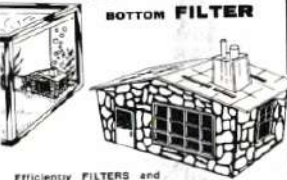
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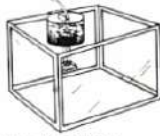
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Heaven Is Where The Angels Are... If...

Temperamental Star:

BY BOBBY NEVINS

This heavenly aquarium landscape of angels on the wing should convince any audience that aquatic vertebrates are stars in their own right, deserving of all the attention and time necessary to accommodate their needs. Photo

I like discus. I know they're generally considered the king of the aquarium. But personally I still think the angelfish is the most beautiful. I never get tired of watching them. There's something majestic about the angel. The way they move through the water never ceases to thrill me. They seem to glide across the aquarium as if they were hooked onto a wire like one of the ski-cars way up in the Alps which moves down in one long smooth swoop.

I know people say that angels are fragile. Hard to keep. Well, I guess in a way they are right. Angelfish have a style of their own. A way of living that requires that the aquarist go along with it, otherwise he'll lose the beauties.

Sometimes they seem to get very fussy with their food. And they won't eat for days, or even altogether. The trick is to determine whether it's a need for increasing the variety of feeding or whether the hunger strike is just a matter of constipation, sluggish irregularity. Angelfish have this problem, just like anyone else. A good way to help their irregularity problem is by placing a small dosage of Epsom salt within their aquarium water. That should assist them in their excretion problem and consequently help return their appetite.

And it's also true that angels are easily frightened. Just a shadow from a passing figure is enough to set their little hearts trembling. A scare will start them darting and dashing about the aquarium as if they were being chased about by some prehistoric dinosaur. This darting about can be quite troublesome because they even bump into the aquarium glass and bruise themselves; quite often this bruise can lead to an infection of fungi. So with angels it's best to provide some kind of hiding-shelter such as rocks and plants. A good idea for a tank with angels is to cover both right and left sides of the aquarium either with paper or aquarium crystal paint. In this way the angels will be less disturbed by activities outside of the aquarium. You can then approach the tank more readily without skirmishes from the angels.

Angels have very sweet faces. They look friendly. And they generally are. But you know. Everybody has their off days. Yesterday's sweetie pie can be today's sourpuss. If you're going to put small fish in with larger fish, don't make the fish too small. Otherwise you might have to call the fish ambulance.

I have a twenty gallon tank with four large angelfish. The water is somewhat on the acid side. I have a large seashell in the tank. Don't ask me why. I just do. I love it. And it seems to help the water conditions for these angels. I've had these particular 4 angelfish for about two years. So I must be doing something right. I don't

Pterophyllum scalare is an overwhelmingly gorgeous creature. But there is no guarantee that the small angels you purchase in a shop will grow to this size. You must know the stock from which the fry were originally bred in order to determine their size potential.



Some aquarists consider *Pterophyllum scalare* to be a prima donna. In fact, the domestic strains of this fish have become handier in many ways than their wild-stock when inhabits waters which are soft and on the acid side. Photo by Klaus Paysan.



Angels are one of the cichlids who do not place their eggs in specially dug holes. Instead, the female angel may deposit her eggs on a smooth flat plant, slate, a large smooth rock, or even glass tubing. Photo by Klaus Paysan.

A New Star: PELMATOCHROMIS THOMASI

BY H. J. RICHTER

During recent years, dwarf cichlid fanciers have almost been overwhelmed with the many new species. But there can never really be enough for the truly enthusiastic fancier whose only problem is where to put all the additional aquaria since he is interested in experimenting with every new species he can obtain.

Of the genus *Pelmatochromis* there were several new species too, which one could not pass without buying. One species that was being freshly offered but did not seem imposing enough for the fanciers was *Pelmatochromis thomasi*, imported in 1966 by Mr. Roloff, of Karlsruhe. Mr. Roloff caught this fish for the first time in 1962 in the Kenema district of Sierra Leone.

Like with many other species, the young of *Pelmatochromis thomasi* are not excessively pretty and striking. This is why many aquarists do not seem to pay much attention to them in the pet shops. As may be seen on the accompanying pictures, the so uninteresting young develop into real jewels which in their colors resemble *Microgeophagus* (*Apistogramma*) *ramirezi*, and *Aequidens curvicoeps* in their manner of living.

If they are kept well, meaning in well-planted tanks and with sensible feeding, the males reach lengths of 3¾ inches and the females 2¾ inches. The average size of specimens kept in tanks should be from two to three inches.

Pelmatochromis thomasi is a relatively peaceful inhabitant for our tanks, only it is apt to show its unfriendly side during the spawning period, but then, which dwarf cichlid doesn't?

When I saw *Pelmatochromis thomasi* in its full colour garb for the first time, it simply set me raving. I wanted to have taken the fish home with me right away, but this was something I could not do at the time, for then the species was still very rare and not for sale. It can not be called rare any more today, for the species is very productive, which means that it should soon be available in quantities. Four hundred to five hundred fry from one spawning are nothing out of the uncommon.

One day I received a marvelously pretty pair and placed them in a thirty-eight gallon tank in which, besides *Microgeophagus* (*Apistogramma*) *ramirezi*, some anabantids were swimming. The tank was well-stocked with plants, and the bottom covering consisted of a mixture of porphyry and basalt gravel. A suction-filter pump provided for a continuous flux of the water.

