

THE FILTER

June 2021
Volume 30 Issue 11



Oryzias latipes
Youkihi Medaka
Orange Ricefish



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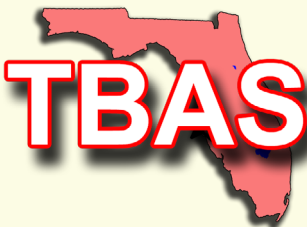
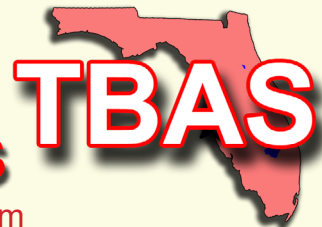


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President's Dharmesh Patel Stuff



Hello Tampa Bay Aquarium Society friends! I hope you all are well. Exciting news, our Annual Auction has been scheduled for November 6, 2021. It will be held at the Clarion Inn Tampa - Brandon. Be on the lookout for more details soon.

After a couple meetings, we have decided to have a guest speaker in June. Don't miss an informative talk by Dave Messier on June 14 at the Clarion Inn Tampa - Brandon. Following his presentation on Discus keeping we will have our regular auction.

Stay safe and see you all soon!



See you all soon,

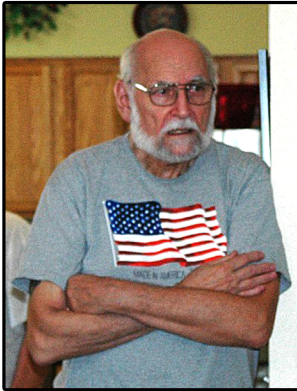
Dharmesh

Dharmesh Patel, President TBAS

Pterophyllum scalare

Smokey Angelfish

Photo by Mike Jacobs 2017



**by Charlie
Nunziata**

EPIPLATYS - Maintenance & Breeding Notes **KILLIFISH**

Nearly all *Epiplatys* are rather hardy, are not particular to variations in water chemistry, and are eager feeders. All of them are excellent jumpers. In fact, some are difficult to keep without the most secure tank cover. Most *Epiplatys*, except some of the multifasciatus forms, are prolific and easily bred. All are plant spawning killifish and their rather large, slightly adhesive eggs incubate in water. The rate of embryonic development appears, under the artificial conditions of the fish room at least, to be wholly dependent on the nature of the species and the temperature at which the eggs are stored. The eggs of most species will hatch in 12 to 21 days at 75°F (24°C).

Housing requirements are modest and are logically dictated by the species size. Spawning pairs or trios of the smaller species are comfortable in 2½ gallon tanks but larger species are best kept in 5½ gallon tanks. Larger groups should be given proportionately larger quarters. Small drum bowls can be used for controlled short duration breeding of pre-conditioned pairs but are not suitable for permanent quarters. Many *Epiplatys* species are shy and skittish, some to an exaggerated degree, and will jump at the slightest provocation. On the other hand, most of the fasciolatus group members are less nervous and not easily frightened. The normal *Epiplatys* deportment is to lie just below the surface under the cover of floating plants or leaves of larger plants. Therefore a cover of floating plants is always recommended for the *Epiplatys* tank. That will greatly suppress the tendency to jump and will enhance water quality. Bunch plants, such as Java fern, will

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have an enormous calming effect and promote both normal behavior and better color expression. *Epiplatys* do exceptionally well in planted tanks but many will show themselves only occasionally in such setups. If broad leaved plants are present, the *Epiplatys* will, as in nature, lie just below the outstretched foliage, leaving that position only for feeding or if alarmed. The placement of the tank is also important. It should be in an area that receives the least traffic and where moving shadows are not normally cast across the surface of the water. *Epiplatys* will react to moving shadows as if a predator were above them. Likewise, lighting should be subdued unless surface plants are present.

Epiplatys dageti



Epiplatys tolerate other *Epiplatys*, most other killifish, small catfishes, characoids and nonaggressive barbs. For this reason, *Epiplatys* make an interesting addition to the small species community tank. If intending to breed *Epiplatys* in a community tank however, catfish will quickly discover and thoroughly scour a mop of all eggs. Because of limited tank space, I often have both *Epiplatys* and *Nothobranchius* species breed in the same tank. The *Nothobranchius* happily breed in containers of green sand or peat moss on the bottom of the tank while the *Epiplatys* breed in the floating mops. Confrontations are minimal, as the *Epiplatys* usually yield to the *Nothobranchius* if the latter venture to the surface.

