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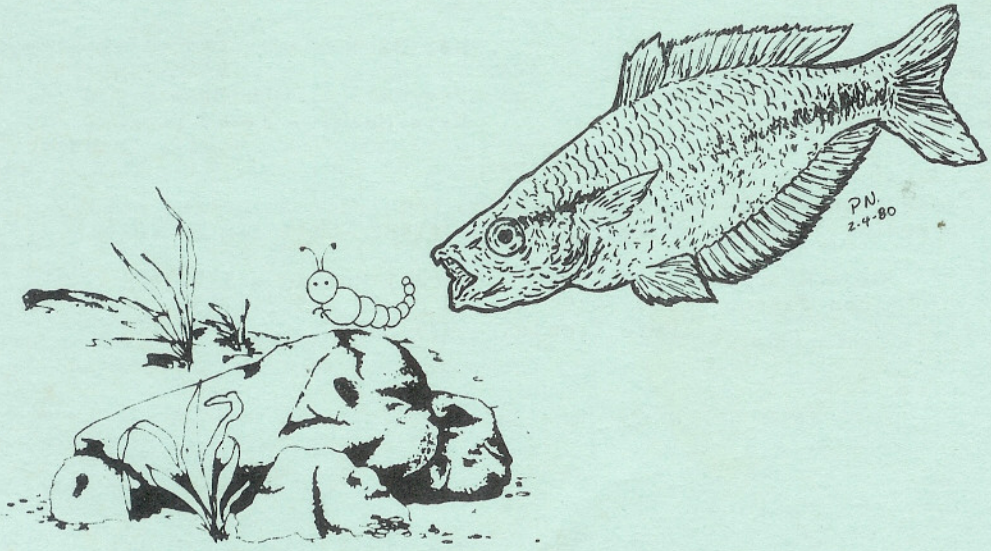
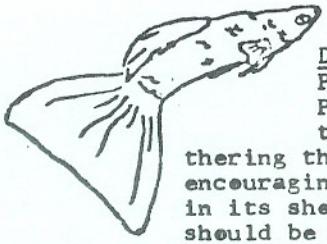
MARCH 10 MINI-AUCTION





Delta Tale is published for the benefit of the Potomac Valley Aquarium Society (Formerly the Potomac Valley Guppy Club), a non-profit organization, established in 1960 for the purpose of furthering the aquarium hobby by disseminationg information, encouraging friendly competition, soliciting participation in its shows and promoting good fellowship. Correspondence should be addressed to: Secretary, P.V.A.S., P.O. Box 6219, Shirlington Station, Arlington, VA 22206. Original articles and drawings may be reprinted if credit is given the author and Delta Tale. Two copies of the publication in which the reprint appears should be sent to Delta Tale, which will forward one copy to the author/artist. All materials for inclusion in the Delta Tale should reach the editor no later than the first Saturday after the monthly Monday meetings.

EDITOR: Maggi Mahoney

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Cover Illustration: Pierre Nelson - New Guinie Rainbow Melanotaenia affins, Ted Gilbert, plants

MINUTES OF THE FEB.7,1980 BOARD OF GOVERNORS MEETING:

Woody called the meeting to order at 7:55 p.m. at the Aldridge residence. Darrell Holamn, Ruth Brewer, Joe Paull, Ken and June Reece, John Jessup, Pete Tietjen, Nancy Reynolds, Woody Griffin, Bill and Brenda Kent, Kenny Warren, Bill Trout, Ed Smith, Gene and Millie Aldridge, Pat and Maggi Mahoney were present.

Coke plant is definatly confirmed for our spring show and auction on 17 and 18 May -- and we can stand by on Friday night the 16th until the meeting being held at the plant is over, so that we can set up at that time instead of Saturday morning as we have in the past.

Dana has finished the flier and can have it printed after the board has oked it.

John Jessup and Heinz Lenzen donated enough trophies to cover 6 quarters of bowl show awards. We will buy the trophies for the show and will have to buy more 2nd and 3rd place ribbons. Someone will have to go to Manassas to pick up the dealers trophy in April.

The letters to the judges are ready to be mailed. Letters to aquarium suppliers asking for donations will be ready by the 15th of this month. Letters to publications announcing dates and current officers have already gone.

At the April meeting -- if not sooner -- we will draft members for the various chores to be done at the May show and auction. The major door prize for the big raffle will again be a tank, stand and hood if the price is right. John Jessup will get prices to present at the February open meeting. Question was raised if we should have ticket books printed so that we can pre-sell on the big raffle prize. No decision was made.

There will be a show committee meeting --open to all interested -- on Sunday, April 13 at 2 pm at Pete Tietjen's.

Future board meetings will be held as follows: March, Woody Griffin; April, Bill Trout; May, Ruth Brewer; June, Ken and June Reece.

Another big box of food has arrived from Hills Kordon. Kenny suggested we give a container to everyone who buys a raffle ticket at regular meetings. This was approved.

The mini-auction was confirmed for the March open meeting, with a five bag per person limit.

Meeting was adjourned at 8:55 p.m.

Respectfully submitted,

Margaret E. Mahoney
Recording Secretary

MARCH BOWL SHOW CATAGORIES:

CICHLIDS	EGGLAYER/LIVEBEARERS
New World Dwarf	Killifish
Riftlake non-Mbuna	Catfish non-Corydorus
open	open

A new world dwarf is any North, Central or South American species whos ultimate size does not exceed 4 inches (10 cm) except mouth-brooders and Angels.

