



Priority of the Family-Group Name Zanclorhynchidae (Pisces: Scorpaenoidei)

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Editorial

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Abstract

The history of the description of the family Zanclorhynchidae with the genera *Zanclorhynchus* Günther, 1880 and *Alertichthys* Moreland, 1960, now belonging to it, is presented. Pointed to the correct name of the taxon.

Keywords: Zanclorhynchidae; Congiopodoidea; Perciformes; Taxonomy

Discussion

At the present time, the vast majority of catalogs erroneously attribute authorship of the family Zanclorhynchidae to Mandritsa. The aim of this article is to clarify the situation.

The position of the genera *Congiopodus* Perry, 1811, *Zanclorhynchus* Günther, 1880, and *Alertichthys* Moreland, 1960 in the fish system is still controversial. The taxonomic position of this group of genera was proposed to be formalized in quite a variety of ways. Some researchers have recognized taxonomic rank at the level of the suborder Congiopodoidei [1-5], but this view has not received further support [6-11]. Now the main questions arise when using genetic methods, as a result of which the position of these three species on the phylogenetic tree of fish [12,13] differs from the result of morphological studies [6, 14]. Nevertheless, the monophyly of the discussed group of genera has been shown by a number of studies [5,6,14,15].

The genus *Zanclorhynchus* was originally placed in the family Scorpaenidae Risso, 1827 [16,17], but since 1937 it has been placed in the family Congiopodidae Gill, 1889 [18]. For a long time, the genus *Perryena* Whitley, 1940 was included

in the family Congiopodidae, but Honma, et al. [19] moved it to a new family Perryenidae and finally determined the composition of the family Congiopodidae s.l.: *Congiopodus*, *Zanclorhynchus*, and *Alertichthys*. Within this group, a sister relationship between *Congiopodus* and *Zanclorhynchus* plus *Alertichthys* is recognized [5,6,15,19,20].

Until recently, these genera were placed in two subfamilies Congiopodinae and Zanclorhynchinae, respectively. In the work of 2021, it is proposed to raise the rank again to families and consider them as belonging to the superfamily Congiopodoidea [21].

Mandritsa [5] in his book described a new family, Zanclorhynchidae, where he placed *Zanclorhynchus* and *Alertichthys*. The diagnosis of the family are:

- The origin of the dorsal fin is behind the neurocranium
- The presence of 5 large sharp spines on the head
- Supratemporal commissure interrupted between parietale and supraorbitale mediale.
- On dentale there is only one pore in praeperculum-mandibular canal
- No pores on praeperculum-mandibular canal between coronal commissure and the origin of temporal canal
- First two segments of the lateral line are a continuation

of the temporal canal, the other segments are isolated from each other

- The first two interneuralia positioned between the neural spines of the first and second vertebrae
- Behind the third vertebra there are no “free” spaces between the neural spines under the first dorsal fin without interneuralia
- There is a wide and long oval aperture between ossa pelvis
- Parietalia meets each other
- Six branchiostegal rays
- All pleural ribs sit on the parapophyses
- Musculus adductor mandibulae attached to suborbital 2.

Most likely, Mandritsa was unaware of the work, where Andriashev twice used the name *Zanclorhynchinae* [20]. Andriashev placed genera *Zanclorhynchus* and *Alertichthys* in this subfamily 8 years before Mandritsa, listing the following diagnostic parameters:

- Three radialia in pectoral girdle
- All rays are unbranched in the ventral fins, the last (fifth) one differs from the others - it is strong, thickened, non-segmented, with the exception of a very short and thin tip
- All rays are more rigid than those of *Congiopodus*, their segmentation is developed over a smaller extent, being strongly moved distally

Andriashev considered the described diagnostic parameters to be acquired in connection with the type of locomotion on four fins. In a footnote to the text, Andriashev mentions a future publication where he plans to give an accurate depiction and description of the morphology of the fins and girdles of congiopodids. Unfortunately, this work never came out.

The authorship of the family-group name *Zanclorhynchinae* is not in dispute, according to the priority principal, the senior creation is valid. The name must be used as follows.