Most *Epiplatys* species are eager feeders. Some will feed only from the surface while others will feed at mid level as well. Few feed from or near the bottom except when chasing swimming prey. *Epiplatys* strike voraciously at live foods, especially those that remain at the surface, such as mosquito larvae and glass worms. Although live foods are preferred, floating freeze dried and flake foods also are taken. Among these foods, freeze dried mosquito larvae are relished by virtually all *Epiplatys* species. Among frozen foods, both brine shrimp

and blood worms will be taken from the bottom by some species, but others will feed only when the food is falling.

Standard killifish mop spawning breeding techniques work well with *Epiplatys* species. Separate preconditioning and placement in a temporary setup invariably produces the best results. Floating nylon or other synthetic spawning mops are preferred for maximum egg production. Pairs are recommended because trios often produce no more eggs than a pair does. The unattended female probably augments her diet with the newly spawned eggs. Egg eating is prevalent, although some species do so more vigorously than others.



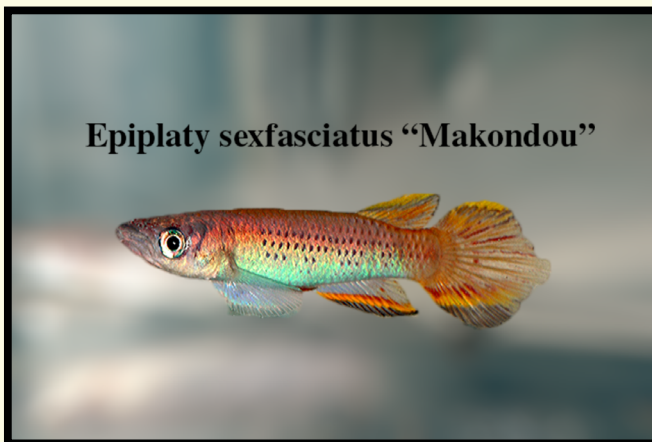
***Epiplatys
annulatus***
Monrovia

Fry eating also is common but varies by species and the amount of available plant cover. Very few fry survive in a totally bare tank. Some species produce large numbers of fry in heavily planted tanks and if you are not anxious to pick eggs from mops, such a setup will always produce some fry. Anecdotally, it is speculated that where few fry result from permanent planted setups, they will be predominantly males, presumably because they will out compete females for food or are better able to escape predation.

If air driven filters are used, the airflow should be moderate. It has been my experience that heavy aeration reduces the number of fertile eggs. I've speculated that this is so because the turbulence produced either suppresses the spawning process or limits fertilization by dispersing the sperm. To my knowledge, no meaningful tests have been conducted which either support or reject this idea. Nevertheless, I customarily keep the spawning mop restricted to the area farthest from the filter. On several occasions the number of fertile eggs increased simply by reducing air flow through the filter or by moving the mop away from the area of turbulence. Aeration is not necessary if water changes are made often or where there is a preponderance of living plants.

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Except for the very small species, such as *Pseudepiplatys annulatus* and *E. duboisi*, *Epiplatys* eggs are medium to large (1.0 to 1.5 mm in diameter), thus embryonic development is easily observed with the aid of even the crudest microscope. The eggs hatch in the typical killifish manner. Deformed fry are exceedingly rare among *Epiplatys*, probably because eggs containing deformed embryos die before hatching. Fertility rates and egg production are excellent for most *Epiplatys* from the western forest (regions west and north of the Dahomey Gap) and with many exceptions somewhat less so for those from the eastern forest, (regions south of the Gap), particularly among members of the multifasciatus group. This may be more a function of the conditions under which the fish are kept rather than an inherent species specific tendency. Nutritional deficiency or the potential for environmental incompatibilities induced by aquarium conditions should always be examined where egg production is low from otherwise healthy fish.



