

June 2011

FISH TALES



ISSUE 163

FREE



"My Tank is
NOT Ready!"
turn to page 5
to see why
David is smiling

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President's PODIUM



After having no meeting in April, we had back-to-back gatherings in May. On Saturday 14th May we met at Peter's home for a relaxing social gathering. We chatted, had a few beers and enjoyed some lovely dips that Karen had made (thanks Karen). The following day, Sunday 15th, we held the Annual Home Show. The Home Show is covered in depth later in this issue so all I'll say here is that I was very impressed with the quality of the entries and very pleased to see that we had eleven tanks entered, significantly more than the four we had last year.

Members and regular readers will be aware that I placed an order for aquatic plants in January so that we could hold a Plant Auction at our February meeting. Due to delays in getting approval, that Plant Auction was put back to March and then April but both had to be postponed. For a while, it looked as though we may not be able to get the plants in but we have now received an import permit. I'm keeping my fingers crossed and hoping that we can get the plants here during June so that we can finally hold the auction. The date of the meeting/auction will be circulated to members via e-mail once we know when the plants will be shipped.

The recent effort to import aquatic plants has revealed a tightening of regulations that will make plant importation even harder. That topic is covered later in this issue.

During the discussion at the May meeting, when asked what topic the next visiting speaker should address, the overwhelming response was live plants and aquascaping. Also, following the successful visit of Anton Lamboj from Austria, there was support for bringing in another world-class speaker from outside the United States and Canada. We are therefore looking to line up a plant speaker for August and will look to bring a quality speaker a little later in the year.

June is already upon us so it will soon be time for the annual pilgrimage to the ACA Convention. This year's ACA is being held in Washington DC from 21st to 24th July and it appears that there will again be a delegation from Bermuda attending. Airfares seem to be very reasonable to DC at the moment so, if you've never been to an ACA convention, this might be a good year to give it a go. If you go to our club web-site you'll find a link to the convention web-site.



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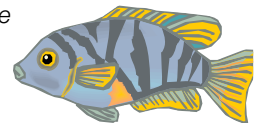
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Member Profile

A couple of Month's ago members were sent a form for the members profile, to be completed and sent to pmarsh@northrock.bm. This will be an asset to members, letting them know what fish are being bred and kept on the island.

If you require the form again please let me know (pmarsh@emoo.com). It only take s a couple of minutes to fill out



Bermuda Fry-Angle Society

If you are interested in joining the Bermuda Fry-Angle Society, just come along to our next meeting to see what we are about. Meetings are held on the third Friday of every month at the Lecture Rooms, behind the Bermuda Aquarium, Museum & Zoo, or contact David Patterson, Membership Coordinator at 704-444 or email: dmpatterson77@hotmail.com. He will be happy to provide any further information or just sign you up. Application forms are also available at Noah's Ark (just ask at cashier's desk.) You can also download an application form from our website: www.fryangle.com

Membership fees are \$20 for the year, and payable to Bermuda Fry-Angle Aquarium Society.



HOMESHOW!



David and his winning Tank

By Craig Morfitt, BFAAS

We held our 2011 Home Show on Sunday 15th May and we had a bumper entry of beautiful aquariums. In recent years, we've only had about four aquariums entered into the show so this year we added a class and split the show into Natural Aquariums and Designer Aquariums whilst revising the judging criteria. We had nine entries in the Natural Aquarium class and two in the Designer Aquarium class. This made for a much more interesting show but created a real challenge for the judge – me!

We created the Designer Aquarium class to allow members to participate even if they don't have a live-

planted tank. The emphasis is more on the design of the display as overall design can earn up to 60 points. Originality of design can earn 10 points, attention to detail 10 points and health & quality of fish the final 20 points. Justin Wall entered a large tank with equally large fish. His 'monster fish' display included an Oscar, Bifasciatus, Shovelnose, Alligator Gar and a Knifefish that all seemed to get along well together. I would have said that you couldn't successfully keep live plants with this bunch but Justin's display proved me wrong. A huge Amazon Sword plant has a central location in the tank and the fish don't seem to be eating it or digging it up! Jeff Sousa's African cichlid



*Robert Wheatley's
Tank*



*Michelle Dunstan's
Tank*



*Jeff Sousa's
Winning Tank*

community edged out Justin to win first place. The display featured extensive rockwork and a constantly moving, brightly coloured assortment of cichlids. Thanks to Jeff and Justin for getting this new class off the ground. I suspect that we'll get more entries in this class next year.

