

# The British Killifish Association



On the Possible Identity and Status of  
*Haplochylus lacazei* Rochebrune 1885  
Jean H. Huber

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## Author's Note

(1) I wish to thank warmly Prof. Eschmeyer to have listed my name as a contributor to the "Catalogue of Fishes", a monumental scope (55000 taxa of fish species, reported in total); for a further edition on CD-Rom, the cooperation has been extended and a special list of Killi-Data 2000 prepared for his team so that the oviparous Cyprinodonts be covered to the latest update.

Illustrations: fig. 1. Idealised sketches of the male of the 5 discussed Cyprinodont species of Gambia (*Callopanchax geryi*, *Epiplatys spilargyreus*, *Ep. bifasciatus*, *Fundulosoma thierryi*, *Nothobranchius kiyawensis*), of *Ep. fasciolatus* from Guinée-Liberia, and of the species of Mbosso River, near Cabinda, *Ep. ansorgii*, by R.H. Wildekamp.

Jean Huber

Paris, January 1999-February 2000.

# On the possible Identity and Status of *Haplochylus lacazei* Rochebrune, 1885.

Jean H. Huber\*

**Abstract:** The identity and status of a since long forgotten taxon, *Haplochylus lacazei* Rochebrune, 1885, are discussed. Because the description does not permit to allocate *lacazei* to any known Cyprinodont species, the author proposes to fix the status of the available name *lacazei* as an invalid name, following the new article 23.9 of the Code of the International Commission of the Zoological Nomenclature, valid from January 1, 2000. Knowing Rochebrune's works and the Gambian Cyprinodont fauna, and as the most reasonable conservative measure, *lacazei* might be considered as a junior synonym of *Epiplatys spilargyreus*, and then it would belong to the sub-genus *Parepiplatys* (sensu Huber, 1998).

**Résumé:** L'identité et le statut d'un taxon oublié depuis longtemps, *Haplochylus lacazei* Rochebrune, 1885, sont discutés. Parce que la description ne permet pas d'allouer *lacazei* à une espèce connue de Cyprinodonte, l'auteur propose de fixer le statut du nom utilisable *lacazei* comme un nom invalide au sens du nouvel article 23.9 du Code de la Commission Internationale de Nomenclature Zoologique, valide depuis le premier Janvier 2000. Connaissant les travaux de

Rochebrune et la faune Cyprinodonte de Gambie, *lacazei* pourrait être un synonyme junior d'*Epiplatys spilargyreus* en tant que mesure conservatoire la plus raisonnable et alors il appartiendrait au sous-genre *Parepiplatys* (sensu Huber, 1998).

**Introduction.** Eschmeyer (1998), in his monumental "Catalogue of Fishes" (1), has remarkably pinpointed the availability of disregarded or simply forgotten publications of old times, which comprise descriptions of taxa at the species or at the generic level. This is the case of Rochebrune's paper (1885) which deals with several new species said to have been collected in Gambia and elsewhere in western Africa. One of these may relate to Cyprinodonts, *Haplochylus lacazei*, and the purpose of this paper is to try to identify that taxon on the basis of all the information available and propose for it a systematic status.

Analysis of the genus name and considerations on the putative belonging of *lacazei* to the Cyprinodonts.

The genus *Haplochilus* Agassiz, 1846 (*Haplochylus*, erroneously by Rochebrune) is an unjustified emendation of *Aplocheilus* Mc Clelland, 1839.

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This name was constantly used to designate non deep-bodied forms of tropical Cyprinodonts and describe new species from both the Old and New Worlds, up to 1934 (*Haplochilus carlislei* Horst): over 50 taxa, mainly in *Epiplatys* but also in Aplocheilichthyins, have been originally described in that genus (Huber, 2000a). Rochebrune was well aware of that name and of the morphology of the fishes it represents, for two reasons:

1) already before 1885, 8 taxa had been described from the Old World: *H. fasciolatus* Günther, 1866; *H. infra fasciatus* Günther, 1866; *H. playfairii* Günther, 1866; *H. rubropunctatus* Steindachner, 1867; *H. senegalensis* Steindachner, 1870; *H. bifasciatus* Steindachner, 1881; *H. chaperi* Sauvage, 1882; *H. antinorii* Vinciguerra, 1883;

2) in 1882, Rochebrune himself studied *infra fasciatus*, *fasciolatus* and *spilargyreus*; and he placed the latter in *Haplochilus*, the first and third species being surprisingly synonymized.

Therefore we may reasonably acknowledge *H. lacazei* as a Cyprinodont in relation to the experience of the above taxa, but nothing in the following description can demonstrate this with full certainty.

