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### *Epiplatys bifasciatus*

Recently a small shipment of live fishes came in from Nigeria, shipped and caught by the Danish zoologist Stenholt Clausen who serves at the University of Ibadan. Together with the live fish, Stenholt Clausen gave some very interesting information on the ecology of this handsome fish.

"During Easter I drove to Share, about 300 km north of Ibadan, in order to catch this fish. Once more I found this species in a swampy area with many springs, small and shallow pools and creeks. There also were rice fields. This area is situated just at the boundary between the "old rock" and the "northern tertiary deposits" along the river Niger. At the foot of a small hill that belongs to the old rock, but was actually on the deposits, the fish lives. The pools and creeks had no subaquatic vegetation except in some stagnant pools where some filamentous algae was found. Grass and weeds were plentiful and overhang the edges of the pools and creeks in some places forming a complete cover of plants on the water surface. Many insects were seen on the vegetation and in the air. In the stagnant pools the water was very hot (35-40 C), whereas in the flowing creeks the water was much cooler. The whole area is shadeless (in the savannah) and during night temperature falls very much because of the cloudless sky. The species was plentiful in pools as well as in creeks. It was found together with *Hemichromis bimaculatus*, the only other species I found. In the higher spring I measured only 14 reciprocal megaohms (that is the upper limit of distilled water in the USA) but in this spring I saw no fish. In the pools I measured about 45 reciprocal megaohms and here iron may be present because I saw brown deposits on the vegetation and on the bottom. The bottom was muddy in the stagnant pools, but sandy at some places in the creeks. Much organic material may be present in the water, as the whole area is used for washing and fermentation of manioc (Kassava) and in many places the bottom was covered by manioc. The mud gave away a sour smell when it was disturbed, at some places also with a smell of H<sub>2</sub>S, also in some of the creeks where pieces of manioc were mixed into the sand. Both species were seen in the hot and shallow pools and in the cooler creeks. The water was clear, but during the return to Ibadan, it turned very cloudy and gave away air forming a brownish foam. This the poor fish did not like and they swam to the surface gasping for air. Nevertheless no fish died in Ibadan (or on the way to Copenhagen, or since arrival). Because of this failure with the natural water, I put them into water from Yemoji, near Ijebu Ode, Ijebu Province, Western Region (see later) which always measured less than 20 reciprocal megaohms/cm.

This species or subspecies of *Epiplatys senegalensis* (Steindachner, 1870) was described by Steindachner in 1881. In 1895, Garmann considered this fish to be a variety of *Epiplatys senegalensis* together with

*Epiplatys maroni* (Steindachner, 1881). Steindachner's material of *Epiplatys bifasciatus* and *Epiplatys maroni* was taken at Bahr el Seraf and Bahr el Geleb ("White Nile"), whereas his material of *Epiplatys senegalensis* came from Dagana in Senegal. Since Steindachner's description, the "senegalensis" have been taken within an unusually large area (for a killie) in Africa. The Belgian ichthyologist Dr. Max Poll reports this species from water (Stanley Pool) near Leopoldville in Belgian Congo. L.P. Schultz (USA) reports the species from Bromley, Harbel and Bendaja in Liberia. Daget reports it from Zinguinchov and Sangalkam in French Senegal. Svensson and later Johnels (Sweden) report the species as far north as Gambia, together with the surely close relative *Epiplatys steindachneri* (Sensson, 1933). Another relative was described from the lake Tchad area by Pellegrin in 1914 as *Epiplatys senegalensis acuticaudata*. Also the "senegalensis" may be caught in French Guinea, Ghana and Old Calabar in eastern Nigeria. *Epiplatys taeniatus* (Pfaff, 1933) from Jebba in French Sudan taken together with "senegalensis" may be a variety or subspecies. *Epiplatys bifasciatus* also may live in Sierra Leone and Liberia.

All these species, subspecies or races may be called the "longitudinal banded *Epiplatys*" because -in particular in females- there are two (more or less) dark longitudinal bands from head to caudal. In this way this group forms a counterpart of the "bivittatum group" in *Aphyosemion*. Just as in the "bivittatum group" the longitudinal bands are less conspicuous in males, and in some of the species at least there may be many narrow vertical bars on the hindmost part of the body.

As far as I can find out, only *Epiplatys senegalensis* has been kept as aquarium fish. It was imported to Germany in 1910 and later. In "The Aquarium" May 56, Fritz Mayer (Germany) wrote about some importations to Germany which came in from (or via) Lagos in Nigeria. He gives a drawing of the fish showing also distinct vertical bars in the female. This stock hatched within 10-12 days at 75 F. No problems of keeping the fish alive or in the breeding. In the July 56 issue of "The Aquarium" Aaron Dvoskin wrote that the species has been imported to the USA from Leopoldville. In this particular stock (Stenholt Clausen's) the females (about 15) have no vertical bars or traces of vertical bars. The longitudinal bands are very sharp and females remind me very much of the female in *Aphyosemion bivittatum*. In the adult male the longitudinal bands fade away and in a certain light some sort of narrow "vertical" bars are seen on the body behind the anus, these bands stand at an angle of about 45 degrees. The last ray of his anal fin is very pointed and so are the center rays of the caudal fin, also the females. Males have a regular pattern of red dots on the sides and some color also in the vertical fins, but still he is very shy and does not show his colors very much. The species seems to be a small one. No specimen is bigger than 5 cm, caudal included.

Most eggs are deposited near the bottom of the tank on perlon, roots of water ferns and upon the fine mud. The spawning act is the same as we find in related species. Males do not chase the females very much. The egg is small, 1.2 mm, the membrane has long and very fine filaments in on pole (as far as I could see in the microscope), some areas of the membrane have no filaments at all. The "white" of the egg is without any colour as in "chaperi". The yolk has a brilliant orange color (may come from the feeding with red daphnia - we often found that eggs of killies took color from the food offered). The yolk only measured 1.00 mm (0.9 mm in "chaperi"). The egg actually measured 1.15 x 1.17 mm ("chaperi" 1.10, "petersi" 1.25 mm). Eggs hatch within 12-16 days at 23-26 C. The fry are small and have a small yolk sack. It does not come to the surface, but rests among the plants very quietly indeed.

The whole stock belongs to Stenholt Clausen and we are now breeding the species on his account. Later on I hope to be able to ship eggs of this promising species.

The fishes had some white spots, in particular, on the pectorals when they came in. These spots (bacteria?) soon disappeared and since then no attack of any known aquarium disease has been seen. I keep the stock in my usual killie water and here they do well. But if water gets only very little cloudy, the fish will look diseased and they will not spread their fins.

The *Aplocheilichthys spilauchen* (Dumeril) that came together with the *Epiplatys bifasciatus* are dying one by one (tuberculosis?). They were caught in brackish pools or lagunes near Lagos in Nigeria. Water had about 26.500 ppm of Sodium chloride (Please notice: I write 26.500 ppm instead a of 26,500 ppm as you do in English).