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On *Nomina Oblita* Among Cyprinodont Species

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Abstract: following the rejection of the concept of forgotten name (*nomen oblitum*) in nomenclature, the seven pending cases in oviparous Cyprinodonts (Cyprinodontiformes; Pisces) are studied and only two result in name changes, all others can be proposed as junior synonyms.

Résumé: suite au rejet du concept de nom oublié (*nomen oblitum*) en nomenclature, les sept cas concernés chez les Cyprinodontes ovipares (Cyprinodontiformes; Pisces) sont étudiés et seulement résultent dans deux changements de nom, tous les autres pouvant être proposés comme synonymes juniors.

In nomenclature, the concept of forgotten name (*nomen oblitum*) has been practical and useful to deal with available names that had not been quoted at all for a very long time (e.g., over fifty years) since their description. Most often, names were declared forgotten in two cases:
- in the case of a doubtful name (*nomen dubium*) or a useless name (*nomen vanum*) which is nearly the same, when that name was so poorly (or vaguely or ambiguously or erroneously) described that it was impossible to assign it to a given species, on the basis of the available knowledge. Then, the name was shifted from a temporary position (*nomen dubium* or *vanum*) as viewed by a given author, to a definite status (*nomen oblitum*);
- in the case of a senior synonym of a well known name to keep the latter name valid, because of its widely accepted usage.

The concept of *nomen oblitum* (plural: *nomina oblita*) had been well accepted by ichthyologists (and zoologists) during the sixties and seventies, although it was not mentioned in the Code of nomenclature of the International Commission of Zoological Nomenclature (I.C.Z.N.).

Then, it has been less and less used (new cases were becoming rare), until recently when it was rejected by scientific circles, themselves. In favor of this move, it can be admitted that the concept was more and more used to deviate from the important principle of anteriority in the Code of nomenclature (I.C.Z.N.): this principle gives priority to the name described before, when two

names are representing the same biological species.

Besides, in the brand new Code, which has been published in 1999 but which will take effect on January 1st, 2000, an important new article is proposed which impacts a lot our discussion of *nomina oblita* (art. 23.9): "an author is required (without a ruling by the Commission) not to displace a name which has been used as valid by at least 10 authors in 25 publications during the past 50 years by an earlier synonym or homonym which has not been used as valid since 1899; 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 name in prevailing use permanently takes precedence over the earlier but disused synonym or homonym."

With the new publication of Killi-Data 2000, it has been unavoidable to deal with the previously accepted *nomina oblita* (as per Killi-Data 1996): simply because two valid name entries, for a single species, are unacceptable to the computer data base.

"...the later name in prevailing use permanently takes precedence over the earlier but disused

The purpose of this short paper is to discuss the six current, plus one potential cases among Cyprinodonts (oviparous Cyprinodontiformes). And to propose a new status for these names that respect the Code of nomenclature of the I.C.Z.N. and maintain, as much as possible, the current valid names. Out of them, only two are concerned by name changes, *Foerschichthys flavipinnis* which becomes *Foe. nigeriensis* and *Poropanchax macrophthalmus* which becomes *Porop. luxophthalmus*. Although these new names are not particularly welcome because of the minimal value added of the move, they should not hurt too many habits as the use of the previous ones has been limited in the past.

1* *Haplochilus rubropunctatus* Steindachner, 1867.