Another dimension of doubt is raised from Rochebrune himself and from his works themselves. Rochebrune was, even for his years of activity, an unusual generalist, dealing with very many

families of zoology: for example in his 1885 paper, he describes many new species among which are mammals, birds, reptiles, amphibians and not less than 11 new fishes of various families from Casamance, the Mellacorée river, the Congo River, Loanda, Bathurst and/or all Gambia. Rochebrune, from the region of Angoulême, southwest of France, published first in botany (1860-1862), then he participated to some archeological field research (from 1865), lived in Saint-Louis (Senegal) as a colonial medicine doctor between 1875 and 1877 and finally became assistant naturalist in Malacology at the Paris M.N.H.N. in 1879. Up to 1885, he dealt with fishes among other animals and was criticized about the weakness of his diagnoses (see Rochebrune, 1885; and comments on papers from the Zoological Record). In addition, his new species from various families and origins came from traders in Paris (e.g., Louis Petit, from various regions of western Africa, including "Landana") who were regularly showing him their novelties, usually before selling them: this explains the poor quality of information regarding collection origins and also the lack of types (the Paris M.N.H.N. holds only two types of fish by Rochebrune from his 1880 paper and none from the 1885 paper). The only regions in which he specialized and sampled were the Senegambia. Between 1885 and 1904, Rochebrune only published in Malacology and notably the coming detailed follow up that he announced in his 1885 paper with Senegambia distribution details and the full diagno-

sis of his new taxa never occurred. It is not known or understood why he withdrew from that project, but he was accustomed to that behaviour.

**Original description and its analysis.**

The next step in the identification of that taxon is to analyse the description which appears to be in Latin (translation into French by Prof. Daget; author's comments between brackets). "24. *Haplochylus lacazei*. D= 10; A= 16; LL= 26". "Body compressed posteriorly from the Pectoral fins insertion; body depth four times in (standard) length (i.e., depth= 25% in S.L.); head strongly flattened, three and a half times in (standard) length (i.e., head length= 29% in S.L.); eye diameter, three and one fifth times in head length (i.e., eye= 9% in S.L.); short subprotractile snout, hardly equal to eye diameter (snout= 7-8% in S.L.). Dorsal fin insertion at the level of the eighth Anal fin ray (i.e., D/A= +8); last rays of Dorsal, Anal and Ventral fins are filamentous.

Upper part (of body), purple red with yellow markings. Lower part (of body), yellow orange, with vermillion red markings and six, intensively blue, bars. Dorsal fin, yellow with scattered blue dots. Caudal fin, yellow with a blue bar near to its base. Anal fin, yellow, with a blue border. Iris, blue.

Maximal size (total length): 7.5 cm (near to 3 inches)".

Habitat: marshy biotopes, near a location named "Landana".

"Registered in Bouvier's personal collection".

"We are pleased to dedicate this very beautiful species to the knowledgeable Professor H. Lacaze-Duthiers".

"It is very distinctive from its congeners".

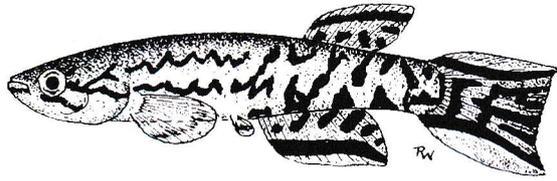
The first comment is that Bouvier's collection is probably lost: Eugène-Louis Bouvier (1856-1944) was a Professor of Entomology at the Paris Museum (MNHN) from 1895 till 1931. In 1885, he was only 29 year old in the early steps of his career. No Bouvier's collection is registered in the Paris MNHN. Therefore, types (if any) may be hypothesized as lost.

The second comment concerns the type locality of Landana. Investigations by Prof. Daget (pers. comm., November 1999) disclosed that Louis Petit (cf. supra) sent birds to Bouvier that were said to come from Landana, too. A priori, it may be hypothesized that Landana is in Senegambia, as many other fishes of Rochebrune's paper of 1885 e.g., *Isistius marmoratus* from "Landana and the entire Gambia". Moreover, Rochebrune's main focus was Senegambia and nowhere else in Africa. Landana should not be far from the sea, because, in the same paper, other fishes are quoted with the same location and a habitat in mangroves. However, Landana does not exist in the present maps of Gambia, nor in the place-name changes (Room, 1993), nor in the Gazetteers of Gambia, Sénégal, Guinea and Guinea-Bissau. The embassy executive of the