On the bottom, not far from the pump, I placed a slab of petrified wood, in the hope that the fish might accept it as a spawning site so that I then might photograph their spawning. My hope came true indeed. I wish to remark further that the water assayed a hardness of about 6° DH and a pH value of about 6.0. Already the next day the pair had taken possession of the stone and defended it jointly against any other fish. I fed them abundantly on mosquito larvae



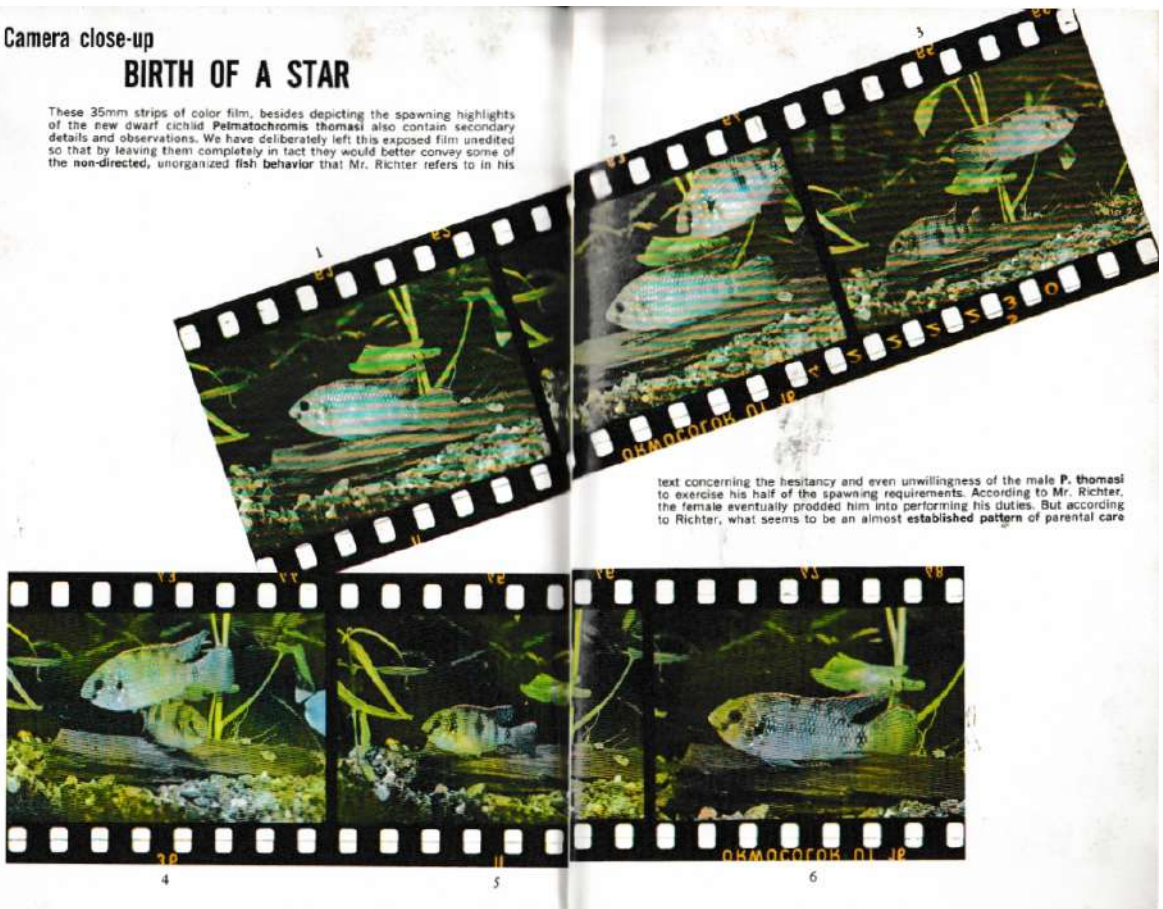
A sparkling new addition to our galaxy of tropical fishes is *Pelmatochromis thomasi*. This species displays amazing similarities to the genus *Apistogramma* or *Aequidens* in physical appearance and behavior. Even its spawning behavior is typical of the *Pelmatochromis* genus, unlike many of the species of the *Pelmatochromis* genus who oviposit with their bellies turned upward. *P. thomasi* oviposits in a normal body stance (similar to a spawning female *Aequidens*) resulting in eggs that are positioned on the lower part of the substratum. Another interesting difference in this new species of *Pelmatochromis* is that this fish is not shy or reclusive as many of the other members of this genus are. In fact, outside of spawning time, this talented newcomer would be excellent casting for a starring role in the daily drama of your community tank. Photo by S. Frank.

Text Continued on Page 51

Camera close-up

BIRTH OF A STAR

These 35mm strips of color film, besides depicting the spawning highlights of the new dwarf cichlid *Pelmatochromis thomasi* also contain secondary details and observations. We have deliberately left this exposed film unedited so that by leaving them completely in fact they would better convey some of the non-directed, unorganized fish behavior that Mr. Richter refers to in his



text concerning the hesitancy and even unwillingness of the male *P. thomasi* to exercise his half of the spawning requirements. According to Mr. Richter, the female eventually prodded him into performing his duties. But according to Richter, what seems to be an almost established pattern of parental care

author has not described, or did not originally observe on set or in his review of the photographs afterwards. You probably have already noticed that both female and male of this species is quite colorful. And in these photographs there doesn't seem to be too much of a difference in their body

among cichlids, was in the case of the male *P. thomasi* only fragmented and unpredictable. We hope that our readers will carefully study these original film strips noting any subtleties, or possibly discovering something that the



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sizes. Of course the pigmentation displayed by these fish within these photos is much more intense than they would ordinarily exhibit since this is breeding time. The female in these photos displays more of the dark, irregular patterns of color on her body than does the male. Also her dorsal is slightly less pointed than the male's. The male seems to be gliding across the eggs as he fertilizes them, while the female is more static as she deposits the ovate eggs with her ovipositor.