MARCH PROGRAM

*****THE MINI-AUCTION *****

Instead of a "program" as such we will have an auction of fish and related items at our regular march meeting!

Rules of the night are much as they are at our big one in May with a few variations to allow us to get home before midnight.

1. There is a limit of 5 bags per person attending.
2. Minimum on each bag will be $1 - higher if you wish to set one.
3. Registration will begin at 7:30 p.m. and will close at 8 pm -- you must be standing in line at the registration table at 8pm or you cannot register items to be auctioned.
4. Minimum bid raises will be in increments of 25¢ until $5 -- after that, 50¢.
5. The auctioneers decision on who gets the item is final. If there are any unsold fish or items at the end of the auction, registering owner should claim them. Unclaimed items will be disposed of at the auction committees descretion.

Remember that everyone is welcome - members and their friends, who include anyone who is interested in aquarium keeping. The auction will begin as soon after 8 as a short business meeting and organization allow. There will be a door prize, raffle -- and a bowl show as usual.

COME TO BUY -- COME TO SELL -- BUT COME TO THE MARCH MINI-AUCTION!!

BEGINNING WITH PEAT SPAWNERS

By: Ruth Brewer, PVAS

Realizing all too well that this is "cichlid country", I still feel a little missionary zeal to try to encourage a little variety in the Breeders' Award Program. That's the reason for this article on some of the "high-pointers" -- the peat spawning killies. A successful spawn of any of these beautiful little fish is worth TWENTY-FIVE POINTS. If nothing else, greed should get to you!

Even among hobbyists who have had a fair amount of experience with killies, the peat spawners are not the most popular fish. Some of the reasons for their lack of popularity are (1) they are considered to be messy, (2) they are thought to be delicate and short-lived fish, and (3) hobbyists are confused by the weird sounding instructions for hatching the eggs. The fact that you can't see them from across the room doesn't help matters with hobbyists who are accustomed to H. moori and the Oscar. Well, some of this is partly true -- but not all, and there are some distinct advantages which offset some of the disadvantages.

Peat spawners do look a bit messy when they are breeding -- if you use peat as a spawning medium and if you try to breed them in the display tank. Neither of these conditions is necessary. You can use a bowl of "green sand" (garden centers will know what this is if you ask), or you can use a bowl of extra fine terrarium sand, the kind that looks like granulated sugar. In either case, remove the bowl occasionally, dump it into a plastic shoe box half full of water, stir it up, wait a few seconds and sweep a fine-meshed net through the water. The sand settles faster than the eggs which wind up in the net. They are picked out and placed on a layer of damp peat moss, being careful that they don't touch each other, and covered with more peat moss to wait out the incubation period. Actually, spawning these fish over peat is not all that messy. Since the fish are small, they don't need too much space at spawning time. A pair of well-conditioned fish can be placed in a two gallon bowl, or a small terrarium with clean water of the same temperature and pH as their home tank and a small amount of peat. Add an airstone, cover tightly (<u>all killies jump</u>) and keep the pair there for a day or so. Feed lightly, preferably not at all, and then return them to their home. They should have left you a nice batch of eggs.

There are some killies which are "touchy" and not suitable for beginners, but for the most part, killies are quite hardy. One of their greatest advantages is that they are cool water fish, preferring temperatures around 68° to 72°. In fact, constant maintenance in the high 70's and above will definitely shorten their lives; thus, no heaters

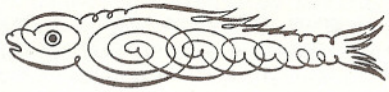
are required for them. The major disease to which killies are subject is velvet and this is seldom a problem if you keep their tanks reasonably clean. I am a firm believer in using one teaspoon of Kosher salt per gallon of tap water and letting it age for a few days before putting it into the tank. There are those who believe that the pH must be on the low side, but I have been successful without having to lower the pH of the tap water I get from Fairfax County. It is true that the peat spawners are shorter-lived than the plant-spawning killies, but they are not necessarily going to hatch, breed and die in a couple of months as they are forced to do in the wild. A little attention and some good food will do wonders.

One of the most fascinating things about the peat spawners is the method of reproduction. These fish come from areas which have prolonged periods of drought, followed by floods. Hence, nature has designed a group of fishes which produce tough-shelled eggs that can withstand long periods of dessication. The parents bury their eggs in the muck at the bottom of the pond and, even though the pond dries up, the eggs are still viable. When the rainy season fills the pond again, the eggs hatch out and a new generation is ready for business. The hobbyist must partially duplicate these conditions in order to breed the fish. That's where the peat (or fine sand) come in. The fish are placed in a tank with the spawning medium, after a day or so, the eggs are separated from the sand and placed in peat, or if laid directly in the peat, the peat is removed and rinsed in a large fine-meshed net and partially dried. It is then stored for the necessary period of time (depending on the species of fish) and then comes the good part. When the incubation period is up, the peat is placed in a container of water conditioned just as that used for the parents' tank, and in a period of hours the first hatch appears. Again, the plastic shoe box is an ideal hatching tank and another should be sitting ready to receive the fry once you succeed in getting them out of the hatching tank. A plastic oven baster is a great tool for this job. You should begin feed the fry on baby brine shrimp or powdered flake food by the second day. Small water changes can be made by siphoning through an air stone and a few snails in the tank will help a lot in avoiding pollution. Don't throw out the peat yet -- there's another precaution nature took in this design. Not all the eggs are going to hatch at the same time. So, just as in the wild when you have a flash flood which only fills the pond for a day or too and then dries up, you will dry out the peat again and put it back on the shelf for another month. At the end of that time, repeat the hatching procedure and almost every time, you will get another hatch.