Systematics

Order Perciformes
 Suborder Scorpaenoidei
 Superfamily Congiopodoidea Gill, 1889
 Family Congiopodidae Gill, 1889
 Genus *Congiopodus* Perry, 1811
 Species *Congiopodus torvus* (Gronow, 1772)
 Species *Congiopodus peruvianus* (Cuvier, 1829)
 Species *Congiopodus spinifer* (Smith, 1839)
 Species *Congiopodus leucopaecilus* (Richardson, 1846)
 Species *Congiopodus kieneri* (Sauvage, 1878)

Species *Congiopodus coriaceus* (Paulin et Moreland, 1979)
 Family Zanclorhynchidae Andriashev, 1993
 Genus *Zanclorhynchus* Günther, 1880
 Species *Zanclorhynchus spinifer* Günther, 1880
 Subspecies *Zanclorhynchus spinifer spinifer* Günther, 1880
 Subspecies *Zanclorhynchus spinifer heracleus* Zhukov et Balushkin, 2018
 Subspecies *Zanclorhynchus spinifer armatus* Zhukov, 2019
 Subspecies *Zanclorhynchus spinifer macquariensis* Zhukov, 2019
 Species *Zanclorhynchus chereshevi* Balushkin et Zhukov, 2016
 Genus *Alertichthys* Moreland, 1960
 Species *Alertichthys blacki* Moreland, 1960

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References

1. Greenwood PH, Rosen DE, Weitzman SH, Myers GS (1966) Phyletic studies of teleostean fishes, with a provisional classification of living forms. *Bulletin of the American Museum of Natural History* 131: 339-456.
2. Nelson JS (1976) *Fishes of the world*. John Wiley & Sons, New York, USA, pp: 416.
3. Lauder GV, Liem KF (1983) The evolution and interrelationships of the actinopterygian fishes. *Bulletin of the Museum of Comparative Zoology* 150(3): 95-197.
4. Lloris D, Rucabado J (1991) Ictiofauna del canal Beagle (Tierra de Fuego), aspectos ecológicos y análisis biogeográfico. *Publicaciones Especiales Instituto Español de Oceanografía* 8: 1-182.
5. Mandrytsa SA (2001) Seismosensory system and classification of scorpionfishes (Scorpaeniformes: Scorpaenoidei). Perm State University Press, Perm, pp: 392.
6. Ishida M (1994) Phylogeny of the suborder Scorpaenoidei (Pisces: Scorpaeniformes). *Bulletin of the Nansei National Fisheries Research Institute* 27: 1-112.
7. Eschmeyer WN (1998) *Catalog of fishes*. Special Publication, California Academy of Sciences, San

- Francisco, USA 3: 2905.
8. Nelson JS (2006) Fishes of the world. In: 4th (Edn). John Wiley & Sons, New York, USA pp: 624.
 9. Van der Laan R, Eschmeyer WN, Fricke R (2014) Family-group names of Recent fishes. *Zootaxa* 3882(2): 1-230.
 10. Nelson JS, Grande TC, Wilson MVH (2016) Fishes of the World, Fifth Edition. John Wiley & Sons, Hoboken, pp: 707.
 11. Zhukov MYu (2022) Taxonomy of the Superfamilies Congiopodoidea Gill, 1889 and Synanceiidea Swainson, 1839 (Pisces: Perciformes). *International Journal of Zoology and Animal Biology* 5(5): 000397.
 12. Li B, Dettai A, Cruaud C, Couloux A, Desoutter-Meniger M, et al. (2009) RNF213, a new nuclear marker for acanthomorph phylogeny. *Molecular Phylogenetics and Evolution* 50: 345-363.
 13. Smith WL, Everman E, Richardson C (2018) Phylogeny and Taxonomy of Flatheads, Scorpionfishes, Sea Robins, and Stonefishes (Percomorpha: Scorpaeniformes) and the Evolution of the Lachrymal Saber. *Copeia* 106(1): 94-119.
 14. Imamura H (2004) Phylogenetic Relationships and New Classification of the Superfamily Scorpaenoidea (Actinopterygii: Perciformes). *Species Diversity* 9: 1-36.
 15. Ishii N, Imamura H (2008) Phylogeny of the family Congiopodidae (Perciformes: Scorpaenoidea), with a proposal of new classification. *Ichthyological Research* 55: 148-161.
 16. Günther A (1880) Report on the shore fishes. Scientific results of the voyage of HMS Challenger during the years 1873-1876. *Challenger Reports. Zoology* 1(6): 1-82.
 17. Waite ER (1916) Fishes. Australasian Antarctic Expedition. *Scientific reports, Series C* 3(1): 1-93.
 18. Norman JR (1937) Coast fishes. 2. The Patagonian Region. *Discovery Reports* 16: 1-150.
 19. Honma Y, Imamura H, Kawai T (2013) Anatomical description of the genus *Perryena*, and proposal to erect a new family for it based on its phylogenetic relationships with related taxa (Scorpaeniformes). *Ichthyological Research*, 60(2): 122-141.
 20. Andriashev AP (1993) On the quadrupedal mode of locomotion of the Kerguelen congiopodid fish *Zanchlorhynchus spinifer* (Scorpaeniformes, Congiopodidae). *Zoologeskij Zhurnal* 72(9): 130-136.
 21. Voskoboinikova OS, Zhukov MYu (2021) Comparative osteology of the superfamily Congiopodoidea (Pisces: Scorpaenoidei). *Zoomorphology* 140: 373-385.