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Text Continued from Page 39

and daphnia. Then things started to happen. On the fifth day after the fish were placed in the tank, the female was carefully cleaning the rock, while the male was on the look-out on an advanced position chasing away all intruders. I got my camera ready and waited patiently for the events that were coming. My wait was not very long. Suddenly, the female approached the male and started the courting games. One could now notice the protruding ovipositor of the female, and her girth led to the hope that a sizeable number of eggs was forthcoming. After short courting the two fish swam to the slab of petrified wood and cleaned it together. During this the male

Continued on Page 62

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by paul hahnel

Mutations?

Q. I am aware that many times a year you are bothered by people who think that they have a new type of guppy. But I think that I do have another type. They were born of variegated guppies, and were born as a batch of twenty or so babies. The other babies were normal color. There are three mutants: a male and two females. One female is just like a gold guppy. The others are gold but of a darker shade. To illustrate, if one were looking at a picture similar to the one in your old Guppy Corner masthead, the light gold would appear to be without scales, while the darker one would have scales showing like the guppy in the picture. The darker female has some black on the top fin and the tail,

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and the male has black and white on fin and tail. I have the three mutants and several females from the same batch in the same tank hoping to get some babies of the light color. Could you tell me if

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Tropical Fish Hobbyist

there are any similar guppies in existence?

Paul E. Malloy
Milwaukee, Wis.

A. It is not unusual for mutations to show up in any strain of guppies. For instance with the blue strain, I did, in fact, get some golden mutations. I reared them till they were about 6 to 8 months, but they were nothing to brag about, so I sent them to guppy heaven. Also, the scales were lined with black markings, the way you mentioned. These particular fishes in a fish show wouldn't get a second glance from a judge. I hope your mutations turn out better than the ones I had.

Hungry Parent

Q. I have one tank devoted entirely to guppies, my favorite fish. I have

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had a dozen or so large broods of baby fish, and have had no trouble at all in raising them. My question is, why is it that my female guppies are the only ones that eat their young? I have made several tests and have found out that not one of my male guppies will eat baby guppies. Could you explain this?

Richard Hatch

San Bernardino, California

A. I have noticed that sometimes male guppies will chase the babies, but they are not able to eat them because their mouths are too small. But there can be an exception to this, if the male guppies are very large.



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BY ALFRED A. SHULTZ

Q. In your magazine, in a back issue, I saw a photograph of a beautiful salt-water fish which was called the French Angelfish. The scientific name given was *Pomacanthus paru*. In this photograph the fish had gorgeous yellow stripes. Then recently in a book on salt-water aquarium maintenance, I saw a photograph of a fish with the caption *Pomacanthus paru*. But it definitely was not the same fish.

It didn't look at all like the first photograph. Somebody on your magazine or the person that wrote that book made a mistake.

Gary Zeller
Boston, Mass.

A. The French Angelfish *Pomacanthus paru* does have beautiful yellow bars in its juvenile form. It is a very popular salt-water fish. Sorry to say though, that as this



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Tropical Fish Hobbyist

species gets older, it loses those lovely yellow markings and grows into a fish which isn't as attractive as its young form. Many salt-water fishes look different in their mature form in contrast to their juvenile appearance. This is the reason for a great deal of confusion among ichthyologists who are just beginning to reclassify many of the species whose juvenile forms were accorded species status incorrectly. In all probability both photographs that you mention contain the French Angelfish. The book photo probably depicts the mature form of this fish.

Q. A friend of mine and myself had an argument. He said that salt-water fishes are more aggressive than fresh-water fishes. I said that was not true. Could you tell me if my friend was right or wrong? Even though I argued against him, I really wasn't quite sure.

David Cohen
Akron, Ohio

A. Your friend was 100% wrong. Salt-water fishes in general possess

temperaments that are just as peaceful as fresh water species.

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You will have some of the same problems as in keeping fresh-water species, i.e., competition among members of the same species over food and territory, but the aquarist can minimize any of these difficulties with salt-water fishes in some of the same ways that the fresh-water aquarist resolves these same problems with his fresh water fishes. You must select in advance salt-water fishes that are known to be compatible. There are salt-water fishes that get along very well together. And there are species that are so beautiful that even though they require their own special tank, this extra effort would be well worth the trouble. You have that same kind of problem with fresh-water cichlids. Also, when setting up a salt-water tank, if you provide the proper environment for your fishes, such as hiding places and the proper water chemistry, your fishes will tend to lose any tendencies which you might consider negative behavior. Quite often improper maintenance of a tank will cause certain salt-water fishes to act nastily, just as is the case with fresh water fishes. In keeping salt-water fishes it is important to remember certain rules which you learned in the fresh-

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marine aquarium

water part of the hobby; if you are attempting to keep various species in the same tank, or members of the same species, it is best to try and obtain fish of sizes which are not too dissimilar. In this way, you can avoid larger fishes taking advantage of smaller ones. Of course with larger capacity tanks and good hiding places, this problem is lessened. In fresh-water and salt-water aquarium-keeping, the aquarist can learn how to bring out the best in his fishes.