The Natural Aquarium class was very competitive. All nine displays were very well done and would be very welcome showpieces in anyone's home. It was clear that a lot of time and effort had gone into these displays and the entrants did a wonderful job of creating live planted displays, especially when you consider the limited availability of live plants in Bermuda. It was clear very early in the show that I was going to have a difficult task picking a winner, as they were all very nicely done. The key to ranking the entries was sticking to the scoring categories and trying to find faults in each display for which points were deducted. The judging criteria for the Natural Aquarium class was Overall Design (50 points), Biotope Representation (10 points), Compatibility of Fish and Plants (10 points), Health & Quality of Plants (15 points) and Health & Quality of Fish (15 points). Several displays lost points due to equipment such as heaters and filter tubes being visible. Other causes for point deductions included having fish from different continents, fish with nipped

fins, cloudy eyes, etc., plants with damage and the presence of black brush algae. Despite my trying to find faults and deduct points, six of the nine displays scored in the 80's with only 9 points separating 1st and 6th place finishers.

When the dust settled, David Patterson emerged with first place with his South American/Amazon display that he had told everyone was 'not ready'. It was a very nice overall design that incorporated two focal points – clumpings of plants and driftwood that worked well with a nice carpet of foreground plants. The plants really 'popped' against a black background. The Angelfish, Rams, Apistogrammas and Rummy Nose Tetras looked great.

Last year's winner, Robert Wheatley, was edged into second place this year, just two points adrift of David. His display was exceptionally clean with not a spot of algae visible anywhere. His design provided lots of contrast in colour and texture and made good use of driftwood to define borders within the display.

Another two points behind was third place finisher Michelle Dunstan who now has bragging rights over husband, Scott, for a year! Michelle had the smallest aquarium and one of the most low-tech approaches in the competition but I was very impressed with the design and she earned high marks for health

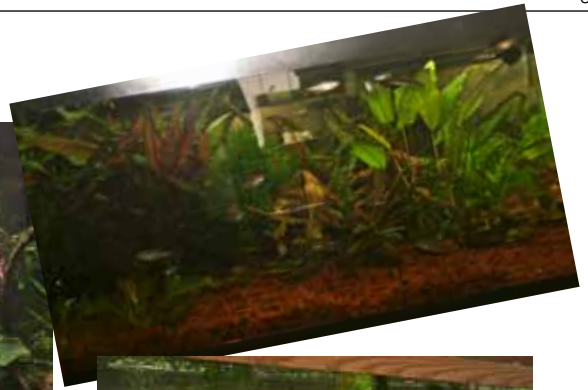
of both fish and plants. Michelle utilized driftwood and Anubias plants to great effect and the school of Harlequin rasboras fit the scale of the tank perfectly.

David Almeida, Scott Dunstan and Justin Wall all scored in the 80's with some beautiful displays. If David's tank didn't have BB algae it would certainly have been in the top three and may have been a contender for first place. Scott had an impressive display but I deducted a couple of points for what I considered to be a distracting element. Another judge might easily have seen it differently and put this tank in the top three. Justin had obviously spent some time working with the design of his tank that represented a sunken wall with two distinct levels in the tank. Congratulations also go to Peter Marsh and Claire Wheatley for their displays. They had nice aquariums but were up against some stiff competition. I must make special mention of Jared Dunstan who is only 10 years old. He entered a

40-gallon live-planted tank that he had set up himself and was competing against the 'big boys' (as well as his Mom and Dad) as we don't have a junior section. Jarad did an excellent job and, judging by what he is putting together at 10 years of age, he's certainly one to watch when he gets a little older.