So far as I am concerned, the biggest drawback to keeping killies is the difficulty in finding them in this

area. Even so, from time to time they do appear in local pet stores and they do show up at many of our auctions. The best source is the Fish & Egg Listing in the AKA bulletin. PVAS is a member of AKA and you can see copies of the bulletins by checking with our librarian.

This article is not intended to be a complete guide to killie keeping, but only to hit some of the highlights. Several of our members have had experience with killies, both peat spawners and plant-spawners. If you're at all interested in these little gems, please talk to me at any of the meetings. If I don't know the answers to your questions, at least I can suggest others to help you.



A WORD FROM WOODY:

It was certainly gratifying to have such a large turnout at our February meeting. I have never seen so many fish entered in the bowl show at a meeting since I have been in P.V.A.S

The program presented by Joe Paull and Gerry Hoffman was thoroughly enjoyable and the slides were beautiful.

With this enthusiastic participation in the bowl shows and raffles, and Ruth Brewer's outstanding program procurement, our society will do nothing but grow.

For some of you new members, please feel at ease to ask questions and get involved, if you so desire. There is no pressure in our society, after all it is here for us to learn and enjoy.

I am looking forward to seeing everyone at our March Mini-auction.

Please come and have "fin"

Woody

The following two articles are re-printed from the Guppy Roundtable, Pan Pacific Guppy Assn., May/June,1978. The first seems to have dim origins - probably originating in the Chicago area circa 1964. Notes are the Roundtables editor's. The second is an original with the Pan Pacific organiaztion.

A SURVEY OF THE GUPPY
ITS HISTORY AND DEVELOPMENT
by Alfred Lange

The inspiration to write an introductory article on guppies dates back not only to the course requirement of a term paper, but also, and perhaps more specifically to an experience in a local pet shop: A mother had taken her son, on what was obviously a long promised visit, to see the tropical fish in the aquarium. Typical of a 6 or 7 year old, this little boy asked questions that his mother could not or declined to answer in public. "...what is a guppy and why are there so many babies in this one aquarium and none in any of the others?" Needless to say, I was moved by such inquisitiveness and inspired to begin this paper with the question, "What is a Guppy?"

A guppy can be many things to many different people. Primarily, it is a small, fresh-water, tropical fish belonging to the classification of "viviparus" (bearing living young). It is an omnivorus surface feeder. The guppy is one of the most common tropical fish that is raised in aquarium all over the world.

As a pet in a bowl, the guppy has introduced many children and adults to the thrilling experience of seeing a female bearing live young in the very view of the most inquisitive eyes of the observers. Because of bearing living, free-swimming young, the guppy is an educational asset in answering the puzzling questions concerning birth to the curious and searching mind of a child.

To both the hobbyist and the research scientist, the common guppy male has provided a challenge in establishing theories, and later, laws which would govern heredity. Though extensive work has been done by scientist and layman alike in establishing constant inherited traits from generation to generation in this genus of tropical fish, much work still desires to be completed or perfected. As examples: the albino and all-black guppy. To the professional guppy breeder and the hobbyist alike, it is the male, with his glorious and splendid spectrum of rich colors, who provides the beauty and variety in the aquarium. Thus, with the preceding description in mind and more to follow, one can truly say that a guppy is indeed a little fish of much interest and many characteristics.

The history of this colorful species is perhaps not as well known to as many people as its common name, "guppy". Yet, the guppy has not been known to the Western world for more than 105 years. Though the guppy is now also known by its unified scientific name, "Lebistes reticulatus," it took scientists nearly 50 years to agree on this classification.

In 1866, an English naturalist, Lechmere Guppy, living at that time in Trinidad and collecting plants, found some small fish swimming near the surface of a pond and sent specimens of his find to the British Museum. The curator of fish at the British Museum, Albert Guenther, named the unusual little fish "Girardinus Guppii" in honor of Lechmere Guppy and Charles Girard, an American ichthyologist. Under the scientific name "Guppii", this little fish became known in 1866 to

English and German Aquarists. Priorto Lechmere Guppy, two other scientists also had found a similar kind of small fish and each named it differently. One of these was Herr Peters, a German scientist. He obtained his fish from Venezuela and named them in 1859, "Poecilia reticulata", Poecilia meaning "little variegated fish", and reticulata, "netted".

Another man also to name the now commen guppy was de Filippi, an Italian. De Filippi obtained his fish from the West Indian Island, Barbados. Apparently he, too, thought that he had discovered a new fish, and named it in 1861, "Lebistes poeciloides". De Filippi was the first to use the term "Lebistes" by which the guppy now is known in scientific descriptions.

At first it was believed by scientistsof the late 1800's, that Guppy, Peters and De Filippi had discovered different species of fish, hence the different scientific descriptions came about. But in 1913, C. Tate Ragen, an ichthyologist at the British Museum, conducted a study of the three appearingly different species. As a result of this study, Ragen discovered "---that the structure of the male's anal fin, or gonopodium, was a valuable index in finding relationships between members of this group of fish." Thus, Ragen classified all three groups of fish into one, and he named them "Lebistes Reticulatus". By this scientific description, the once controversial little fish is still so listed in professional literature. But it is far better known by its common universal name, "Guppy", to many people all over the world. (Note #1)

The wild guppy in its natural environment is not limited to Trinidad, Venezula, and the island of Barbados, but it also has been found in the Guianas and parts of Brazil. When it became known that the wild guppy ate mosquito larvae as a major diet in its wild state, the British Colonial Office and other governmental offices introduced this fish in many parts of the world. Since the guppy, or "million fish", as it also was called because of the rapid increasing ability, does only thrive in the tropics, it was used to aid in the control of mosquitoes. Thus, guppies can be found wild in such countries as Mexico, Cuba and the Southern parts of the United States.