***Epiplatys* sexfasciatus "Makondou"**

Epiplatys young are slow to very slow growing by *Aphyosemion* or *Nothobranchius* standards. The young often exhibit different patterns during development and almost always resemble females until well into the juvenile stage. In most cases, young males can be sexed at an early age by observing them with backlight, and focusing on the anal fin. The broad dark edging of the anal fin, characteristic of males in many species, will be seen as a shadow across the lower edge of this fin, even in very small juveniles. This is particularly so for members of the fasciolatus and related groups. Fry do very well on newly hatched brine shrimp and small frozen foods that remain in the water column. Finely ground flake or crumbled freeze dried foods are taken after a month or so.

A wide range of water conditions is generally tolerated but, as with most killies, *Epiplatys* do best in clean, stable conditions. The pH can vary from 6.2 to 7.8 and DH from 30 to 180 ppm. Despite their hardiness, regular weekly 20 percent to 30 percent water changes are recommended to keep *Epiplatys* in top spawning condition. Diseases are rare if weekly water changes are made and uneaten food is not allowed to accumulate. Velvet disease, caused by the parasitic flagellate *Oodinium pilularis* is the most common to occur, but adults almost always recover with the addition of a level teaspoon per gallon of noniodized salt and frequent water changes. Fry are not especially susceptible to velvet, although once infected, losses can be heavy. Other diseases are rare and not often encountered unless the tank is allowed to foul. I'm of the opinion that chemical treatments should be avoided under most circumstances and copper sulfate should be avoided entirely. If a community tank or permanent setup must be treated with copper sulfate, the *Epiplatys* as well as all other killifish should be removed.

Epiplatys are not found in your local store. They are available through specialized killifish clubs and organizations and some commercial outlets and Internet auction sites. They are very hardy and long-lived, four or more years in general, with those from the western forest often living well past 5 years. They offer an enormous variety of species that vary in size, from an inch to over four inches SL, and an array of color combinations and intricate body markings. Their hardiness, beauty, fecundity and ease of breeding make them excellent long-term members of your killifish collection, and will bring years of satisfaction. They are certainly worth the effort to acquire them.