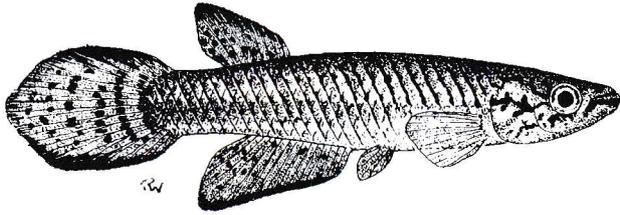
Gambian State in Paris, M. Jallow, was kind enough to ask for an in-depth historical and geographical research of that locality name to the Gambian civil servants, but the search was not conclusive: Landana may be a mislabelling or an erroneous transcription for Latre Kunda, a village close to mangroves in the surroundings of Banjul, the capital city and single harbor of Gambia. An alternative option is to enlarge the search outside Senegambia, on the coast and this is conclusive: Lândana (geographical coordinates in hundredth of degrees: 5.22S; 12.13E) is today a village, near mangroves in Cabinda, northwestern Angola, about 50km southeast of Pointe Noire in Congo. However, senior ichthyologists in M.N.H.N. discard this hypothesis, because Rochebrune never deposited material from that region and that his paper of 1885 was the last he ever published on fishes. None the less, let's explore the Portuguese Landana as the correct type locality: *lacazei*'s description partly corresponds to the single *Epiplatys* species of Cabinda, which reaches 7 cms and exhibits bars on sides. It is yet an unnamed component of the *multifasciatus* superspecies or identical to *ansorgii* (sensu Wildekamp, 1996) or to *boulengeri* or to *huberi*, reported from not too far away, in southwestern Gabon/Congo. The meristics of the three taxa (D= 9; A= 15; D/A= +10; EL= 30) somewhat fit with *lacazei*, except the scale count in lateral series; however, all components of the *multifasciatus* superspecies exhibits more than 7 bars on sides (usually 12 to 14) and these bars are black, never blue;

besides, the color on the upper sides is not red but yellow or green. Equally, an undisclosed "blue-barred" component of the genus *Aphyosemion* in Cabinda, would show associated red bars on sides that are not mentioned for *lacazei*. Then, the most reasonable hypothesis for the type locality of *lacazei* is that it lies not far from Gambian mangroves of those days: near the sea or upstream the Gambia river influenced by tide (remembering that mangroves were then more extended than today).

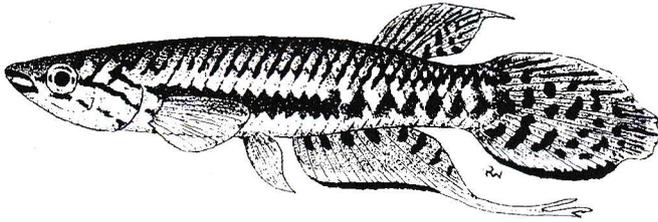
The third comment concerns the description itself which is clear and detailed but not comprehensive at all and, within the scope of Senegambian Cyprinodonts, may refer to a male of a member of the genus *Epiplatys* or of the subgenus *Scriptaphyosemion* in *Callopanchax* or of the annual fishes of *Fundulosoma* or *Nothobranchius*; this discards the other Cyprinodont lineage of that region, the Aplocheilichthyins, because of their colours (no red or green colours and no dark bar in *Aplocheilichthys spilarchen*, or *Poropanchax normani*); the five Cyprinodont taxa of the above genera which are presently known, according to Killi-Data (Huber, 2000a) from the Gambian lowlands (and also Senegal) are (their size as T.L. and their average major meristic counts, D, A, D/A, LL, are given between brackets for comparison with *lacazei*): *Cal. geryi* (T.L.= 5cm; D= 13; A= 17; D/A= +5; LL= 33); *Ep. bifasciatus* (T.L.= 6cm; D= 8; A= 16; D/A= +10; LL= 27); *Ep. spilargyreus* (T.L.= 5cm; D= 8; A= 17; D/A= +11; LL= 27);



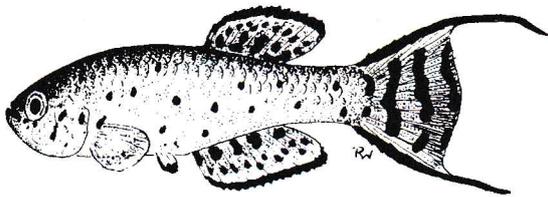
*Callopanchax geryi* Battabut Gambia



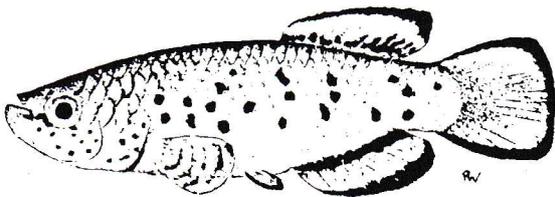
*Epiplatys spilargyreus* Georgetown Gambia



*Epiplatys bifasciatus* Bonoua Ivory Coast.