I was equally impressed by the spirit of friendly competition that clearly existed between several of the entrants. Whilst there was a lot of banter between them, it was also obvious that they help each other out throughout the year, exchanging plants and ideas. That's what the club is all about and it was nice to see. I'm sorry that you couldn't all win but I hope that you enjoyed visiting the various homes and seeing the different tanks. I also hope that I wasn't too harsh in my judging and that you'll all enter again next year.





Aquatic Plant Update

By Craig Morfitt, BFAAS

If you thought it was already difficult enough to import aquatic plants into Bermuda, it just got harder!

Many of you will already be aware that aquatic plants cannot be brought into Bermuda without an import permit. Those permits are issued by the Plant Lab, which is part of the Bermuda Government Department of Environmental Protection. The challenge is created by the requirements that must be fulfilled before the plants can be imported. Generally speaking, there are two prerequisites. They are a Phytosanitary Certificate and a Nematode Certificate.

The Phytosanitary Certificate is reasonable easy to acquire. The US Department of Fish and Wildlife inspects the actual shipment and, if found to be free of pests, issues the certificate for a fee. Until recently, that fee was about \$100 per inspection but the plant company informs me that the fee for a certificate has now increased to \$300. A fee of \$300 is prohibitive to many people who only want to import a few plants. A sizeable order is needed in order to spread the cost of the certificate. For example, an order of 100 plants means a certificate fee of \$3 per plant (possibly doubling the initial cost of the plant) whereas an order of 300 plants equates to \$1 per plant.

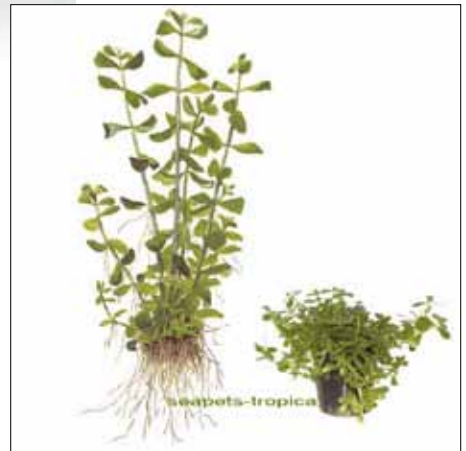
By far, the greatest challenge is the Nematode Certificate. This can come in two forms. Either the growing facility itself has been inspected and found to be free of nematodes (within the preceding 12 months) or the actual shipment of plants has been inspected and found to be free of nematodes.

We have contacted dozens of plant nurseries and suppliers and none of them have been able to provide the necessary certification regarding nematodes. As nematodes live in the roots of plants, the inability to get a nematode certificate means that we have been unable to import rooted plants.

Fortunately, the Department of Environmental Protection has allowed us to bring in plants without a nematode certificate, provided the roots are cut off completely prior to shipping to Bermuda. This works out well for bunch/stem plants as they will grow new roots once in an aquarium. This is how we have been able to import a variety of plants over recent years but we have been restricted to only stem or bunch plants. Other common genera of plants such as Echinodorus (Sword Plants), Anubias, Cryptocorynes, Aponogetons, etc cannot be imported as they will die once the roots are cut off. All of the existing examples of these types of plants in Bermuda have been



Ludwigia palustris



Bacopa monnieri

propagated from specimens that were imported years ago before the regulations tightened.

However, even our ability to import stem plants without roots has now been restricted. The Plant Lab is now researching every plant species before allowing them to be imported. This is to reduce the potential for importing invasive species that would be problematic in our ponds. Also, as per regulations, any plant that is capable of producing seeds may only be imported in seed form. This process will gradually result in a 'stop-list' of plant species that cannot be imported as well as a list of species that have been approved. Unfortunately, the process of refusing or approving plant species is a lengthy one. It took months for the Plant Lab to research the species on my recent order.

Of the plants on my initial order list, the following were approved for import (provided that they were grown totally submerged and have had the roots removed): *Ammania senegalensis*; *Proserpinaca palustris*; *Nesaea crassicaulis*; *Nesaea 'Red'* (hybrid); *Alternanthera reineckii*; *Didiplis diandra*; *Ludwigia inclinata*; *Ludwigia repens*; *Heteranthera zosterifolia*; *Hydrotriche hottoniflora*.