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repeatedly swam in a circle around the female, while he kept his fins extended. Off and on, you could also see the quaking motions that are typical of all *Pelmatochromis* when courting.

Nearly the whole surface of the slab of petrified wood was cleaned, though I was unable to imagine that they would need all that space for their eggs. I was to find out later that indeed they used only a small part of the cleared area.

Almost as if they were staging a dress rehearsal, the pair glided alternatively over the rock for a last time, pressing as close to it, as if they already wanted to spawn. The male made a final survey of the surroundings and chased all intruders away, while the female glided over the rock again, this time releasing her roe. Then she stood above the eggs with spread fins as if wondering why the male was not there to fertilize them. She was probably thinking: "Oh well, he'll eventually show up in due time." So she made use of the time to spawn some more eggs. Again the posture above the eggs ensued with their eyes turned towards the male. He did not seem to suspect what was happening and remained aloof. The female then considered that things had gone far enough and swam towards her mate. Then and there she reminded him of his duties with her spread fins, and he finally did what was expected of him. So the male then glided over the eggs and fertilized them. Sometimes the male stayed near when the female was spawning, but at other occasions he took his leisurely time, especially if he was busy chasing away unwanted trespassers. There was one occasion when the female released eggs four times in a row before the father showed up to fertilize them. Thus, I was able to watch the amount of spawn increasing continuously during half an hour.

After finishing the act of spawning, it was the female at first who was in charge of the eggs, while the male watched the neighborhood, by no means permitting any other fish to approach his nest. If this should have come to pass despite his watchfulness, he dashed lightning-like, with spread fins, upon the intruder, who then withdrew without further urging. During the period before spawning the male was satisfied with this, but later the trespasser was hurried along for quite some distance. Then the female wished to be relieved from her task of busily cleaning and fanning the eggs. With spread fins she swam up, on the look-out for the male. If he happened to see his mate, he immediately returned and continued the work of caring for the spawn. In this manner male and female alternated in

good understanding, until the female dug a pit . . . and the eggs disappeared. This generally happened on the third day. But as much as I looked into the pit, no small fry were to be seen. Having probably considered their roe a welcome delicacy, the pair had cheated me out of a beautiful picture of them and their family, and also of a very desirable new population of fishes. Unfortunately these happenings kept repeating themselves, so that I was forced to restore to technical breeding. By this means I was able to get baby fish too. Soon about three hundred fry were swimming contentedly in the nursery tank. They grew up quickly on a diet of brine shrimp and cyclops nauplii. Within a fortnight they were already able to eat small cyclops. All things considered *Pelmatochromis thomasi* should become popular with American aquarists and aquarists all over the world because it is an exquisite species that is not difficult to maintain.

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10A. Total No. Copies Printed (Net Press Run)	40,180	50,000
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1. Sales through dealers, agents, etc.	20,601	21,968
2. To term subscribers by mail, carrier delivery or by other means	18,311	19,904
C. Total paid circulation	39,000	41,232
D. Free distribution	1,467	1,467
E. Total distribution	40,469	42,699
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come first, worry about the plants later. Of course very basic to your problems is the matter of filtration. Is your filtering system adequate to handle the size of the tank with the number of fishes you have placed within the tank? You can't just throw various aquarium elements together, without any preconceived plan. You might enjoy just throwing things together but they seldom work out properly and if they accidentally do, you don't know what you did right or wrong in the first place, so that later if there is trouble, you'll have no way of evaluating or judging as to what to do in order to correct the troubled situation. Also you say

you've changed from alkaline to acid (6.8-7.0). That doesn't make sense as you've stated it, because 6.8 is an acid reading, 7.0 is neutral; so according to your figures you really went from acid to neutral, i.e. if you haven't twisted the data in attempting to write this letter. As to plants, novice aquarists should stick to utilizing only a couple of compatible types of plants in their first aquariums. Plants aren't easy to maintain. They need special handling just as do the many different kinds of fishes. Some plants require more light than others, and some are especially touchy about water conditions. And there are aquarists who



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have complained that they have a great deal of trouble keeping Sagittaria and Vallneria in the same tank. It is impractical in the limited space of this column to explain in detail the rudiments of the tropical fish hobby. But it seems clear from your letter that you would well use your time by reading or re-reading the many informative TFH books and book-

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Fish Search

Q. When I got the September issue of *Tropical Fish Hobbyist* I saw the new variety of G.T.O. (*Gymnoconurus ternetzi* shih). I was overcome when I saw the beauty of this fish and I knew I had to go out and get it. So I went to four pet stores and they said they do not as yet have it. I would appreciate it if I could obtain this fish somehow from Gulf Fish Farms which I believe sells only wholesale. I understand they are making it possible for this fish to be sold in the United States.

Thomas Savin
Union, New Jersey

A. Tom, you are not alone in your admiration for the G.T.O. that appeared in our September issue:



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lets which are devoted to assisting you in properly setting up a tank. These TFH publications will help you in selecting fish, the right tank size, and the kind of filtration systems best to use. You'll also discover what kinds of plants do well together. Any diagnosis of what's ailing your tank setup based on the incomplete and contradictory information you have provided would of course not be 100% correct. But I would venture to say one of your basic problems is an overcrowded tank that is inadequately being filtered and aerated. You probably have had a build-up of organic impurities in your tank which has led to other complications.

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Cichlid Bowl?