The idea of keeping fish in aquariums was not new to the Europeans. Herbert Axelrod in his book, Tropical Fish as A Hobby, on page 211 describes fish being kept for reasons other than breeding.

"The earliest record of putting fish into glass containers comes down to us from the Romans of the first century. They did not do this to keep the fish alive, but rather to watch their change of color as they died."

The first man to keep and breed the wild guppy in aquariums was a collector from the British museum, Captain J.A.M. Vipan. He is credited with inter-breeding the guppy from Trinidad, Venezula, and Barbados for the first time. Captain Vipan's accomplishment contributed to science the knowledge that the earlier presumed different species of fish were interfertile, and, therefore, not separate species, but rather sub-species.

Captain Vipan's accomplishment was indeed of great importance. Following the year 1909, numerous other guppy fanciers in England, Germany, Sweden and other countries in Europe began to breed the common (wild) guppy for its rainbow variety of colors.

Note #1 - *Apparently Herr Peters earlier claim was eventually recognized since the Guppy's scientific name is now Poecilia reticulata.*

In a comparatively short period of time, after the guppy gained popularity, many distinguishably different varieties were produced by inter-breeding, in-breeding, line-breeding and cross-breeding. In turn the necessity for classifying and naming these various varieties arose. The guppy, or "rainbow" and "peacock fish" (as it also was called), was identified by a number of different methods. One method used to distinguish differences in guppies was the coloring of the caudal fin (tail), such as blue, red, green and black. Other methods stressed the markings (spots or lines) on the body of the male. Yet another way to describe a guppy is by the shape of his tail and his color. Thus, veiltail-blue, delta tail-red, fan tail-green, etc.

As is the general rule of almost all animals, the male guppy is the gorgeous one, rich in color, and personality wise, the most outstanding of this species. As an exception to the general rule of animals, the male is inferior in size to the female guppy in the wild variety. But he does more than make up for this inferiority when he displays his brilliant colors by performing his dance in pursuit or courtship to the female.

"Perhaps one of the most unusual characteristics of a male guppy is," as Mr. H. Morrison (a noted Benton Harbor guppy fancier) pointed out to me in a conversation, "that unlike most any other type of male, he tolerates any number of his own sex in his immediate surroundings". Possessing this kind of personality, the male guppies may be kept in a tank, apart from any females, and still act and thrive without showing any apparent differences. Thus, one can create and display an eye catching view of an unusual blend of rich, unequaled colors. Each male guppy is as different in color variation as compared to one man's finger print resembling the others, yet being different in a number of ways.

With respect to the requirement of this paper and the inquisitiveness of a child, it has been my objective thus far to describe the guppy from an introductory standpoint, by far, not even attempting to provide answers to any specific questions. Regardless of how much is said about the common guppy, almost any one who has ever been introduced to keeping guppies as pets, will have additional, unpublished information to add. Thus the conclusion of the common or wild guppy points to yet another sub-classification of Lebistes reticulatus, the "fancy guppy."

The history of the fancy-tailed guppy, as Mr. Morrison calls them, does not date very far back into the past and goes back to 1908 when guppies were first brought into England. In fact, the achievement of developing fancy, large tailed male guppies is credited to men of our present century. As the term "fancy" suggests, this type of guppy is a result of man's effort to constantly improve the basic stock that nature uniquely has provided to populate the universe. Because of Vipan's original inter-breeding of the once differently named sub-species of fish, the history of the wild guppy was momentarily interrupted, and the fancy guppy had its birth.

While scientists conducted numerous studies of these biological freaks in order "to learn a little about their variation," several amateur scientists pioneered in the development of the fancy guppy.

The first of such early pioneers in America was a medical doctor of Ampere, New Jersey, Dr. Abbs. Since Dr. Abbs was a scientist, and therefore familiar with heredity, he was able to develop some rather large size fancy guppies of the Trinidad variety. His breed became known as "Abbs" strain" during the 1930's

and 1940's. A possible reasonable answer to Dr. Abbs success of producing such outstanding guppies in his time is best described by one of the authors of Guppies:

"He (Dr. Abbs) gave common Trinidad guppies ideal conditions and let them grow to their maximum size. Even in nature I have collected many kinds of guppies, some strains are small, while others are large, all depending, of course, on the suitability of their habitat. Giant guppies collected by me in British Guiana were easily sold as Abbs strain... people thought that Abbs was merely breeding from these large fish... they soon changed their minds. When they tried to breed large guppies from the stock brought in, they were terribly disappointed... we know now that the enviroment in which guppies are kept is just as important as their inheritance... (In the natural state, females get to be from 1½ to 3 inches, males from 1 to 1½ inches in length.)

At the same period of time, while Dr. Abbs was employing the method of "selective breeding" (whereby one selects the best male and crosses him with healthy virgin females), another man, Paul Hahnel, also became interested in breeding guppies.