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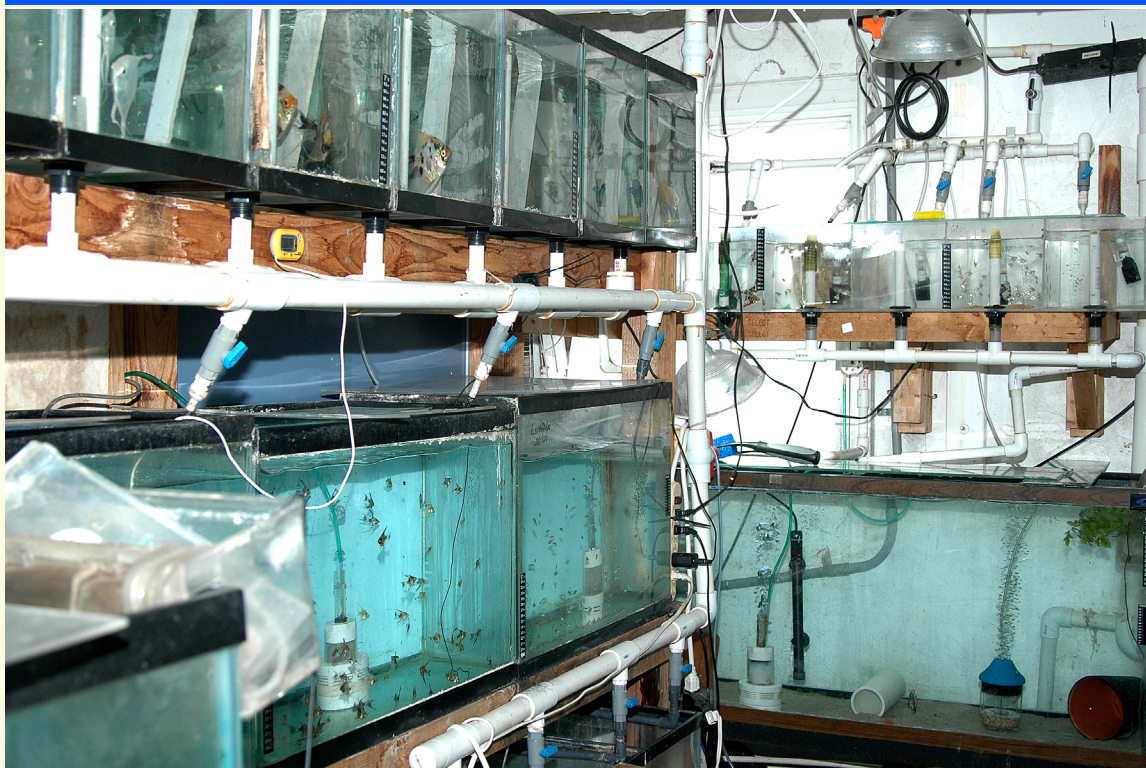
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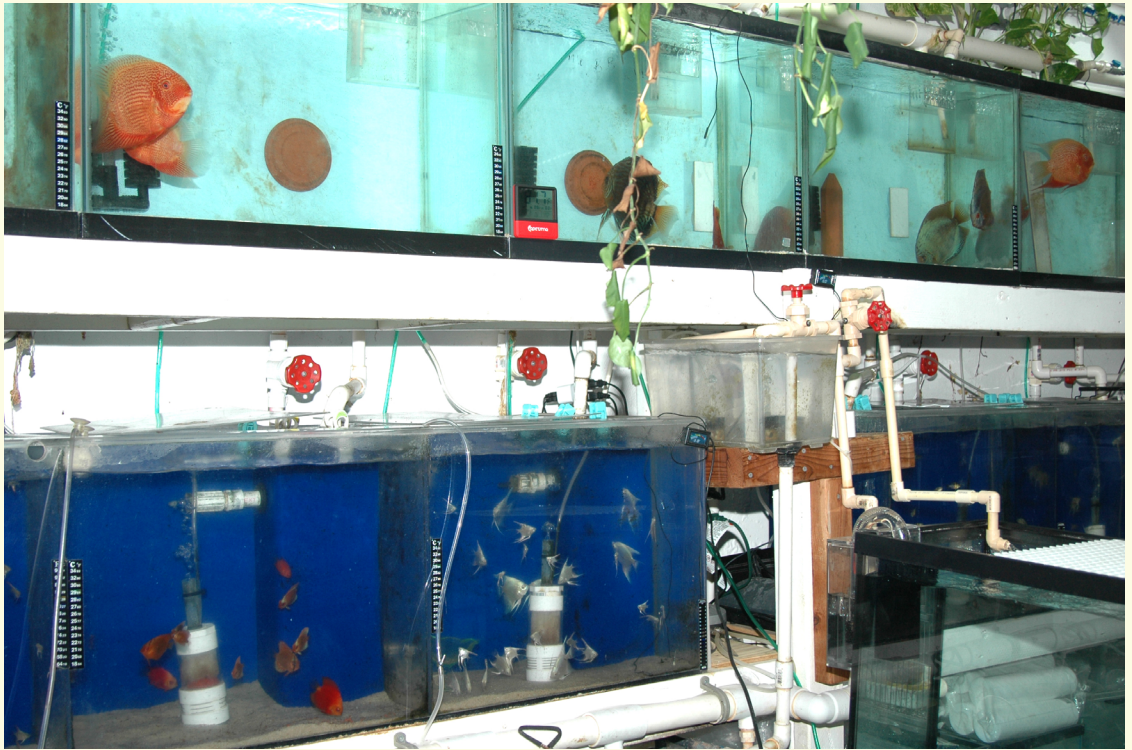
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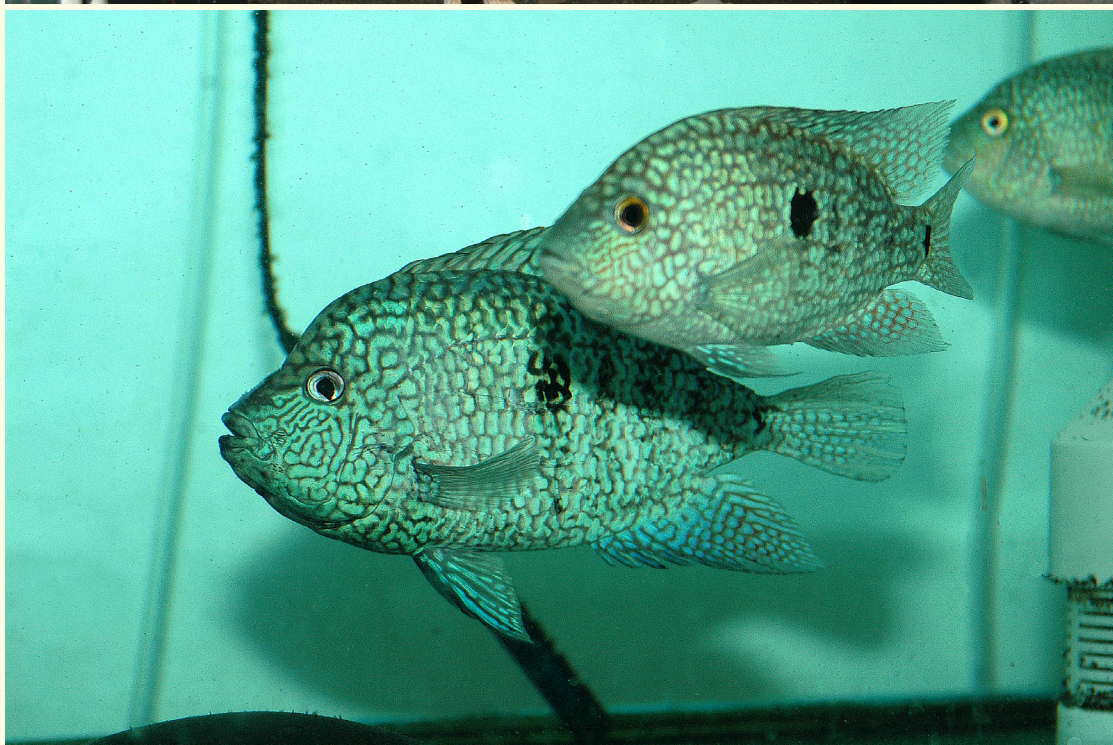
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The Secrets of the Wonderful Wet-Dry