Q. I've been wanting to ask you a question. If you had a pair of cichlids that were going to spawn, and you didn't have an extra tank, would they spawn in a fish bowl? If they would, what size fish bowl? Also, here's a poem I wrote that I thought your readers might like.

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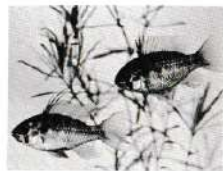
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Mary Helen Montez (14 yrs. old)
San Jose, California



Apistogramma ramirezi

A. Fish sometimes break their own rules, and will confound the experienced aquarist, so to say that your cichlids will definitely not spawn in a fishbowl is too absolute of a statement. What species of cichlids are you referring to? Possibly, you could perform a miracle and spawn a pair of dwarf cichlids in a very large, well aerated fish-

bowl of at least 2 gallons, but it's doubtful. A tank is best, and even a tank must be of the proportions necessary for the particular type of cichlid. Besides, if by some weird quirk your dwarf cichlids did spawn in a large bowl and the eggs hatched, you would still have to transfer the fry to an aquarium where they would have the proper space and adequate aeration to survive. Also larger tanks mean less chances for polluting the water in case you accidentally overfeed the fry. Thank you for your poetry. We enjoyed it and we are sure many of our readers share your feelings about the hobby.

Fry Deaths
Q. I recently purchased a pair of black lace angel fish that I believed to be a pair. I put them in my 15

gallon tank with a strip of slate for them to spawn on. After a few days, the pair spawned upon the slate. I removed the slate to an aquarium filled with the water of the same 15 gallon tank, added two drops of Methylene Blue to the gallon and put an airstone near the eggs. After a three day interval, the eggs were hatched and were either lying singularly or in clumps on the bottom of the tank vibrating vigorously. After another three day interval, the fry started dying quickly. After they broke away from the clumps they would dart along the bottom for an hour or so and then die and turn white. After the seventh day, I had no fry left.

Doug Watson
Drew, Mississippi

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Swordtails For The Advanced Hobbyist

Swordtails are one of the most beloved and popular of aquarium fishes. The book "*Swordtails For The Advanced Hobbyist*", by Drs. Myron Gordon and Herbert R. Axelrod, is a must for any aquarist who desires to increase his knowledge of these special fishes. Detailed information as to maintenance, genetics, identification and reproduction are included along with numerous scientific color photographs which will aid you in understanding and properly identifying these handsome fishes, including all the very latest man-made varieties (lyretail, hifin, fancy blacks, etc.). Printed on thick, glossy coated paper, this book will last you a long time so that you can continually refer to it. This is the best book ever published on swordtails — a worthwhile investment for only \$2.00.

A. First of all, congratulations on having been able to recognize a pair of angelfish; most aquarists aren't able to distinguish a male from the female of the species. In fact it isn't easy for anyone, without scrutiny. In your letter you do not mention the size of the tank to which you transferred the fish eggs. You did not include any information at all that would be relevant in deciding what went wrong. For instance, your water temperature might have changed from what it was originally, because of the different temperature surrounding the new tank setup location.



Young ANGELS

tion. Did you have a heater in the new tank? And newly born fish of course require special attention when it comes to receiving the proper temperature. Nor do you mention how powerful was the pump that was working in conjunction with the airstone. Setting the water in motion too violently, and the airstone too closely situated to the young fish could hinder rather than help. Aeration is needed, but not a hurricane! Also, had you provided any infusoria for the fry to feed upon? And if you did, maybe in your enthusiasm, you became overly generous, thusly helping to pollute the water.

Puffer Information

Q. Recently I purchased a young Murus (or Murial) puffer. All I could find out is its living and feeding requirements, and couldn't find anything about it in any books. Is there any information you can give me as to size, habitat, coloring, etc.?

Eric Oken
Hollywood, California

A. *Tetraodon lineatus*, popularly known as the Congo Puffer, is one of the puffers that does live in fresh water. The Congo river in Africa is its natural home. Supposedly they are able to grow to reach a 3 inch size, although I personally have not seen recent importations which included specimens that were of that large a size. The coloring of this species defies accurate verbal description because they are capable of very rapid color changes. Sometimes they look a smoky grey, other times they appear to have a mottled brown coloring with a flesh colored background. Their coloring is not what attracts aquarists but rather it is their very interesting behavior. Generally, they should not be kept with other species because they will chew up other fish.



Tetraodon murus

Unusual Betta

Q. It is with some concern that I write this letter to you about a situation concerning one individual

of a particular species. I am a proud owner of one of your publications "Encyclopedia of Tropical Fishes" and it was in the preface of this book that I found out that you would welcome any new or unusual information on fishes. What I have to say, however, is not really to present information on any new techniques of spawning a new kind of fish but merely to report what seemed to me an unusual occurrence.

A few months ago I observed my bettas (or fighting fishes), a female who had shed her eggs without the aid of a male. She was placed in a container by herself and yet, one day I saw a large number of eggs scattered on the bottom of the jar. Needless to say, within minutes she had eaten them all up, but the idea that she had

shed her eggs all by herself is rather startling to me. Is this unusual? This is what I would like to know.

Anthony Narine
Trinidad, West Indies

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A. Dr. Axelrod has asked me to thank you for the letter. He also requested my telling you that the occurrence of your female betta shedding her own eggs is extremely unusual though he has heard of it happening before on rare occasions. Events like this sometimes confuse the aquarist but on the other hand things of this sort only serve to whet the appetite of the serious aquarist who has because of his hobby become interested in biology, biochemistry, taxonomy, etc. Why not accept this unusual event as a reason for you to investigate further with your own experiments and research into betta behavior.