This taxon has been described on the basis of specimens said to originate from China and Sri Lanka. Scheel (1990) has rightly determined that the name probably belonged to the genus *Epiplatys*, that the origin was then erroneous and proposed it as a synonym of *infrafasciatus* Günther, 1866. Wildekamp (1996) has agreed and proposed it as a *nomen oblitum* and a member of the *Epiplatys sexfasciatus* group. As several unnumbered syntypes are reported in Eschmeyer (1998) from the Vienna Museum, they were requested on loan, through the kindness of Dr Mikschi, curator and of Herr Wellendorf, the collection manager . We confirm that the 2 studied syntypes (n° 14488-1&2, of which the first, a male, is hereby designated as the lectotype) are members of the *sexfasciatus* group. These 2 specimens are in

good shape, belong to the genus *Epiplatys*, and cannot belong to another superspecies than *sexfasciatus*: the color pattern of the male is similar to the species *sexfasciatus*, with 6 vertical bars on sides (the second being faint and the last being on the peduncle); no intermediate bar could be seen and none of the bars were oblique, as can be seen in *togolensis* or *infrafasciatus*, the two other known members of the *sexfasciatus* superspecies; a dark margin is prominent on Dorsal, Anal and upper and lower Caudal fins; the Caudal fin is shaped with median rays longer and the Ventral fins reach the second or third Anaal fin ray, also in male; the frontal neuromasts are of the open type, a single characteristic of the *sexfasciatus* superspecies; the lectotype is 50.1mm S.L. and 65.9mm T.L.; morphomeristics of the lectotype (first) and of the paralectotype (second) are the following: D= 10, 11 (?), A= 16, 17 (?), D/A= +9 , +10, LL= 31, 32, predorsal scales= 22, 25 (?), transversal scales= 9, 10, circumpeduncular scales= 19, 19, predorsal length (as a % of S.L.)= 74%, 75%, preanal length= 63%, 66%, preventral length= 48%, 51%, height= 20%, 19%, head= 32%, 33%. These observations fit with the data on populations of *sexfasciatus* from the type region, between Lambaréné and Libreville in Gabon, western Africa. We propose to consider *Haplochilus rubropunctatus* Steindachner, 1867 as a junior synonym of *Epiplatys sexfasciatus* Gill, 1862.

2* *Nothobranchius amsingki* Ahl, 1928

This taxon is difficult to handle because the description, limited to the male, fills 6 lines only in an aquarist magazine, with a rough hand-drawing. And more importantly because Ahl, himself, announces at the end of that short article (32 lines in total) a coming full description of the fish, that never occurred. It may be seen either as a *nomen nudum* (unavailable name) as Scheel (1990) suggested with a possible synonymy with *Fundulosoma thierryi,* also described by Ahl (in 1924); or, alternatively, as a *nomen oblitum* and a possible senior synonym of *Fundulopanchax filamentosus* (Meinken, 1933), a widely accepted name. Indeed, the few details of colors (red rather vertical dots on head and sides) and the drawing (dorsal and anal fins superimposed; a lyretail) points out a fish than can be either of the above two taxa or a population of *Fundulopanchax walkeri s.l.* The type locality, given by Ahl (east of Cotonou, Benin) falls within the present distribution of both *filamentosus* and *thierryi*, but not of a component of *walkeri*, unknown east of Ghana. And it is hardly possible that it may have been the case, only 70 years ago. Wildekamp (1996) favors its identity with *filamentosus* on the basis of the median band on the anal fin in the drawing. However, such a band occurs in *thierryi* too (see photos in Scheel, 1990). No type specimens are known in the Berlin Museum (Paepke, 1995) to sort out between the two options. In this case, the new article of the code (art. 23.9) cannot apply, because of the usgae of the taxon and because of the unreached 100 years gap. On the basis of the available evidence, it is not possible to assign unambiguously *amsingki* to a

known fish from Benin and it is proposed to consider it as an available name and a *nomen dubium*, probably synonym of *thierryi*, also described by Ahl. This proposal then respects Ahl's decision not to describe the fish fully (maybe precisely for that reason of identity between the two). This proposal respects also the principle of conservatism by maintaining *filamentosus*, a widely accepted and used name. Another option would have been to consider *amsingki* as a *nomen nudum* and synonym of either *filamentosus* or *thierryi*. However, this is debatable, because the description has been published before the end of 1930, when the current I.C.Z.N. Code did not explicitely requested a diagnosis for a description to be valid and a name to be available.