No approval was given for *Hydrocotyle*, *Lysimachia*, *Limnophila*, *Micomeria* or *Myriophyllum* due to their invasive and weedy potential.

It is very important for Bermuda's aquarists to ensure that offshoots, cuttings, runners or seeds are not planted or disposed of in local marshes, ponds, waterways or sewers as they may become established and endanger protected areas. Please dispose of cuttings responsibly to protect our local environment.

To highlight this point, I note that the book "A Naturalist's Field Guide to Bermuda" by Martin L. H. Thomas (available from the Bermuda Aquarium) lists a number of aquatic plants that are known in the hobby as being established in local waters. These include *Ludwigia palustris* (Paget and Devonshire Marshes) and *Bacopa monnieri* (Devonshire Marsh, Paget Marsh and Pitman's Pond). Also commonly established now are pond plants such as Water Lettuce (*Pistia stratiotes*) and Water Hyacinth (*Eichornia crassipes*).

We will continue our efforts to find a plant supplier who can meet all of the local requirements and who can provide us with a greater variety of plants. The next avenue to explore is that of cell cultivation of plants in sterile conditions. This emerging practice has the potential to supply plants grown in sterile laboratory conditions that are nematode and pest free.



WASHINGTON D.C.

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Featured speakers include Ad Konings, Vin Kutty, René Krüter and Zeb Hogan from Nat-GeoTV. The ACA 2011 Fish and Art Show presented by UPG will show off the best looking cichlids. It all ends with the massive Sunday Auction.

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Reprinted from Greater City Aquarium Society's Newsletter "Modern Aquarium"

No, It's NOT a Guppy!

Article and Photos by Alexander A. Priest

Many aquarium hobbyists even today believe that the Endler's livebearer is "just a guppy." Even the on-line encyclopedia Wikipedia cites an expert who claims these fish are just guppies, and not a separate species at all: "According to Stan Shubel, the author of **Aquarium Care for Fancy Guppies**, the Endler guppy is in fact not a separate species. The Endler guppy has the same genetic makeup as the guppy [*Poecilia reticulata*], yet is given its own name, "Poecilia wingei" for conservation purposes." Wikipedia further notes that, while Endler's livebearers are not on the the IUCN "Red List" of endangered species, they are in danger of extinction from human encroachment and pollution. There is some speculation that they may even be extinct in the wild, due to the fact that a city garbage dump

was built next to the only place where they were known to exist, the lagoon Laguna de Patos.²

A 2005 article in **Contributions to Zoology** stated: "The recognition of *P. wingei* results from observed character displacement, i.e., on the interaction between two closely related species in a shared environment. In addition to differences in coloration, behaviour also indicates specific differences . "its closest relative is the common guppy, *P. reticulata*, sharing identical meristic data, but differing by its enhanced metallic body pigmentation. This brightness in body pigmentation is also noticed in the females of *P. wingei*. Moreover, in the zone adjacent to the distribution area of the common guppy, *P. wingei* males exhibit a unique melanophore pattern,



A (typically) gravid female Endlers



A male Endlers

viz., a large band in the midsection of its body. The importance of this feature, i.e., the spatial distribution of melanophore patterns, is decisive for its recognition as a valid species.”³ (Note: meristic data relates to quantitative, or countable, features of fish, such as the number of fins or scales.)

The current thinking in the scientific community appears to be that *Poecilia wingei* is a valid species, separate and distinct from that of the common guppy, *Poecilia reticulata*. So for the balance of this article, I will be treating Endler's livebearer as a separate species, *Poecilia wingei*. It should be noted that since it can breed with the common guppy, hybridized crossbreeds are, unfortunately, not uncommon. My description of this species and of their care and maintenance is based on the population my wife and I have kept for several years. We received them from former Greater City President Joe Ferdenzi, who assured us they are a “pure” strain (i.e., not crossbred with guppies) that came from the aforementioned Laguna de los Patos. In fact, ours are descendants of the ones collected by Endler himself (There are different populations, and they don't all look exactly alike.)