Recently I had the great fortune to set up not one, but TWO wet-dry filters for a couple of members of the club (not the hang-over-the-back-power-filter-type). I have been using a wet-dry filter for the past

7 years and currently own two of them. One is up and running on my 110 gallon goldfish tank and the other is waiting for the 70 gallon tank I am setting up. I realize that this is a confusion filter system even for experienced hobbyist. Most people think of this filter as a saltwater filter only, but I find it works very well on freshwater and I highly recommend them to anyone.

Because I think I have had everything go wrong that could go wrong, I thought I would pass on my experience to help someone else.

The standard wet-dry has two main parts: the pre-filter and the wet-dry. The pre-filter is the output and the water flows over the top of the inside chamber through a pad, then through the overflow tubes to the back chamber. The pad inside chamber catches bubbles before they go into the overflow tubes. Without the pre-filter pad the bubbles will build up in the overflow tubes and break the siphon. The outside chamber has a reservoir built in so in cases of power outage the siphon won't be broken. Some pre-filters are drilled into the bottom of the tank usually in the corner: there is a stand pipe and sometimes a panel sealed across the corner of an overflow. But, no matter how it is built they are pre-filters.

The second part is the wet-dry filter. So why do they call it a wet-dry? The first chamber of the filter is above water making it the "dry" part. This chamber is usually filled with bio-balls or DLS material. With the water flowing over the filter medium, instead of through, there is a large surface area providing continuous oxygen for the nitrifying bacteria and no dead spaces. Under the dry chamber is the "wet" chamber usually filled with a heavier medium like lava rock or bio blocks. This area still gets oxygen because the water is sprinkled into it. Sometimes there is another chamber that is also "wet" provided for carbon, Chemipure or for a protein skimmer (another article). Then comes the reservoir - this is where water is added

and the level is checked. If it is too low, then the pump will suck in air. It makes a sound that will wake me out of a dead sleep. If it is too full then it will overflow when the power is turned off. The pump can be a power head or a water pump attached to a hole in the side. Anything that will pump the water back into the tank will work. At the top the water goes in with an angled tube to allow the water to flow across the surface. This tube can be the source of a few headaches.