Wandering Mollies

Q. Living in Florida I have access to a great many drainage canals. Recently while looking for live foods, I spotted several extremely beautiful *Mollisnia velifera*, along with colorful specimens of *Mollisnia latipinna* and *sphenops*.

1. Isn't it unusual for such fine varieties to be in canals as are in my area?

2. I also found them to be living in irrigation ditches directly supplied with water by an artesian well. I would like to put some in my home community aquaria. Would a change from sulphur to city water I use be feasible?

Brian McCartney
Vero Beach, Florida

A. 1. The geographical range of *Mollisnia sphenops* is Mexico, Central America and parts of South America. *Mollisnia velifera* is found within Yucatan. So it is definitely unusual to find these species in your local waters. Some aquarist or fish farmer must have planted them there. Only *Mollisnia latipinna* has a range which includes the southeastern coastal United States south to Yucatan.

2. If you decide to maintain these newly found mollies, condition your water so that it is somewhat hard, slightly alkaline, and add one teaspoonful of salt to each gallon of water.

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LOWER SWORDTAIL, GRAY

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Second Prize: Richardson (England), 71 points.
Third Prize: Kratochwil (Austria), 70 points.

DOUBLE SWORDTAIL, GOLD

First Prize: Kahrer (Austria), 60 points.

LOWER SWORDTAIL, GOLD

First Prize: Lindschouw (Denmark), 66 points.

SPADETAIL, HALF-BLACK

First Prize: Jinks (England), 63 points.

First Prize: Hein (Germany), 63 points.

Third Prize: Hein (Germany), 62 points.

SPADETAIL, RED

First Prize: Kaden (East Germany), 62 points.

Second Prize: Jinks (England), 60 points.

Third Prize: Knaack (Austria), 54 points.

SPADETAIL, FLAMINGO

Knaack took the first six prizes with scores from 65 to 62.

ROUNDTAIL

Bechet took first two prizes with scores of 58 and 55.

VEILTAIL, PINTAIL and POINTED TAIL

First prizes all taken by Delingpole (England) with scores of 77 to 58 points.

SPECIAL GROUP-COLOR

Honorable Mention for Pfand, Mascha, Kaden, and Gellrich, in that order.

SPECIAL GROUP-FORM

Won by Müller (Germany).

SPECIAL GROUP-FEMALES

Honorable Mention for Sykora and Naumann, in that order.

SHOW CHAMPION-BEST IN SHOW

Bertagni (USA), 88 points.

The following are the names and addresses of the winners which are published to encourage contact between the various countries.

- Joseph Bertagni, 428 DeWitt Avenue, Brooklyn, N.Y. 11207 USA
- Richard Busch, Jahnstr. 7, 4130 Meerbeck-Moers, Germany
- Max Kahrer, Schwiegerstr. 7/7, A 1150, Vienna, Austria
- Gerhard Gellrich, Saalg. 9, 6000 Frankfurt/Main 1, Germany
- Herbert Mörth, Am Schierlinggrund 56, A 1220 Vienna, Austria
- Heinrich Brachet, Goebenstr. 9, D 6200 Wiesbaden, Germany
- Randolf Litzrodt, Marktstr. 28-31, DX 30 Erfurt, East Germany
- Mr. Delingpole, Fairfield, Raidford Road, Alvechurch, Birmingham, Eng.
- Stephan Mascha, Am Mühlgraben 72, A 8041 Graz VII, Austria
- Helmut Künzel, Alt Kettenhoferstr. 3, 2320 Schwedat b. Wien, Austria
- Herr Müller, Im Heckhofen 7, Rumeln Kaldendorf, Austria
- Erwin Renner, Marktgasse 6/12, A 1090 Vienna, Austria
- Friedrich Gazareck, Parkgasse 13, 1030 Vienna, Austria
- Dr. Werner Tritta, Lindauergrasse 36, 1160 Vienna, Austria
- Joseph Kratochwil, Brüsslgasse 4-12, 8/2, 1160 Vienna, Austria
- Alfred Hein, An der Engelsfuhr 49, 507 Berg, Gladbach, Austria
- Dieter Kaden, Rosa Luxemburgstr. 8, DX 806 Dresden, East Germany
- Klaus Pfand, Käthe Kollwitzstr. 1a, DX 55 Nordhausen, East Germany
- Rudolf Sykora, Frühlingstr. 10, DX 806, Dresden, East Germany



First Prize Form

This elegant and spacious Museum of Natural History in Vienna, Austria was the site for this most impressive guppy competition.



First Prize Lower Swordtail, Emerald



First Prize Lower Swordtail, Gray



First Prize Double Swordtail "Vionneso Emerald"



First Prize Double Swordtail, Gold



First Prize Double Swordtail, Gray



Third Prize Double Swordtail, Gray



First Prize Veiltail



First Prize Pointed Tail



Helostoma rudolfi is not overly colorful but in the right light it does display a pearl-like texture and lovely sheen. And in a large aquarium, its playful exuberance adds a cheerful dimension.