Paul Hahnel, a German immigrant, living in the Bronx, New York and a member of the Bronx Aquarium Society, was a cabinet maker by trade and totally ignorant of the formal rules of Mendelian inheritance....Hahnel's "practical" way of breeding guppies produced the most outstanding "Veiltail" varieties. In fact, his guppies were so much more superior to those of other American fancy guppy breeders, that the claim is made: "...probably all veiltail guppies, as we know them today, came from Paul Hahnel's stock". Thus, the honorary title "the father of the fancy guppy" (sic) has been bestowed on Hahnel.

Another all time first of Dr. Abbs was to have an albino guppy appear in his inbred stock. This early albino is described as a "puny, golden fish with red eyes and lacking in all black pigmentation". Though not Dr. Abbs but rather Frank Alger developed the albino strain to a fertile, hardy and large variety.

Goals in guppy development during the 1940's were aimed at long fins and intense coloration. Among these early professional guppy breeders were such men as Hahnel, Sternke, Alger, and Wenk. Because of the emphasis on long and colorful tail fins, new varieties, such as pintails, swordtails, lyretails and red guppies, blue guppies, and finally, black guppies were developed. Hardly any two brothers ever look IDENTICAL in ALL characteristics, perhaps, excluding the Golden and Albino strains. New goals have been set up in striving to accomplish this objective. The emphasis now, and as had been in the early development periods of the fancy guppy, is still being placed on large and colorful finnage of the male guppy. As an additional, perhaps new, challenge to the breeders who breed fancy guppies for showing at exhibits, the call has gone out to strive for identical males (brothers of the same spawning).

Mr. Morrison, a well-known personality to the professional show breeders of the Chicago "Guppy Associates" club, has informed me recently that "a prize will be awarded in the 1964 International Guppy Show at Chicago to the first man to show five identical brothers." This may or may not be a very difficult goal to reach, depending on the individual breeder, his stock and his technique. Congratulations, and for now, a wish of "good luck" to whoever the one may be to achieve such perfection in the fancy guppy. (Note #2)

The general reference term, "guppy", is commonly used to refer to both the male and the female of this species of fish. While much is said and written about the male and his vivid colors, the female guppy has been kept in the background and out of the limelight of the aquarium "playboy". Since it is evident that the guppies' popularity is basically due to the coloration of the male and, only in part, to the females' frequent spawning of live young, one cannot replace the unique position of the female from a genetic point of view.

The female guppy is notably different from the male in many ways. Basically, she lacks the bright and many color patterns of the male. She is distinguishably larger in body size, and displays short, and often clear, finnage. Her overall color is gray or olive-green, with exception of the Golden and some strains of the Black guppy. In some of the highly developed stock, female guppies show a great amount of color in the tail and dorsal fins. "It is believed that such females throw youngsters of superior color."

The larger size of the female, in comparison to the male guppy, is perhaps just another way of nature to provide each creature with the necessary equipment for survival. Since the female guppy bears young alive, unlike the "oviparous" (egg laying) species, the number of young born from 1 mother at 1 spawning is far less than that of egg layers. While the number of young in a single spawning varies with age and size of the mother fish and the environment and previous breedings, one can hope to see eight to nine generations from 1 female in a period of one year.

Furthermore, only twenty-seven to thirty days spans the average age of one generation (sic, litter) to the next. Though, Mr. Morrison has informed me that certain strains will have young as often as only 17 days apart. Also, that the amount of young can vary from 2 or 3 and exceed 150 in one single spawning of a female. Generally, one can expect about 30 to 60 babies at normal intervals of 28 to 30 days apart.

Prior to giving birth, the female gets to be rather large and rounded in the mid-section. The "gravid spot", dark and yet transparent, is a visual aid in determining the approximate date when a new brood may be expected. Besides the often visible eyes of the yet unborn babies in the gravid spot, one can also determine that birth is near when the front of the tummy takes on a slightly square appearance. It is unwise to move the mother at any time shortly prior to giving birth, because of the chance of hurting her or damaging the young.

An expecting guppy mother should be fed well with live or frozen foods, especially during the last few days of pregnancy. If she is not hungry at the time of birth, she will not eat her young, and, therefore, no "breeding trap" needs to be used. Of course, it is important that no other fish, large enough to eat the young, are in the tank while a mother gives birth.

The babies are born 1 or even 3 at a time. They hesitate only instantly, as they emerge from the mother, and immediately make a dive to the bottom or into floating plants in an attempt to hide. To watch this taking place, it makes one marvel at how well nature equips its kind and provides those just born babies with an instinct for survival. To borrow a term once again from Mr. Morrison: "In a matter of a second, the baby emerges, uncurls and darts for hiding. This is indeed unique in itself."

Fortunately, not all live born young mature to adults. Some inevitably will be eaten by the mother. Others will fall victims of a disease, yet others will die because of imperfection or inability to adjust during the vital periods of changes from baby to adult. This is good, because this way only the fittest and those most capable to adjust will survive and live to reproduce.