3-4* *Panchax nigeriensis* Brüning, 1929 and *Fundulopanchax luxophthalmus* Brüning, 1929.

These two taxa are discussed together, because the cases are substantially similar. Both taxa are obviously identical to, respectively, *Aplocheilichthys flavipinnis* and *Aplocheilichthys macrophthalmus*, both described by Meinken (1932) in the same paper, as it has been pointed by many authors. These two synonymies have been pointed out first by Lazara (1984) who surprisingly considered Brüning's taxa as senior synonyms and not valid. Wildekamp (resp. 1996 and 1995) placed them as *nomina oblita*. Both descriptions of both fishes are poor (in fact they are aquarist's reports with a new name, as frequently the case in those days) and Meinken's, though posterior to 1930, do not contain a diagnosis. The single superiority of Meinken's taxa comes from the designation and deposition of type specimens (a lectotype for both have been designated by Paepke & Seegers, 1986), but this is not requested -only suggested- by the Code of the I.C.Z.N. Therefore nothing may support Meinken's taxa, as it had been similarly reported, this time fortunately with identical names, for *Fundulopanchax splendopleuris* and *multicolor*, by Brüning, 1929 and Meinken, 1932, and it is not known why Meinken behaved that way and changed Brüning's names. This is unfortunate, because this implies to drop two well accepted names and to consider valid *nigeriensis* (now in the genus *Foerschichthys*) and *luxophthalmus* (now in the genus *Poropanchax*). Seegers (1997) has already proposed that move for the case of *luxophthalmus*, but not for *nigeriensis*, without comments. Again, the new article of the Code (23.9) cannot apply because of the unreached gap of 100 years; besides, for *nigeriensis*, it would be somewhat jesuitic to claim that it has no precedence over *flavipinnis* because it has never been assigned to the valid status: indeed, all researchers, including Lazara, kept it as a *nomen oblitum* for no better option. From the point of view of conservatism, these unavoidable shifts are a pity, even if all those names have not been quoted frequently (surely less than 25 times!); the two shifts can only be reversed after a successful specific petition to the I.C.Z.N. and the venture is unlikely.

5* *Poecilia* (?) *thermarum* Eichwald, 1851.

This taxon is well described in comparison to the standards of those days (maximal size, depth, ecology, detailed color pattern, D/A deviation with Dorasl and Anal fins superimposed, shape of scales, shape of fins and type locality where the water then reached 44°C). Types are unknown, though, and in this case it is a major drawback. The only met difficulty was to obtain a copy of that rare paper. Wildekamp, Romand & Scheel (1986) proposed that it is a *nomen oblitum* and a senior synonym of *Tellia apoda* Gervais, 1853. In the vast desertic region of the type locality (hot springs between Setif and Bathna, Algeria), 3 *Aphanius* species are recorded today: *apodus*, *iberus* and *fasciatus*. And it is supposed that, at the time of the description, nearly 150 years ago, they were much less rare, because of a somewhat less dry climate. Eichwald's description rules out the identity of *thermarum* with *apodus*, because ventral fins are mentioned. Similarly, it may not be *iberus*, because of its 7 to 8 silvery bars on sides (10 to 20 in *iberus*, not taking into account those on the Caudal fin), all the more separated that their width increases. Therefore, it is proposed that *thermarum* is a junior synonym of *Aphanius fasciatus* Valenciennes, 1821. The fact that *thermarum* has been collected in hot springs does not hurt the identification, because *fasciatus* is a very opportunistic species found mainly in sea (as we have personally witnessed the matter near the Calanques, in the South of France, where it was erroneously thought to be extinct) and brackish waters and occasionally more inland, in isolated pure fresh waters. In this case, the new article (23.9) of the new Code could apply: the 100 years gap is reached, the taxon has been quoted very scarcely; however, the same remarks as for the previous case would be relevant.

6* *Cyprinodon martae* Steindachner, 1877.

