



## ***Stenorynchoacrum xijiangensis*, a new genus and a new species of Labeoninae fish from Guangxi, China (Teleostei: Cyprinidae)**

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### **Abstract**

*Stenorynchoacrum xijiangensis*, a new genus and a new species of Cyprinidae, is described from a tributary of the Zhujiang River (Pearl River) in Guangxi Province, China. It can be distinguished from other genera of Labeoninae by the following characters: middle part of rostral cap undeveloped, narrow, only covering the base of the upper jaw, both sides of rostral cap well developed and extending upward, rostral cap connected the lower lip with free lateral margin, the median part of lower lip protruded to form a round fleshy pad, whose posterior margin continuous with the mental region.

**Key words:** Labeonini, oromandibular structures, Zhujiang River, taxonomy

### 中文摘要

记述了采自中国广西省境内珠江支流野鲮亚科一新属一新种：狭吻鱼属 *Stenorynchoacrum* gen.nov，模式种：西江狭吻鱼 *Stenorynchoacrum xijiangensis* sp. Nov.。新属与野鲮亚科其它属区别的主要特征有：吻皮中间不发达，仅覆盖上颌基部，吻皮侧边发达，往外翻，与下唇相连，唇后沟把下唇分成三部分，下唇侧边后缘游离，下唇中间隆起形成一个圆形肉质垫。

### **Introduction**

The Labeoninae (Chen *et al.* 1984) is a group of cyprinid fishes in China which inhabit tributaries or upstream of rivers with fast flowing water. The morphology of lips and associated structures in the Labeoninae is highly modified and variable. The characters of oromandibular structure (equivalent to lips and associated structure) are vital. According to morphological distinction of oromandibular structures, in recent years, new and newly recorded genera in China have been described and the generic assignment of some species were rearranged, e.g., Zhang & Chen (2004, 2006), Zhang & Kottelat (2006), Zhang *et al.* (2006), Zhang *et al.* (2008), Yuan *et al.* (2008), Yang *et al.* (2008), An *et al.* (2010), Zhu *et al.* (2011).

In China, there are about 26 genera, of which 12 are endemic. During the process of checking Labeoninae specimens, we found that some specimens from Lijiang in Guilin City, Guangxi could not be assigned to any genera in Labeoninae. We described it as a new genus herein.

upward rostral cap, a notch in the centre of rostral cap (vs. normal), postlabial grooves extended medially close to the midline of lower lip in *P. longisulcus* (Zheng *et al.* 2010: 94, fig 2A) or restricted at corners of mouth in *P. prochilus* (vs. extending medially about 1/3 of corresponding mouth width). *Semilabeo* and *Parasinilabeo* further differs from *Stenorynchoacrum* by possessing pendulous (vs. extending upward) rostral cap, postlabial grooves restricted at corners of mouth (extending medially to the middle of lower lip).

*Rectoris* (Fig. 4e) is further distinct from *Stenorynchoacrum* in having fringed (vs. unfringed) rostral cap, upper jaw connected (vs. disconnected) to lower lip by a frenum, a depression (vs. no depression) partitioning lower lip into a narrow anterior portion and a wide posterior portion, postlabial grooves restricted at corners of mouth (vs. extending medially to the middle of lower lip).

There are many differences in the oromandibular structures between *Stenorynchoacrum* and *Hongshuia*, *Pseudocrossocheilus* and *Sinocrossocheilus*. For example, *Stenorynchoacrum* has an unfringed rostral cap (vs. fringed), which connected (vs. disconnected) to lower lip at the corners of mouth, prolonged postlabial grooves (vs. no postlabial groove), rostral barbels longer (vs. shorter) than maxillary barbels. There are more obvious differences among the four genera on lower lip morphology. *Stenorynchoacrum* having a lower lip with a greatly protruded, round fleshy pad in the median part, whose posterior margin continuous with the mental region; *Hongshuia* having a lower lip with its median lobe modified into a round, fleshy plate peripherally protruded to form a ring-like fold and centrally sunken to form a flat, fleshy pad (Yuan *et al.* 2008: 40, fig 2C); *Pseudocrossocheilus* having a lower lip divided into a protruded, square median lobe and two lateral lobes by mental grooves (Yuan *et al.* 2008: 40, fig 2E); *Sinocrossocheilus* having a lower lip with its median lobe modified into a greatly protruded, crescentic fold and a slightly protruded, triangular fleshy pad (Yuan *et al.* 2008: 40, fig 2A).

*Stenorynchoacrum* is easily distinguished from *Discogobio* (Zheng *et al.* 2010:11, fig. 6A), *Qianlabeo* (Zhang & Chen 2004: 30, fig.1C) and *Ptychidio* (Fig. 4f) by the following obvious characters. *Discogobio* has a lower lip modified into a suctorial disc whose posterior margin is free completely (vs. without suctorial disc and only lateral margin is free). A crenulated, pendulous rostral fold and a normal upper lip concurring in *Qianlabeo*, which is unique in the sub-clade of Labeoninae and make it easily distinguishable from *Stenorynchoacrum* with narrow rostral cap and a regressed upper lip. *Ptychidio* possesses unique rostral cap which was divided into several fimbriate branches covered by dense papillae (vs. smooth and entire rostral cap).

*Cophecheilus* has been described by Zhu *et al.* (2011) and also distributes in the Zhujiang drainage. It is distinguished from *Stenorynchoacrum* by the following obvious characters (Zhu *et al.* 2011: 43, fig 2a): a subdistal depression (vs. no depression) located in the ventral margin of rostral cap, a postlabial groove extending anteromedially (vs. medially) close to the anterolateral margin (vs. the lateral margin) of the median part of lower lip, no fleshy pad (vs. a fleshy pad) in the median part of lower lip, two pairs of well-developed barbels (vs. undeveloped).

Though those genera belong to the same sub-clade and mainly distribute in Yangtze and Zhujiang Rivers, the extent of their morphological differences are variable. Our results support the suggestion of Yang & Mayden (2010) that fish develop morphological characters in order to adapt to its living habitat.

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