One particular strain of guppies, the Golden or Albino, would perhaps not survive in nature, as the mother of this strain, more so than any other variety, will eat her young almost as soon as they are born or shortly thereafter. In order to raise albinos, the breeding trap is an aid in saving the young. Whether the lighter color or just their lack of instant adjustment ability is a factor of being easy prey, Mr. Morrison was not certain; but it is a known fact that he has lost more than one spawning. Perhaps, because of these inferiorities of this strain, one does not find any albino guppies in the wild. (No such finds have been recorded in any of the material used in research for this paper). One such strain, the "Golden Guppy", was established by Fredlin, a Swedish breeder, 1934, and imported to America in 1935. While their color was basically "golden or amber", the scales were edged in black. The females of this strain were considered to be rather "baby eaters". (Note #3)

Some unusual experiences in guppy breeding have been encountered. A not too common occurrence is an"interspecific hybrid". The Guppy and "Mollienisias" have occasionally been mated successfully. The results of such matings are called "Hybrids". "The young of such crosses, especially those being wholly or partly black are likely to develop fatal tumors, mostly manifested as swellings about the base of the tail, and in progressive deformity of the tail fin." At the London Laboratory, Dr. H. Spurway reported the birth of 13 fatherless fish born from a virgin guppy. All 13 young were females. In this report it states: "Partheno-genetic offsprings of higher animals must be females, because the inheritance factor for females (sic, males) is absent in the unfertilized female's egg cell or ovum. (Note #4)

Much can still be said about numerous other important topics on the guppy, but since this paper is but a survey, omission of highly specialized and expert areas is essential. Needless to say, in order to get started in a hobby of tropical fish--guppies-- one needs to have an aquarium of 5 to 20 gallons of water capacity and go to the neighborhood pet shop. The pleasure, information, and education obtainable from this kind of hobby can only be matched by another hobby of equal interest.

In view of the past history of the Guppy, from the wild and natural state to the present highly developed strains, one must indeed bestow much credit on pioneer and modern breeders for producing a little fish of beauty.

Because of its wide reaching popularity, this unusual fish has created international good will and understanding among men of common interests all over the world. As an ambassador, a subject of international interest and as a little fish of many qualities, the future of the Guppy seems to promise even more splendor and challenges than in its past. END ###

Note #3: *Gold scales edged in black are now classified by the IFGA as bronze. Light colored babies are eaten because they lack natural camouflage and not because their mothers are more cannibalistic than other guppies.*

Note #4: *Guppies and Mollies are now both classified in the genus Poecilia.*

BASIC GUPPY

by Jack Rosengarten

Guppies are probably the most commonly aquired tropical fish by the beginning aquarist. The two main reasons for aquiring them are that they are colorful and cheap. The cheap, of course, applies to the common guppy found in the aquarium stores. Show guppies are not cheap.

Guppies are fresh water, livebearing tropical fish. The fresh water part of that does not mean straight from the tap. As a tropical fish, guppies live in a very narrow temperature range. They prefer 75° to 80° F. so it is therefore necessary that the water or the room be heated. Although they can survive in temperatures from 65° to 90° F., they will not do well. At the lower temperatures they are susceptible to disease and at the higher temperatures their metabolism is so speeded up that their lives are materially shortened. As with most tropical fish, they cannot tolerate rapid temperature changes of more than a few degrees, although they will survive extreme temperature changes if the temperature change is gradual.

Guppies like water with a neutral pH which means that it is neither acid or alkaline. Again, they can tolerate both acid and alkaline water if the change is gradual but will not do well in extremes. Since the waste products produced in the tank tend to make the water acid, and the nitrite products also build up, a partial water change should be made weekly. About 10 to 20 per cent of the water should be changed weekly. Replacement water should be aged for at least a day to allow chlorine and other gases to escape and to allow it to warm up to room temperature.

Baby guppies are born live and have a natural instinct to hide. Given a minimum of cover, such as plants, most of them will survive in an uncrowded tank. About 30 to 60 babies are born with some strains bearing litters of more than a hundred. The females start bearing when they are about three months old and continue until they die which is at about two years of age. Babies are born about every 28 days at 75°F. This is more frequent at warmer temperatures and less frequent at cooler temperatures. Males and females can be distinguished when they are young by the separate development of their anal (bottom) fins. The female has a rounded anal fin, while the male's anal fin is elongated and pointed. The male's anal fin is called a gonopodium and it is used for mating. He will thrust the gonopodium at the female in his mating drives. As they get older, the female will develop a dark gravid spot above the anal fin which identifies the egg mass within her. The male will develop the bright colors and flowing fins for which he is famous. Full maturity of size and appearance occurs at about four months of age although this varies with the varieties and with the temperature.

Guppies digest their food rapidly, so that it is best to feed them small amounts of food frequently. It is not unusual for a guppy breeder to feed his fish five or more times a day. Overfeeding will simply foul the water with uneaten food and cause the fish to be distressed. It is a good rule to feed them only what they will eat in 10 minutes at each feeding. An exception is if the food is live and will stay alive until eaten. For maximum growth, guppies should be fed a lot of live food such as tubifex, daphnia and baby brine shrimp. Finely grated beef heart and fish is also good but care must be taken that it

does not spoil before it is eaten and that the particles are small enough to be swallowed. Most dry foods which are medium or finely grated are also acceptable. Do not expect the guppy to chew its food as it is not equipped to handle anything that is hard.

It is important to the growing baby guppy that it receive a generous diet within the confines of the above. It is also important that it does not have to compete with adult or older babies for this food. For that reason baby guppies should be raised separately. It is best if they are not crowded. Adult guppies should get about a gallon of water apiece. Good aeration, filtration and frequent water changes will allow you to crowd them more than that but their size and health will be affected if there is too much crowding.

If water conditions are allowed to deteriorate, guppies will suffer from bacterial infections. There are also various parasitic diseases which plague the guppy. The simplest cure for bacterial diseases is to correct the water conditions and to add small amounts of salt to the water. The more common parasitic diseases can also be treated with salt but it is wise to consult your local aquarium store for medications. Malachite green will cure the most common parasitic diseases. Newly aquired fish should be quarantined for a week to be sure that they will not introduce disease into the established aquarium. As with all living things, a healthy guppy will best withstand an attack of disease.