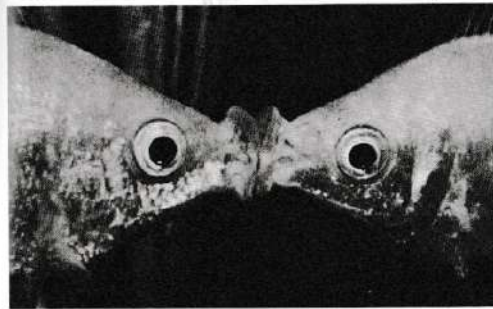
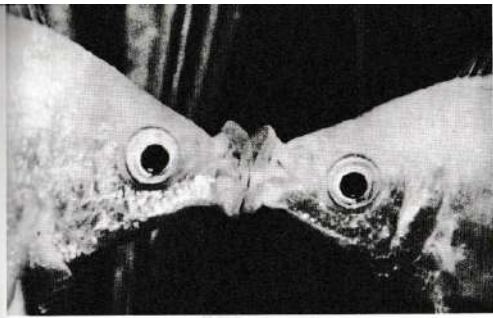
a romantic star

ALWAYS ON THE SCENE

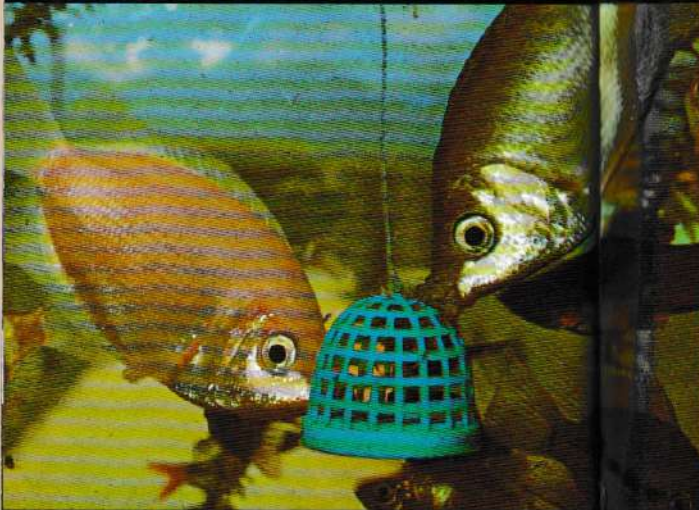
BY J. M. BELLANCA

Did you ever get the feeling while watching your aquarium that you were really looking at an old silent movie . . . you know those great old films featuring the Keystone Cops and Charlie Chaplin? Of course the apparent silence in anyone's aquarium would help one to experience this analogy. But if you had 4 kissing gouramis in your tank as I have in my 55 gallon aquarium, this silent film effect would be even stronger, for these gouramis really look like those old time movie actors whose exaggerated comical facial expressions depended upon the effect of large dark eyes standing out against

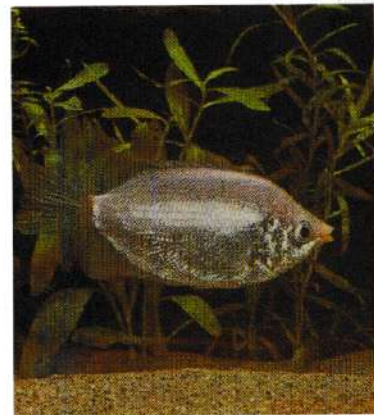
Imagine this kissing scene on a large movie cinemascope screen! This behavior of *Helostoma rudolfi* may appear like love to the novice aquarists. But in reality, ichthyologists have not as yet explained the function or functions of such behavior. Whatever its function this kissing commences without any warning; the timing is unpredictable, and this enhances the humorous shock value of the event. Obviously these fish don't kiss and tell.



Tropical Fish Hobbyist

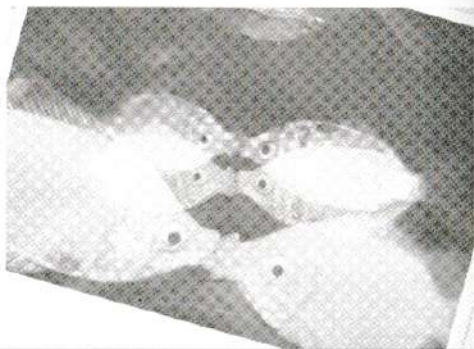


Feeding time with the kissers is a charming spectacle especially with a feeding bell which forces them to pucker up in order to obtain the food. *Helostoma temminckii* on the right in this photo is the species of kissing gourami that is not often seen in pet shops. Both of these anabantids at spawning time blow bubbles but do not build the prototypic anabantid nest. Photo by David and Santayana Chen.



Some aquarists and scientists believe the eyes of the kissing gourami to be of more interest biologically than the study of the kiss behavior. Meristically, the eyes may eventually serve as further distinctions between *H. rudolfi* and *H. temminckii*.





This fantasy montage was created to show what it would be like to have several pairs of *Helostoma rudolfi* kissing at once. Looking into an aquarium window with such a happening would be like looking into the car windows at a drive-in movie, except that the aquatic love-in would be innocence personified.



an overly made up white face. And not only does the kissing gourami look like the great old time cinema stars, it moves just as they did—fast and choppy, especially when it commences its hilarious kissing routine.

The kissing gourami *Helostoma rudolfi* (no relation to Rudolph Valentino) has been on the aquarium scene a long time but it always deserves praise and comment because it thrills the new aquarist who first sees it, and keeps charming the pants off the old timers. It is native to the waters of Thailand, Sumatra, Malaya. In these waters this comical fish is reported to reach a size of at least 10 inches, but generally the largest they grow within aquaria is about 7 inches. Surprisingly, this species can become quite aggressive, and if it feels especially comfortable in your aquarium setup, it will tend to become quite bossy, stopping other fishes in your tank from getting their share of the food. This fish usually is more scrappy towards its own kind, sometimes unmercifully so. One of the attributes of this fish is that it will eat practically all kinds of food including flake and freeze-dried, and really enjoys a serving of Dr. Axelrod's Algi-flakes. Nor is this fish difficult to please with its general water conditions: it will survive nicely in a community tank.