*Fundulosoma thierryi* Soponé Burkina Faso



*Nothobranchius kiyawensis* Dobo Swamp, Gambia River

Idealised Sketches by R. H. Wildekamp

*Fundulosoma thierryi* (T.L.= 3.5cm; D= 11; A= 15; D/A= +1; LL= 26); *Nothobranchius kiyawensis* (T.L.= 4.5cm; D=14 ; A= 14; D/A= -1; LL= 26). From the above diagnosis, it appears that the last two taxa can be excluded because of the lower D/A ratio and the smaller size and the first taxon, too, because of the higher Dorsal and LL counts.

The fourth comment, and a problem with the description of *lacazei*, is that it fits with some characteristics of the two *Epiplatys* from Senegambia, but not all: it presents more fin ray counts at Dorsal and Anal, which are consequently inserted less apart (a minor issue, though). *Haplochylus lacazei* shows the characteristics of filamentous fins which are to be seen in old dominant males of *bifasciatus*, however no fasciated pattern is reported for *bifasciatus* throughout its entire huge range; besides, it shows the key characteristics of fasciated pattern (blue oblique bars) of *spilargyreus*, however neither such red colorful pattern of male nor filamentous extensions are reported in *spilargyreus* throughout its entire huge range. The matter of filamentous rays is though not critical and it can be an artefact: when a fish is not properly fixed, its fin rays are stuck together and can simulate such a condition (e.g., Pellegrin has described in 1913 *Haplochilus senegalensis* var. *acuticaudata* on such a basis, but it turned up to be a mere synonym of *spilargyreus*).

The fifth and last comment is that the description even fits better with a pop-

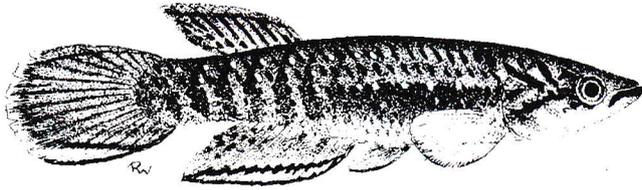
ulation of *Epiplatys fasciolatus*. Indeed, *fasciolatus* shows the dark blue bars on sides and peduncle (although more than six plus one), the characteristic yellow markings on upper sides and red markings of lower sides, the extended last rays on fins and notably ventrals, the less slender form of body than the known *Epiplatys* species of the region, the larger size and the higher meristics (T.L.= 9cm; D= 12; A= 17; D/A= +9; LL= 28). Unfortunately, the present distribution of *Ep. fasciolatus* ranges from Liberia to Guinea (Wildekamp, 1996) and its most northern collecting place is (Huber, 2000a) near Bagoro (10.52N; 13.55W) in western Guinea, about 400 km, south of Banjul, the main Gambian city and harbor, on the Gambia river mouth and putative approximate type-area of *lacazei* (13.47N; 16.65W).

#### **Discussion-Systematic status.**

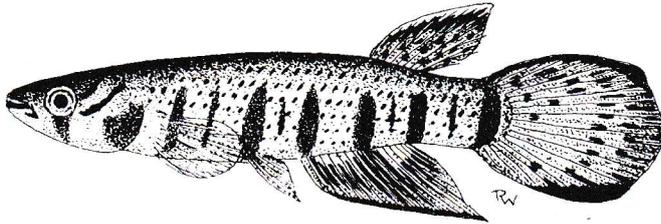
If it is accepted, in spite of the lack of types or of a figure in the original description, that *Haplochylus lacazei* is a Cyprinodont, then our present knowledge of Rochebrune's works strongly favours its belonging to the genus *Epiplatys*.