This taxon, contrary to all the others herein discussed, have been studied on several occasions, not long after its description and it should not have been given the status of *nomen oblitum*. According to Wildekamp (1995), several authors (Garman, 1895; Lazara *in litt.* after Miller & Weitzman) have proposed that it is not an oviparous Cyprinodont, but a viviparous one. Wildekamp (1995), in an attempt to maintain the current systematics of *Cyprinodon*, proposed that it is considered a *nomen oblitum* and a possible senior synonym of *Cyprinodon dearborni* Meek, 1909 because the two type localities for this opportunistic, mostly brackish to marine, fish are not very distant (respectively Santa Marta, near the mouth of the Rio Magdalena in northern Colombia and Curaçao, in the Nederland Antilles, off the Venezuelian coast). The study of the unique type (NMW 76519) could not be lent by the Vienna Museum, but kindly Herr Wellendorf sent its radiograph and its photography. Both reveal clearly that *martae* is not a member of the genus *Cyprinodon*. The morphomeristic measurements (on the radiograph) are

the following: S.L.= 52.1mm, T.L.= 69.6mm, D= 9, A= 10, D/A= -5, Vertebrae= 10+16, predorsal length (as a % of S.L.)= 60%, preanal length= 64%, preventral length= 49%, height at Anal level= 29%, height at peduncle level= 19%, head= 31%. These data differ from *Cyprinodon dearborni* by the size (too large), the height at Anal level (too low), the head (somewhat too short), the preventral length (too low). Above all, four characteristics are unknown to the genus *Cyprinodon*: long and pointed Dorsal fin, which goes beyond the level of the peduncle (the holotype is then probably a male), Caudal fin rays are undivided, basis of Ventral fins, well separated, all fin rays at Anal and Dorsal, linked with radials. Therefore, we propose to consider that *Cyprinodon martae* Steindachner, 1877 is not a member of the genus *Cyprinodon* and not a senior synonym of *dearborni*. Because of the sexual characteristic of the Dorsal fin length, its belonging to a Poeciliin genus is unlikely (no gonopodium). On the basis of our present knowledge of oviparous Cyprinodonts, *Cyprinodon martae* cannot be assigned to a known taxon or a known genus and further studies have been asked to experts of other groups of fishes, including Poeciliins, and collections at the type locality are encouraged. Pending their results, the taxon is provisionally considered as a *nomen dubium* and has been kept on Killi-Data listings.

7* *Oriastes lastarriae* Philippi, 1876.

This taxon was to be considered as a *nomen oblitum* in the preliminary draft of Killi-Data that was circulated to reviewers, after Eschmeyer (1998) remarkably pointed out its availability for the first time after more than 100 years. According to Eschmeyer, the genus name is an emendation of *Orestias* and the species name should have been *lastarriai*, because the collector, Mr Lastarria, is a man, but he may have asked Philippi to dedicate the species to his wife or his daughter (for example). The taxon is very well described for those days, with detailed measurements, color pattern, shape of fins and scales and diagnostic characters versus *Orestias cuvieri*, *pentlandii*, *jussiei* and *agassizii*. No type specimen is known, but it cannot be ruled out that some vial is hidden somewhere in the Lima Museum. Two localities are given; two small Andean lakes at 4500 m altitude, east of Lima (geographical coordinates of Lima, in the coastal plain, in hundredths of degrees: 12.10S; 77.05W), Lago de Pucro and Lago de Misa in Peru. Unfortunately, these two lakes are not quoted on the Gazetteer and not plotted on maps of the past century that we have available to us, thanks to I.G.N. managers in Paris. They should be far from Lake Titicaca (15.70S, 69.55W) and in fact closer to Lake Junin (resp. 11.12S; 76.12W), where *Orestias empyraeus* Allen in Eigenmann & Allen, 1942, a junior synonym of *agassizii*, is reported (type locality), or even closer to the upper waters of Rio Rimac (resp. 11.72S; 74.27W), where *Orestias elegans* Garman, 1895, a probable junior synonym of *agassizii*, is reported (type locality). The identification is