The many guppy varieties have been developed through the careful selective breeding of the best stock available. Guppies have a very complicated genetic makeup which means that no two guppies will be identical although as the existing strains get purer the differences are getting smaller. To assure that only the selected breeders produce the young, guppies are separated by sex as soon as they can be identified. The aquarist can then evaluate the mature guppies and select his breeding stock for whatever goal is being sought. It might be a purer color, a better tail shape, larger size or to set some variation that has shown up.

The International Fancy Guppy Association has established standards for judging the fancy guppy at its sanctioned shows. They have categorized the guppy varieties into various show classes. Male guppies are classified by caudal (tail) shape, caudal color and body color. Female guppies are classified by caudal color and body color. Recognized caudal shapes for males are delta, veil tail and swordtail. Delta tails are supposed to have a tail spread of 60° and veil tails have a spread of 45°. Swordtails have an elongation of one or both of the outer tail rays. Delta and veil tail classes are divided into color classes. Swordtails are not subdivided into color classes. Recognized caudal colors are red, blue, green, yellow, purple and black. There are also two color combinations with the predominant color being specified, such as blue bicolor, green bicolor and red bicolor. Three or more caudal colors are classified as multi colors. These are also paired with the snakeskin and half black body patterns so that there are red snakeskins (snakeskin body pattern with a red caudal), half black reds (Half black body pattern with a red caudal), blue snakeskins, half black blues, etc. Body colors, aside from the wild grey color, are gold, bronze and albino. These are also combined with some of the caudal colors and body patterns so that we have gold half black red deltas, albino snakeskin veil tails, etc. Females are divided into albino, gold, bronze, black and half black body colors and red, blue, green and black caudal colors. The dorsal fin should be the same color or colors as the caudal. ###

ONLY A NATIVE: ELLASSOMA EVERGLADEI

Reprinted from April, 1978 edition,
TANK TOPICS, Greater Akron
Aquarium Society

Rick Johnson GAAS

Regardless of the tastes of the general hobbyist, the pygmy sunfish, Elassoma evergladei, deserves a spot in most every aquarist's tanks, native or not. It is really one of the more interesting fish one could hope for. The coloration of the male when in breeding colors is magnificent, the spawning and raising of the fry seems almost as if it were a dwarf cichlid, and it is a very hardy fish as well. Maximum size is approximately 1½ inches. The aggressiveness of most sunfishes is almost absent in this miniature. A 2½ gallon tank is all that is needed to raise and spawn these little fish and certainly a 10 gallon would be the largest tank used in keeping one pair. Most all standard foods are accepted although live foods such as white worms, daphnia, mosquito larvae and tubifex, all readily available throughout early spring til late autumn, are the preferred. Live baby brine shrimp are eaten greedily as well. A very small portion of flaked foods is all that is needed as they are small fish and it is not their favorite food. Chopped earthworms are devoured of provided.

Setting up the tank for E. evergladei can be done easily or to the extent that it will be a show tank. The range of the evergladei is from Florida to North Carolina with the most abundant section being the Everglades where it gets its name from. It was first described in 1884 by David Jordan, who named so many other fishes native to North America. In its native habitats the pygmy sunfish is found in slow flowing streams and rivers as well as in ponds and lakes in dense vegetation and lots of natural cover. They are shy and bright light makes them jumpy, as do fast movements. When outfitting their tank this should be kept in mind and they should be provided with lots of rocks, live plants both floating and rooted, and possibly some driftwood branches. A gravel or sandy bottom is much to their liking. Very little rooting is done by these fish so an undergravel filter may be utilized if a box or sponge filter, both very acceptable, is not wanted for aesthetic reasons.

Caring for E. evergladei is very easy, the pygmy sunfish seems to care little about the pH or Dh of the water. An average temperature of 70° is ideal and a slight increase of a few degrees is all that is needed to induce spawning if the pair is in good condition. Most books state that the eggs are laid on a broadleafed plant or on a flat rock, but the pairs I've spawned always laid their eggs upside down in a rocky cave provided by slanting a couple of rocks on top of each other. The male takes care of the eggs as well as the fry, which hatch in about two days at 72°F. The females are driven away and have no further participation in the spawning/rearing event after the eggs are laid. If enough cover or a large enough tank is provided, the female need not be taken out. I haven't lost a female from an over- aggressive male yet.

Sexing E. evergladei is not too difficult a task if a mature fish is available. Coloration is the easiest and surest way to pick out the males. The females stay a pinkish/brown with numerous black spots while the male will turn jet black with electric blue spots over his entire

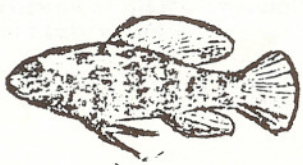
body. Truly a magnificent fish.

The fry are extremely small when hatched and the male takes very good care of them, not unlike the behavorial patterns of most South American cichlids. I have had several batches of fry in the tank at the same time, so spawnings may occur right after another spawn is reared. The older fry are chased away from the spawning site when the second spawn occurs and are usually found up in the corners of the aquarium.

First foods should be very small for the tiny fry. Infusoria is an excellent choice, but baby brine and microworms can be taken shortly after the free swimming fry are observed, about two days. If a natural type tank was used, a healthy amount of mulm and infusoria should be present to provide the first foods for the fry. If a new tank was set up for spawning purposes, the infusoria will have to be supplied either through a culture or by adding mulm from an established tank or by a good healthy working sponge filter. Feed the larger foods in a couple days to insure that the fry will get enough food for proper growth.