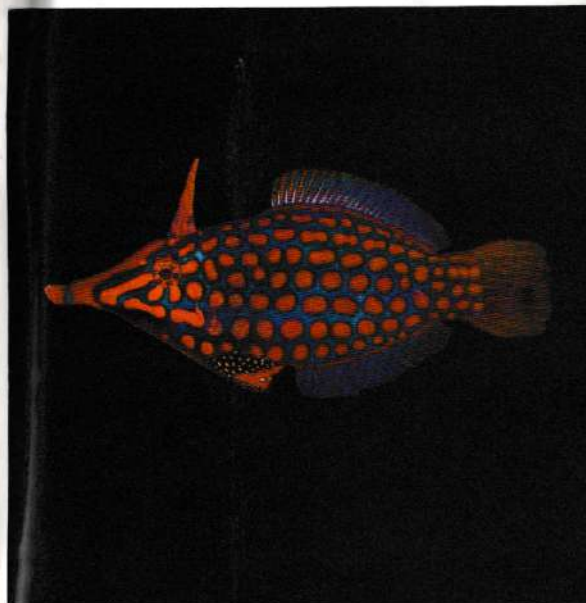
There is another kissing gourami other than the pink one which we often see in our pet shops. This other species is *Helostoma temminckii*, a green colored fish with a dark stripe in the anal and dorsal fins. Neither of these species is easily sexed for there is no sexual dichromatism or any apparent external structural differences. But there have been successful recorded spawnings of *Helostoma rudolfi* in this country. Supposedly the kissing gourami is not ready to spawn until it reaches a size of 5 or 6 inches. It doesn't build the orthodox bubble nest as is associated with anabantids, and unlike betta eggs, the kissing gourami egg floats to the surface immediately. The parents are reported to be notorious egg eaters. Spawning requirements reported, included a 65 gallon or thereabouts size container. But you don't have to spawn kissers to enjoy them; studying their curious, comical behavior is reward enough. And these funny fish seem to really enjoy our attention. In fact, the kissing gourami's theme song might well be, "Let Me Entertain You".

Suitable tankmates for the kissing gourami should possess characteristics such as speed and aggressiveness. Only with such qualities can peace be kept in the aquarium. Living with the kissers would mean having to be on the defensive with an occasional offensive maneuver to show the kissers who's boss. *Gymnoconylus torquatus* and *Cappeta tetrazona* (tiger barb) would make courageous companions of the smaller fishes. *Metynnis schreitmulleri* (silver dollar) *Trichogaster trichopterus* considering their behavior and large size should also be compatible.

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FOUR STARS FROM THE SEVEN SEAS

Pomacanthus imperator is a famous star of the waters of the East Indies. This salt-water species looks as if an inspired artist had taken tubes of his oil paints and squeezed the colorful thick paints right onto its body into ribbons of vibrating hues. In Europe, this living palette of colors is very often featured in public aquaria, where its startling presence draws big crowds. This is not a species that the novice salt-water aquarist should attempt to maintain. Photo by Dr. John Randall.



The family of fishes *Monacanthidae* can be very proud of its star member *Oxymonacanthus longirostris*. This oceanic optical illusion is a celebrated species who still causes the eyeballs of those who look upon it for the first time to dance round and round in rock tempo. But this hypnotic first meeting between aquarist and filefish usually leads to a story with an unhappy ending: the filefish is not the easiest of salt-water species to maintain for when kept in a marine aquarium with other fishes it cannot at feeding time get its fair share of the food because its unusually small mouth necessitates its taking longer time to eat. But by the time *Oxymonacanthus longirostris* begins to feed, the other fishes have devoured everything. Do you think that this amazingly attractive species deserves a tank of its own? Photo by Dr. John Randall.



Ostracion lactoria is a comic salt-water species whose performance on the aquarium always brings applause and laughter. Its unusual locomotion and funny face make it a favorite with marine enthusiasts. While this species possesses the hard external shell typical of the cowfishes, its especially long horn-like extensions distinguish it from other species of the **Ostraciidae** family of fishes. How did a cow ever get into the ocean? Photo by Marcuse.

No, this isn't the loser of the November presidential election, but **Antennarius hispidus**, a truly interesting species of the salt-water frogfishes. Most of these fishes wait for things to come to them including their food (live fishes) which they attract with their lures. If you look between the eyes of this fish in the photo you will notice this angler lure structure. Their roughly textured loose skin is capable of minor color changes that enable it to blend in with its background. It can be kept in a marine aquarium where it would prove hardy and hilarious. The oceans of the world have provided the aquarists of the world with great diversity and beauty. Let's help preserve the oceans of the world from pollution and destruction as has been done to our atmosphere. Photo by Hansen.



Contest Winners

Here are the November winners. The judges had a difficult time making a decision because of the many fine photographs. Dr. Axelrod said that maybe we should eventually publish all the entries regardless of whether they are winners or not. We'll see. If you haven't entered our photo contest, you can do so by first reading the rules which were published in the May 1968 issue of **Tropical Fish Hobbyist**.



(Category I) Close-Up. Alex De Zetter, Gentbrugge, Belgium

(Category II) Landscape. Robert Ruth, York, Pa.



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