THREE NEW FRESH-WATER FISHES OF KWANGTUNG PROVINCE

By S. Y. LIN (LIN SHU-YEN, 林書顏)

The Fisheries Experiment Station, Canton, China.

Family Homalopteridae

Parhomaloptera disparis sp. nov. (fig 1-4)

Derivation of name: disparis means different, referring to the color of the fish.

Fig. 1. Parhomaloptera disparis sp. nov. Lateral view. About 1.5 times natural size.

D. 3/7; A. 2/5; P. 1/13; V. 1/7. L.l. about 70; I.tr. 16/7-V. Depth in length 3.8; head 5.2. Eye in head 8; snout 2; postorbital space 3.3; interorbital 2.5; width of mouth 4.1; width of head 1.1; space between ventral axilla 1.3; longest dorsal ray 1; anal ray 1.1; pectoral 1; ventral 1; length of peduncle 1.6; its depth 2.

Fig. 2. Parhomaloptera disparis sp. nov. Ventral view.

1 Contribution from Fisheries Experiment Station of the Bureau of Agriculture and Forestry, Department of Reconstruction, Kwangtung Provincial Government.
Elongate, compressed posteriorly. Head strongly depressed. Abdomen flat. Snout broadly rounded, usually with horn-like warts. Mouth small, crescent-shaped, inferior. Lips thick, smooth, overhanging the mouth; lower lip fleshy, more or less free from mandible, produced into a number of prominences and continuous with upper lip at angles of mouth. Jaws with sharp, smooth edge, all free from lips. A rostral groove before the mouth, partly covered by the rostral fold. 6 or 7 short and fleshy rostral barbels situated in the rostral groove, the posterior pair long and slender. A long and prominent barbel at corner of mouth. Eyes small, suprolateral, with free, circular rim, invisible from below. Nostrils large, close to and in front of eyes. Gill-openings small, before base of pectorals, extending to ventral surface for a short distance. Dorsal short, commencing slightly before ventrals, its origin midway between tip of snout and base of caudal. Paired fins with only one unbranched ray. Pectorals and ventrals horizontal. Tip of pectorals not to ventrals which are separate and remote from anal. Anal short, far behind end of dorsal, reaching base of caudal. Caudal emarginate, with the lower lobe longer. Vent close to ventral axilla, in the first third or half of ventrals. Lateral line complete, in middle of depth of tail. Scales small, adherent. Ventral surface before ventral fins devoid of scales. Intestine short; peritoneum black. Air bladder with two chambers, entirely enclosed in bony capsules, communication between them hardly detectable. Basipterygium without a lateral foramen and with the lateral horn not well marked (a character intermediate between Homaloptera and Gasteromyzon).

Fig. 3 & 4. Parhamaloptera disparis sp. nov. Left, ventral view of head. Right, basipterygium.

Color in alcohol varies from light brown to dark, with many zigzag bands and large spots in black. Dorsal and caudal with a few rows of round, dark spots. Abdomen of caudal base with a distinct spot.

Based on the following characters: one unbranched anterior ray; basipterygium; gill-openings extending to ventral distance; and the small, lunate oval rostral groove, rostral fold, corrugated barbels, it seems suitable to place this species in Vaillant. Parhamaloptera disparis Linnaeus in coloration, in origin of origin, and base of caudal, in the unforked end in other minute points.

Type No. H 15, length to base of Experiment Station, Canton, from Lo Hope, District, Kwangtung, April, 1932.

Family Cobitidae

Misgurnus arenae sp. nov. (fig. 5 & 6)

Derivation of name: arenae means sandy.

This species differs from all other Misgurnus in having the head and body different color pattern, and very short fins. (fig. 5. Misgurnus arenae sp. nov. Linn. natural size.

D. 2/7; A. 2/6; P. 1/7; V. 1/5. 85. 6 count. Depth in length 8.6; head 4.7; postorbital 2.5; interorbital 1.1; thickness of longest dorsal ray 1.3; anal ray 2.2; pectoral 2.7; caudal 1.3; length of peduncle 1.3. Space 48 per cent of length postdorsal. Gill-openings small, before pectoral base.

Misgurnus, not extending to ventral surface.

Elongate. Head and body very compressed. Thorax flat. Snout tapering, conical. Convex Eyes high, small, close together, smooth, no ocular spine. Mouth small. 4 rostral, 2 maxillary barbels very distinct, slightly longer than eye-diameter. The duced into four barbel-like fringes which Lips thin, continuous. Maxillary to unanal without spine; the first branched coalesced with the simple ray. Dorsal of
few rows of round, dark spots. Abdomen white. Middle of depth of caudal base with a distinct spot.