Male Endlers have orange, black, yellow, green, and blue colors. Females are a uniform drab color, but often with a slight metallic body sheen. Both males and females are under one inch total adult length, with males being smaller than females. (I remember hearing that all males looked exactly alike, but this has not proven to be true.)

Endlers are named after Professor John Endler, who collected them in northeastern Venezuela in 1975. (Actually, they were first discovered in 1937, and this was, in fact, a “rediscovery”). Dr. Endler's collection ended up in Germany, where they became popular with hobbyists and were given the name “Endler's Livebearer.”

Dr. Endler collected them in warm (81° F - 27° C), hard, and green (due to algae) water, where they coexisted with *P. reticulata* (also native to northeastern Venezuela). However, guppies are less common in places where Endler's Livebearers are found, as guppies prefer clear and cooler (77° F - 25° C) water.

The species was given the scientific name *Poecilia wingei* in honor of the Danish biologist Dr. Øjvind

Winge (1886-1964), head of the Department of Physiology at Carlsberg Laboratory (Copenhagen, Denmark) and “the father of yeast genetics.” He was the first geneticist to describe and demonstrate the genetics of a number of guppy mutations and traits in the late 1920s.

These fish will eat almost anything small enough to fit into their mouths. As noted in my wife's companion article (“A Recipe For Smiles,” elsewhere in this issue), our population is fed twice a day, with crushed flake or small pellet food in the morning and live microworms in the evening.

One article I came across stated that water temperature during gestation affects the gender of the fry. For more males you should keep the temperature in the tank at 69°-70° F. For more females you should keep the temperature in the tank at 79° to 81° F.⁴ Our tank stays at around 79° F in the daytime, and drops to about 72° F at night (the heater in the tank is not plugged in). Since we do not appear to have an overabundance of females, I cannot verify this statement based on our experience. As is common among livebearers, a single insemination of the female will yield more than one brood of fry.

Although Endlers were originally found in warm 81°C (27°C), hard, and alkaline water, they will adapt to local conditions. Wikipedia notes that: “Endler's livebearers are hardy and undemanding in the aquarium though they prefer hard, warm water. The warmer the water, the faster they will grow; however this also seems to shorten their lifespan. They can be kept at 18°C (64°F) to 29°C (84°F) (66-82°F), but their optimum temperature seems to be 24°C (75°F) to 27°C (80°F). This is slightly higher than their guppy cousins which prefer 23°C (73°F) to 25°C (77°F)”⁵

They do best if kept in tanks with plants (preferably live plants, but fake will do) to give them hiding

places. Although they appear to be less likely than guppies to eat their own young, plants will give the fry a better chance at survival. While I have not found any specific reference saying that hornwort grows in the natural habitat of Endlers, it is well documented that hornwort can be found worldwide. Based on our success with a combination of Endlers livebearers and hornwort (again, refer to Susan's article), I would recommend it as a plant of choice for these fish. They are reported to be determinedly suicidal jumpers, so a cover on the tank is a must.

If you like small, active, colorful, and not very shy fish, you'll love Endlers. As their common name implies, they are livebearers, with females producing live fry. While some books indicate that, like guppies, they will eat their fry, we have not found this to be the case (or if it is, it has not been a major problem). In our tank, very tiny fry compete side by side with nearly inch long adults for food, without any noticeable aggression or predation.

So no, Endlers are NOT guppies (but they should never be mixed with guppies because they will interbreed, and hybrids are frowned upon by aquarists, especially if this could contaminate the gene pool of a species possibly endangered or even extinct in the wild). However, Endlers are just as easy to care for and breed as guppies.

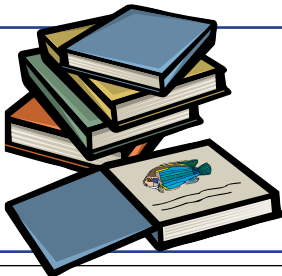
¹ http://en.wikipedia.org/wiki/Poecilia_wingei

² <http://www.aquaworldaquarium.com/Articles/TonyGriffitts/EndlersLivebearer.html>

³ Description of *Poecilia (Acanthophaelus) wingei* n. sp. from the Paria Peninsula, Venezuela, including notes on *Acanthophaelus Eigenmann*, 1907 and other subgenera of *Poecilia Bloch and Schneider*, 1801 (Teleostei, Cyprinodontiformes, Poeciliida