When my friend was building my first wet-dry he flooded his living room twice before he installed a siphon breaker. This is a little hole drilled at water level that will suck in air if the power is turned off preventing the reservoir from overflowing. His wife was very happy when I picked up the wet-dry. Another time, after the tank had been up for a couple of years the hole became blocked with algae and overflowed in my living room.

I have made up the following troubleshooting guide for new wet-dry owners. If you know how to fix a problem then it is not a problem anymore. I hope you will find this guide useful. Practice good fish keeping. Till next month.

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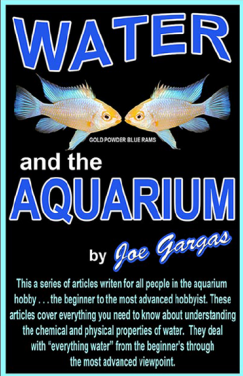
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***Astronotus ocellatus* - Gold Oscar - 4in FI Bred**

photo: Mike Jacobs 2020

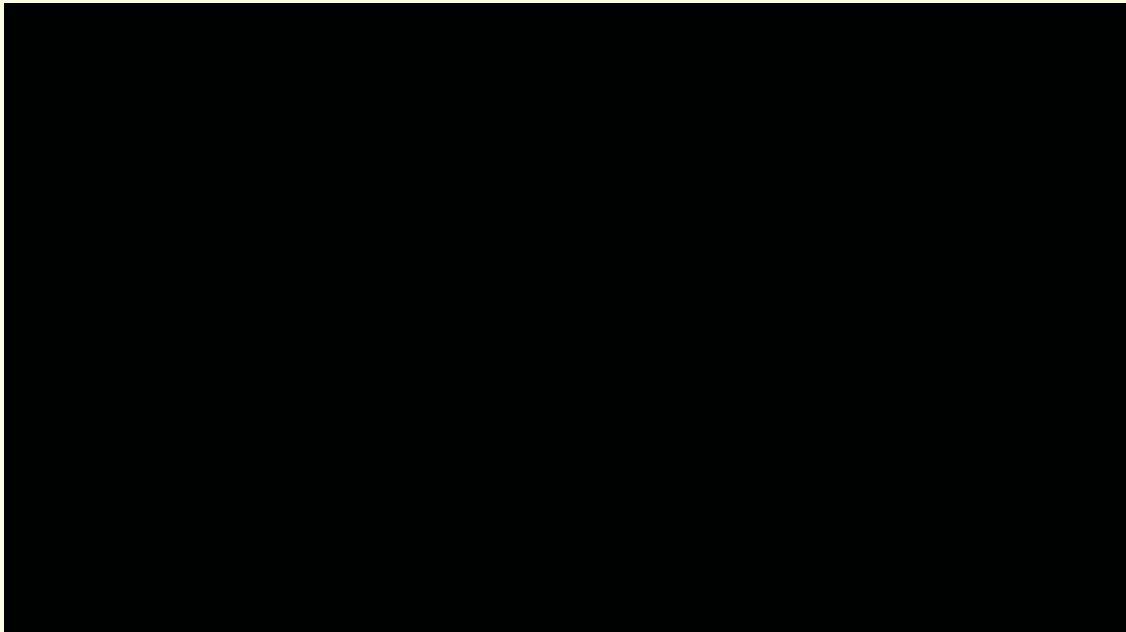
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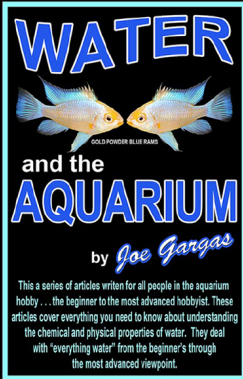
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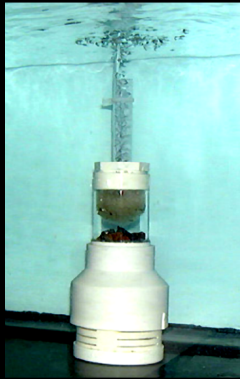
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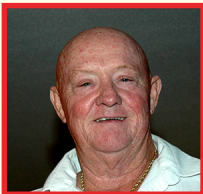
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