Native fish in the American aquarist's tanks have always been scorned except by a few specialists who keep little else. Most aquarists would rather go the the aquarium shop and pick out a few colorful tetras or livebearers and watch them swim about, never thinking much of what is swimming on the local stream or pond just a few blocks away. Although the pygmy sunfish will not be found in our lakes and streams of northeast Ohio, its cousins the bluegills, red ears and pumpkinseeds will, as well as some very attractive minnows, chubs and darters. Most make fascinating animals in the home tank, and in these times of insufficient as well as outrageously priced electricity, the natives as a group do not need heaters to maintain them. Why then is there such total neglect, if they possess beauty and interesting habits, only require room temperatures years round, and are expensive to feed as well as obtain? Probably because hardly any can be bought in the aquarium shop! I can safely say that 95% of the hobbyists in the US are too lazy to go out and find their own species, or even collect their own live foods as a supplement to the prepared foods. In the US there seems to be a prevalent attitude that if it is homemade (not store bought) it is no good. If one reads accounts of the hobbyists in Europe, it is noticed that the majority of foods, tanks and equipment is homemade - which does not automatically mean better, but shows that necessity is the mother of invention. Most aquarists throughout the world are not as "blessed" with the deluge of products available to us at our dealers' shops. When a company produces a stainless steel spawning strip for a fish to spawn on, there is no end to what may be pushed upon us if it will be bought!

The non-aggressive nature and true beauty of Elassoma evergladei really make this one fish we should search out and keep, whether it be native or not. If it came from South America or perhaps Africa, it would be in such high demand and command such a high price that people would be fighting each other to get it. But alas, it's only a native!



bap REPORT

NAME	POINTS
JOE PAULL	505 ****
RUTH BREWER	305***
GARLAND NEESE	310**
GERRY HOFFMAN	220**
BEV FAZIL	180**
PAT & MAGGI MAHONEY	175**
SUE & MIKE SPRAGUE	165**
WOODY GRIFFIN	150**
JOHN JESSUP	95*
KENNY WARREN	90*
GENE ALDRIDGE	80
VINCE EDMONDSON	45

* Breeders Award
** Intermediate Breeders Award
*** Advanced Breeders Award
**** Master Breeders Award

Recent points for spawning:

Garland Neese : Ps zebra, peach
Labeotropheus fuelleborni

Vince Edmonsdon: Ps. aurora
Ps. lanisticola
Ps. lombardoi (Kenyi)
Jul. maleriari

We welcome Vince Edmondson to the Breeders Award Program. He's coming in with a splash -- 45 big ones, one a 15 pointer. His articles was printed in the February Delta Tale, before we even had his points recorded. Welcome, Vince -- good spawning.

If you want to get into the Breeders Award Program or have additional spawns to report -- here are the folks to call. (Remember - any member in good standing can sign in a 10 point spawn.)

Alexandria/Arlington - Gene Aldridge, 931-7426
Dana Best, 548-1868

Fairfax City - Joe Paull, 591-9245

Fairfax County, Falls Church -
Ruth Brewer - 893-6997
Pat Mahoney - 534-0006

Warrenton - Gerry Hoffman, 347-7486

Prince George's County - Tom Wright, 345-7486

Montgomery County - Nancy Reynolds
Woody Griffin 949-1290

BOWL SHOW RESULTS AND STANDINGS, FEBRUARY, 1980

CICHLIDS

New World Medium

1st - Rainbow Cichlid, K.Warren
no further entires

Haplochromis

1st - Hap. sp, K. Warren
2nd - Richardi, K. Warren
3rd - Burtoni, D. Holman

open

1st - Ps.auratus, D. Holman
2nd - Ps. macrothalmus, D.Holman
3rd - Red-top cobalt, K.Warren

EGGLAYER/LIVEBEARERS

Guppies

1st - yellow vari., Pat Mahoney
no further entries

Barbs

1st - Tiger, Pat Mahoney
2nd - T-bar, G. Neese
3rd - Tiger, Pat Mahoney

open

1st - Starburst molly,D.Holman
2nd - Clown loach, Pat Mahoney
3rd - Synodontis sp., D. Holman

CICHLIDS	MONTH	QUARTER	YEAR
Kenny Warren	19	35	35
Darell Holman	14	23	23
Garland Neese	3	13	13
Pat Mahoney	5	11	11
Bill Kent	2	2	2

EGGLAYERS/LIVEBEARERS	MONTH	QUARTER	YEAR
Pat and Maggi Mahoney	19	44	44
Darell Holman	11	11	11
Garland Neese	5	11	11
Kenny Warren	1	3	3
Suzan Reynolds	3	3	3
Bill Kent	1	1	1

Potomac Valley Aquarium Society
P.O.Box 6219
Shirlington Station
Arlington, VA 22206

FIRST CLASS MAIL

1980 MEETING DATES

MAR. 10	APR. 14	JUL. 14	OCT. 13
	MAY 12	AUG. 11	NOV. 17
	JUN. 9	SEP. 8	DEC. 8

Meetings are held at the Coca-Cola Bottling Plant, 5401 Seminary Road, Bailey's Crossroads, Alexandria, Virginia. Meetings start at 8 p.m., Bowl Show Registration at 7:45 p.m. -- Doors open at 7:30 p.m.