⁴ <http://dpc.uba.uva.nl/ctz/vo174/nr01/art07> <http://www.aquatropicalfish.com/showthread.php/834-Endlers-Livebearers>

⁵ http://en.wikiDedia.or/wiki/Poecilia_wingei



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Reprinted from Hill Country Cichlid Club's Newsletter "The Lateral Line"



Astatotilapia cf. bloyeti Sauvage, 1883

- Greg Steeves

Many interesting cichlids inhabit lesser known waterways throughout Africa. New species are discovered with each ichthyologic expedition to rarely explored regions. Some fish however, have been known to aquarists well before the enmas exportation of fish from the great rift lakes. Over time, scores of these species seem to have slipped from main stream popularity only to surface intermittently under a new guise. Included in this intermitted resurgence is the beautiful riverine species *Astatotilapia bloyeti*.

First described in 1883 as *Hemichromis bloyeti* from Kandoa Tanzania, *A. bloyeti*-like fish have been catalogued from waterways in Kenya, Tanzania and Uganda as well as Lake Chad and the Upper Niger (Greenwood, 1979). Female coloring and

body markings are quite similar within these locales while the males display differing hues and patterns corresponding to collection location. As of yet, it has not been determined if this is a single species or a complex of comparable animals. The cichlid found in the aquarium hobby under the moniker *A. bloyeti* is consistent with physical attributes noted in the Kandoa variant (Sauvage, 1882).

The maximum size has been noted at 7cm. In the aquarium, *A. bloyeti* females will grow to this length however males will reach 12 cm with a much more robust girth. This is typically a moderately aggressive haplochromine with most hostility restricted to conspecifics. Females have a well defined pecking order and are somewhat belligerent towards each other. The alpha female when displaying, will not have



Two female Astatotilapia cf. bloyeti sparring.

the midlateral markings as represented when in a more relaxed state. A solid back bar stretches from the corner of the mouth and through the eye. Body coloration is a tarnished silver color with a slight olive green hue. The anal and caudal fins have a yellow tinge. In a relaxed state, females will have a black line running along the body laterally with slight vertical barring along the flanks.

Dominant males are really quite striking. Body color is a gold-green. A rust colored blaze extends along the forehead to the base of the dorsal fin. The eye bar extends to the lower jaw where this black coloration spreads. The bottom lip is very light, almost white. Pelvic fins are black with the first ray extended. The

dorsal and caudal fins are clear with a slight light blue tinge. A black margin lines the aft portion of the dorsal fin. Three to five orange ocelli line the posterior outer edge of the anal fin. The mouth is creased with both bicuspid and tricuspid teeth spaced in 5-7 rows in both the upper and lower jaws. The cheek is completely scaled. The body shape is typical of astatotilapines in that the forehead slope is straight or ever so slightly convexly curved. The body is deep but somewhat laterally compressed. Unlike true haplochromines, the outer teeth of *A. bloyeti* are firmly attached to the mandible.

It is recommended when housing this cichlid in captivity, that the basic guidelines be followed that is relevant to all *Astatotilapia* species. An aquarium of at least 120 liters will be suitable for a small group of 2-3 males and 8-9 females. This sex ratio will allow for any aggression to be dispersed among the colony. A fine grain substrate of inert sand will suffice as this cichlid will spend a considerable amount of time sifting along the bottom. Live plants will typically not be bothered however I have found that the various Anubias, Aponogeton, and fern type species work best. Some rockwork fashioned into caves or large pieces of driftwood will add to the feeling of security needed by *A. bloyeti* to really display at its best. In terms of water parameters, so long as extremes are avoided, good filtration and regular maintenance is really all that is required.



Astatotilapia cf. bloyeti pair in the aquarium.



Astatotilapia cf. bloyeti pair in the aquarium.

Synodontis catfish, tetras such as Phenacogrammus interruptus and other fish make for good companion species providing the aquaria is of a size adequate to accommodate the behaviors of these fish. If one is not concerned with being bio-typically correct, some Lake Malawi Aulonocara and Lake Victoria haplochromine types may coexist nicely. When ever mixing any species of cichlid, one must diligently observe the community to ensure compatibility.