not difficult, especially since Villwock and Siennknecht (1995): thereby, it has been demonstrated that, in Lake Titicaca only, a significant, but limited speciation has occurred and that only *Orestias agassizii*, variable and opportunistic, was to be collected elsewhere (and *Orestias laucaensis* and *parinacotensis*, for example, were synonymized). Philippi's measurements and meristics (T.L.= 66mm, S.L.= circa 53 mm, body depth in S.L.= 25%, head length= 27%, eye diameter= 8%, longest dorsal fin ray= 15%; D= 13-14, A= 14, C= 24, P= 15), the shape of fins (truncated caudal fin, extended first ray of dorsal fin) fit perfectly with *agassizii s.l.* The following meristic counts are reported in Parenti (1984) for *agassizii* (first) and *elegans* (second): D= 12-14; 14-15, A= 14-16; 15-16, P= 16-18; 15-17, LL= 32-36; 35-36. And Philippi's diagnostic observation of regular scales on lower part of abdomen (contrary to none in *agassizii* as per Valenciennes) is today known valueless among the variable Cyprinodontidae (*Aphanius*, *Orestias*). Therefore, we propose that *lastarriae* is considered as a junior synonym of *agassizii*. Anyhow, should ultimately *Orestias elegans* be a valid species and *Orestias lastarriae* be identical with *elegans* and then its senior synonym, we propose here to apply the new article (23.9) of the Code and to regard *lastarriae* as non available: *elegans* is a name which has 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); "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 name (*elegans*) in prevailing use permanently takes precedence (without a ruling by the Commission) over the earlier but disused synonym (*lastarriae*).

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Note: a subsequent article will deal with the much confused and complicated case of *Haplochilus lacazei* Rochebrune, 1885 and last enigma of ancient forgotten taxa among Cyprinodonts.

Post-finalization important notes (February, 2000)

Orestias lastarriae- To the kind request of Richard Vari (U.S.N.M., Washington), Hernan Ortega (M.N.H.N.P., Lima, Peru) has found the

geographical coordinates of the two lakes of *Orestias lastarriae*. Laguna Pucro (type locality): 11.57 S; 75.33 W and Laguna Misa; 11.57 S; 75.28 W, both connected to Rio Santa Eulalia, Provincia Huarochiri. These two lakes lie not far from the type locality of *Orestias elegans*, as anticipated above, and *lastarriae* is an invalid senior synonym of *elegans* under the new code, which in turn may well be a junior synonym of *agassizii*. Both Hernan and Richard are warmly thanked for their decisive contribution.

Cyprinodon martae- Dr. Mikschi has kindly reviewed the type specimen of *Cyprinodon martae* for us (additional meristic data: LL= 25; TRAV. = 8). From its low set Pectorals, species is confirmed not to belong to Poeciliids. Michael Ghedotti (Regis University, Denver) agrees on this and believes that it is closer to the Rivulinae because of its anterior Dorsal fin radial and ray pattern. *Cyprinodon martae* shares with *Rachovia* the extended Dorsal and Anal fins, the short face, long body, large scales and deep caudal peduncle. According to us, it is though very distinctive from other Colombian Rivulinae (*Austrofundulus, Rachovia*) by its very low meristics, by its equal number of rays at Dorsal and Anal, and above all, by its advanced position of Dorsal over Anal, a unique feature. From this, it appears that *martae* is less a *nomen dubium* than a valid name with an "*incertae sedis*" genus. It may be a very important taxon in the evolution of the Cyprinodonts and, to rediscover it live, is a critical venture. We shall propose a redescription in a coming paper, after we have been able to disclose its frontal scalation and neuromast patterns, possibly within a newly described generic name. Obviously, Mike is warmly thanked, too, for his valuable and major comments.

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