From the incomplete description, from the ambiguous type locality and from our presently insufficient knowledge of the Senegambian or Cabindan Cyprinodonts, seven hypothesis may be forwarded:

- 1) its identity with *Epiplatys spilargyreus*, as a junior synonym, and in that case some parts of the description are inaccurate; knowing



*Epiplatys fasciolatus fasciolatus* Bomi Hills Liberia



*Epiplatys ansorgii* Mbosso River Congo

Idealised Sketches by R.H. Wildekamp

Rochebrune's works, in general, these inaccuracies are minor, notably the deviations in size and depth;

2) its identity also with *Epiplatys bifasciatus*, as a junior synonym, and in that case several parts of the description are inaccurate; if Rochebrune's knowledge of *spilargyreus* is tentatively thought comprehensive, then this second hypothesis is likely because he did not know that taxon described from the Nile basin and *bifasciatus* is very abundant in Gambia; however, the deviation in the colour pattern appears to be too high;

3) its identity, also as a junior synonym, with *Epiplatys fasciolatus* which fits the best with the description. In that case, collecting localities have to be discovered about 400km north-

westerly to the most northern collections of *fasciolatus* but this possibility appears very unlikely to experts of the region;

4) its validity as a distinct northern component of the *fasciolatus* super-species that has to be collected for the second time after its description; the collection in western Africa of relict species in pocket regions linked to hypothesized refugia (Huber, 1998), such as *Epiplatys barmoiensis* or *Ep. njalaensis* or, if valid, *Ep. lokoensis*, does not make this hypothesis too theoretical; it seems, though, very unlikely to Etzel (1999 and comm. pers.), the expert of Gambia, a region which has been sampled a lot for Cyprinodonts and appears to be poor because it is situated at the northern most distribution of the *Epiplatys* genus (if it has not

become extinct in the mean time). Detailed field surveys in the putative distribution of *lacazei*, near the coast of Senegambia, say between Dakar and Casamance, may only clarify that issue but it is an hazardous venture;

5) its possible identity with a component of the *Epiplatys multifasciatus* superspecies if the type locality, Landana in Cabinda, would be accepted as accurate and if the "7 blue" bars were changed into "12 to 14 black" ones: all its components have been described after *lacazei*'s creation and the proper one would then be a junior synonym of *lacazei*;

6) its status as a nomen dubium (or nomen vanum), as a consequence of its insufficient description data which prevent from clearly assigning the taxon to a known species.

7) A further eighth hypothesis would have been worth studying: its status as a nomen oblitum (or forgotten name), as a consequence of its non usage during more than one hundred years; however, this concept is now rejected by zoologists due to deviations in its usage (Huber, 2000b, in print) and it is unfortunate in that case.

Because it lacks traceable types, or a drawing of them, a proper description (by modern standards) and a clear and non ambiguous type locality, *lacazei* may be best considered as a nomen dubium and a probable junior synonym of *Epiplatys spilargyreus*, within the subgenus *Parepiplatys* (sensu Huber, 1998). Although this proposal

does not tackle all possible issues, it was the one chosen for the first finalisation of the manuscript (late Summer 1999), when the author was informed of the coming publication of a new Code of Nomenclature which would tackle some cases of forgotten names.

We propose here to apply the new article (23.9) of the Code, valid from January 1. 2000, and to regard *lacazei* as an invalid but available name, especially but not solely for the unlikely case when *lacazei* could be a senior synonym of *Ep. multifasciatus* or any other subsequent taxa of that superspecies: *multifasciatus* (and the other) are names which have been used as valid by all authors in many publications during at least the past 50 years and cannot be displaced by an earlier synonym which has not been used as valid since 1899 (in fact quoted only once without status, by Eschmeyer, 1998); "when an author has discovered that such conditions exist, and has published a statement of this fact which cites the relevant article (23.9) and gives appropriate evidence", then the later names (namely, *multifasciatus*, *ansorgii*, *boulengeri* or *huberi*) in prevailing use permanently takes precedence (without a ruling by the Commission) over the earlier but disused synonym (*lacazei*).

#### **Acknowledgements.**

We wish to thank the following individuals for advice and information, or for reviewing an earlier draft of this paper: J. Daget (MNHN, Paris), M.L. Bauchot (MNHN, Paris), and the anonymous reviewers of the manu-

script. By courtesy, the manuscript has been sent for information to the experts of the fishes of that region, V. Etzel (Cuxhaven), A.C. Radda (Vienna) and R.H. Wildekamp (Gemert) and their comments have been valuable.

#### **Dedication.**

This paper is, in great friendship, dedicated to Prof. Jacques Daget; it would have been fair that he co-authored it, owing to his decisive contribution. However, the subject interested him so much that he decided to start writing a full article to cover Rochebrune's life and his "new" taxa, in addition to *lacazei* (in prep.). At eighty years old, Prof. Daget is the memory of the Museum and is still very active in research and publications (his last book, last year, covers a major topic of Malacology). I shall never stress enough my debts to him as a researcher and as a man, since he kindly accepted to be assessor to my thesis, back in 1978.

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