Spawning is typical of other species in the genus. A ripe female triggers the male into courtship. He will excavate a small depression at the base of an object. From here he will shake with his fins fully extended defending his area from other fish. Eventually the female succumbs to his advances and spawning occurs. The female circles the male nipping at egg dummies on his anal fin while dropping her own eggs. The male releases milt which the female ingests while picking her eggs up. The larvae are incubated between 16 and 18 days at which time the female will release here brood for small forages. After a week, the female will not allow the young back into her buccal cavity and the parental care tapers

off. The fry grow rapidly and will be sexually mature at ten months.

Most *Astatotilapia* species are opportunistic omnivores with a high preference for insect larvae. In captivity *A. bloyeti* are easily reared on a varied diet.

The complex of cichlids that include *Astatotilapia bloyeti* and *bloyeti* like species is in need of study. There are many fish with uncertain pedigrees from the riverine regions around the African great lakes: many are *A. bloyeti* like. Until accepted taxonomic examination can be made, it is in the best interest of all involved to refer to these fish as *Astatotilapia cf. bloyeti*.

References

Greenwood, P. H.; 1979; "Towards a phyletic classification of the 'genus' Haplochromis (Pisces, Cichlidae) and related taxa. Part 1"; Bulletin of the British Museum (Natural History) Zoology Series; pp. 265-322.

Sauvage, H.E.; 1882; "Description de quelques poissons de la collection du Muséum d'histoire naturelle. V . 6";Bull. Soc. Philomath. Paris; (Ser . 7V . 6 pp. 168-176.

You May Have Too Many Fish If:

- People ask you how many you have, and you tell them how many tanks you have.
- You try to hide the power bill from your spouse.
- You don't buy fish, you sell them.
- You don't sell fish, you give them away.
- "Fish Fry" has no culinary meaning to you.
- Your house is nicely humid, even in the winter.
- Mosquitoes and Japanese Beetles aren't pests; they're live food.
- There are some things in the refrigerator you don't talk about.
- If that dead one isn't too big, you "let the snails take care of it"

Fin Fun

WANNA FIGHT?



Betta macrostoma in aggressive stance - photo by Al Priest

Whether or not they really are more aggressive than most other fish, some species have common names that most certainly suggest that they are, well, pugilistic. See if you can correctly match the common names of these “fighters” with their scientific names.

Common Name	Scientific Name
Black Belt Cichlid	<i>Pseudosphromenus cupanus</i>
Fighting Loach	<i>Xiphophorus helleri</i>
Green Terror	<i>Betta splendens</i>
Jack Dempsey	<i>Ichthyborus ornatus</i>
Ornate Fin Nipper	<i>Micralestes acutidens</i>
Sharp Toothed Tetra	<i>Cichlasoma octofasciatum</i>
Siamese Fighting Fish	<i>Nemacheilus notostigma</i>
Spike-Tailed Paradise Fish	<i>Vieja maculicauda</i>
Swordtail	<i>Aequidens rivulatus</i>

BERMUDA FRY-ANGLE AQUARIUM SOCIETY

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SEND US YOUR IDEAS!

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We welcome contributions
to Fish Tales, including
articles, comments, book
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Any contributions should

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Society Membership

Membership to the Bermuda Fry-Angle Aquarium Society is open to any resident of Bermuda who has an interest in tropical fish. The annual membership fee is \$20. The Society's financial year runs from April 1st to March 31st.

Meetings are held on the third Friday of every month. Meeting place is the Lecture Rooms, behind the Bermuda Aquarium, Museum & Zoo. Occasionally meetings are held elsewhere. Check the "meeting" column in this newsletter for details of upcoming meetings.

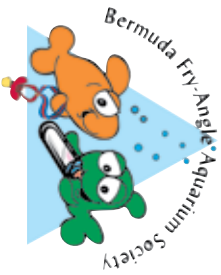
If you would like further information please contact:

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Members will be notified
of the date and location
by e-mail