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Biotodoma - The Elfin Eartheaters

By Graham Ash

Here is a group of fishes that must be one of the most challenging of the neotropical cichlids to maintain.

Currently the genus consists of four known species, of which two have been formally described, *Biotodoma cupido* (Heckel, 1840), *B. wavrini* (Gosse, 1963) and the two un-described species that have initially been named after their collecting sites, *Biotodoma* sp. "Sanataren and *Biotodoma* sp. "Red Finned Toncantins".

The type species, *Biotodoma cupido*, was originally described by Heckel in 1840 as *Geophagus cupido*. In 1862 Gunther placed the species into the genus *Mesops* but it was later found that this genus was preoccupied by a group of beetles and so in 1903 Eigenmann and Bray erected the genus *Biotodoma* and assigned the species *cupido* as the type species of the genus.

At the time it was believed, by Eigenmann and Bray, that the species, *cupido*, was, in fact, a mouthbrooding cichlid and this influenced their choice of name for their new genus. The Latin name of *Biotodoma* means "Living Home" which indicates that the fish are mouthbrooders. However, it has come to light in more recent times that the species is not a mouthbrooder at all, but indeed are substrate spawners.

Generally, *Biotodoma* species are not imported very frequently and so very few that do find their way into the country rarely survive through to adulthood. This fact provides a very serious challenge to those cichlid keepers who may have been lucky enough, and observant enough, to be able to recognise specimens in retailer's tanks.

Initial maintenance

Having purchased the drab coloured rarities, the hobbyist should be aware that they will probably have a rather difficult time on their hands to advance the emaciated little fishes that was initially purchased into a very worthwhile and beautiful animal. The size of the tank required in not, initially, an important factor, most *Biotodoma* arriving at a length of about two inches which can easily be maintained in a two foot tank. They are best obtained and kept in groups of four or more and kept on their own, for about the first three weeks, so as to allow them to recover from their long journey from the wild.

It is during this early quarantine period that will determine if the fishes survive or not. The tank should be located as high up as is possible, from floor level, and should be left bare of any substrate, decoration or plants. Filtration should be by using a slow turnover rated filter and it is here that a large sponge filter can prove to be the best choice, one at opposite ends of the tank are even better. The water should be warm, and clean, with a temperature of around 82°F being aimed for. As the fishes originate from South America then the water will need to be adjusted, before the addition of the fish, so that it is slightly acidic and soft - a pH of 6.8 and GH of 9 being most welcome. Lighting should be low and subdued.

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Upon introduction into their new home, the fishes should be treated with a broad-spectrum bactericide which, once started, should then be continued throughout the three-week quarantine period. Feeding should be started straight away after the introduction, with a small feed of frozen bloodworm which, if not eaten within about thirty minutes, should then be siphoned out and some fresh put in. Do not leave any food in the tank that will turn bad overnight.

Once the first foods have been taken then you can commence to alternate the frozen bloodworm with brine shrimp nauplii or salina. *Biotodoma* only have small mouths and therefore cannot eat large offerings.

Continue the feeds as often as you are able, the main aim being to keep their stomachs full so as to get the fishes back into condition. After the first week a good flake food can be offered, but only small amounts and even then, any that is not eaten should be siphoned out of the tank. Water changes should only be small throughout and it should not be very long before a change will be seen in the fishes as they begin to come to the front of the aquarium every time you go near.

General maintenance

Once the initial three-week period has passed, and the fishes are in an improved condition, then you can now consider moving them to a more permanent home.

A tank should be prepared that is at least three feet in length, depth is not too important with twelve inches being adequate, but the tank should be as wide as possible. Filtration is optional but with a slow turnover rate being required, either a pair of sponge filters can be retained or a small internal power filter used. The benefits of using more than one filter is that it is far easier to maintain a biologically active filter by having the two in operation and make for easy tank servicing.

The substrate should be considered in relation to the fish, as the fish only have a small mouth and so a suitable substrate would be a mixture of sand and small sized gravel to a depth of about half an inch on most of the tank base. Where plants are to be situated, the substrate depth can be increased to allow the plants to root properly. These fishes do not dig up or destroy plants. Hardy plants such as Java Fern, Java Moss and Indian Fern are ideal. Also, any tank companions should be on the small side and from South America if at all possible. If it is to be a community aquarium then any of the medium sized Tetras, such as Kerris, Cardinals, Rummy Nose or Bleeding Hearts are suitable. Equally catfish can be added such as *Corydoras*, *Farlowella* and *Sturisoma* being suitable, as are any of the Bristlenose group.

If it is to be a cichlid species tank then the choice of tank mates is more crucial. Firstly, the *Biotodoma* species must be able to compete successfully for food that is offered.

Cichlids from warm acidic waters that will make ideal tank companions include *Cleithracara maronii* - the Keyhole cichlid, *Laetacara dorsiger* and *Acarichthys heckclii*, as long as the latter are not too large, *Cichlasoma* species should definitely be avoided.

Breeding

Breeding has rarely been accomplished in captivity. It is known from isolated reports that these fish are a substrate spawner. Rather than spawn on the usual hard surfaces, *Biotodoma* species differ in that the adults scoop out small channel depressions in the substrate and lay their eggs on the base of the gravel. It is probable that the fish are not sexually active until at least two years of age.

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Sexing is difficult and has been confused by differing accounts being given stating different sexual characteristics. Males are said to grow larger and are slightly more colourful as they get older and also they develop tail fin extensions.

In conclusion

As in previous articles on South American cichlids that I have written, this species is yet another that is rarely kept long enough to allow it to reach adult status. How often is a Biotodoma over three inches in length ever seen? A lot has yet to be learnt about this group, but I do know that there are a few members of the BCA and Yorkshire Cichlid Group who are on the right tracks. Let us hope that, with patience, we will eventually gain the skills and knowledge to be able to eventually reproduce these fishes before they are no longer available.

Yet again it is another of those areas where patience is a virtue as some of my Biotodoma are over two years of age and I hope to be setting up tanks specifically to attempt to breed them. It is rather pointless at this stage assuming how they breed when it has only rarely been accomplished, and all that I can say is that they should be treated as with most South American Eartheaters and kept warm and clean.

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