Based on the following characters: paired fins possessing only one unbranched anterior ray; basipterygium devoid of a lateral foramen; gill-openings extending to ventral surface for a short distance; and the small, lunate mouth provided with definite rostral groove, rostral fold, corrugated lower lip and with several barbels, it seems suitable to place this species under Parhomaloptera Vaillant. *Parhomaloptera disparis* Lin differs from *P. microstoma* Boulenge in coloration, in origin of dorsal midway between snout and base of caudal, in the unforked ends of the rostral groove and in other minute points.

Type No. H 15, length to base of caudal 52 mm. Fisheries Experiment Station, Canton, from Lo Fau Shan (羅浮山), Po-ho District, Kwangtung, April, 1932.

**Family Cobitidae**

*Misgurnus arenace* sp. nov. (fig. 5 & 6)

Derivation of name: *arenace* means sand.

This species differs from all other members of the genus *Misgurnus* in having the head and body uniformly well compressed, different color patterns, and very short mandibular barbels.

![Diagram](image_url)

**Fig. 5. Misgurnus arenace** sp. nov. Lateral view. About 1.2 times natural size.

D. 2/7; A. 2/3; P. 1/7; V. 1/5. Scales minute, very hard to count. Depth in length 8.6; head 4.7. Eye in head 11; snout 2.2; postorbital 2.3; interorbital 11; thickness of body and head 2.7; longest dorsal ray 1.3; anal ray 2.2; pectoral ray 2.2; ventral ray 2.7; caudal 1.3; length of peduncle 1.1; its depth 2.7. Predorsal space 48 per cent of length; postdorsal space 40 per cent of length. Gill-openings small, before pectoral base, like other members of *Misgurnus*, not extending to ventral surface.

Elongate. Head and body very compressed. Abdomen round; thorax flat. Snout tapering, compressed; interorbital narrow, convex. Eyes high, small, close together, covered by skin. Cheek high, smooth; no ocellar spine. Mouth small, inferior, strongly arched. 4 rostral, 2 maxillary barbels very distinct. Anterior rostral barbels slightly longer than eye-diameter. The two-lobed labial fold produced into four barbel-like fringes which cover the postlabial groove. Lips thin, continuous. Maxillary to under nostrils. Dorsal and anal without spine; the first branched ray of anal more or less coalesced with the simple ray. Dorsal origin opposite or slightly in
Similar to *G. conirostre* Steindachner, but with wider mouth and different color pattern.

![Diagram of Glyptosternum pallozonum](image)

**Fig. 7. Glyptosternum pallozonum** sp. nov. Lateral view. About 1.3 times natural size.

D. 1/7; A. 3/8; P. 1/8; V. 1/5. Depth in length 6.2; head 3.7. Eye 17 in head; snout 2.4; postorbital 2.1; interorbital 4.2; width of head 1.2; width of mouth 1.9 or 1.7; width of body 2.1; nasal barbel 2.8; free portion of rostral barbel 1.2; pectoral spine 1.6; longest dorsal ray 1.9; length of peduncle 1.7; its depth 3. Elongate, compressed behind ventrals. Head strongly depressed. Breast flat, with smooth-skinned, horseshoe-shaped holding apparatus. Head broad; snout broadly rounded. Mouth inferior, transverse, very slightly arched, angles of which reach sides of head. Lips normal, not broadened, and not turning backwards, covered by small, fleshy pimplies, and continuous as angles of mouth. No rostral fold. Upper jaw projecting beyond the lower. Both jaws provided with bands of villiform teeth. Vomer and palate edentuate. Barbels 8, the nasal pair short, situated between two nostrils, reaching to behind eye; rostral pair near end of maxillary, reaching somewhat beyond base of pectorals. Submental barbels 4, shorter than rostral ones, the outer pair longer than inner pair and reaching to or beyond gill-openings. Nostrils two on each side, wide, situated nearer snout than eye. Eye small, covered by skin. Gill-membranes narrowly joined to isthmus. Gill-opening wide, extending to dorsal and ventral surface for a considerable distance. A shallow groove across the isthmus. Suprapterygial bone small, with long, pungent projection behind.

First dorsal short, with an osseous spine, finely serrated before and behind, its origin above the posterior half of pectorals. Adipose fin short, opposite to anal. Pectorals horizontal, with a strong spine, serrated behind, not to ventrals. Ventrals below hind margin of dorsal not to anal, which commences slightly before adipose fin. Caudal forked, the lower lobe somewhat longer. Lateral line straight, in middle of depth of tail.

Color yellowish, with light brownish spots and bands on back and side of body; looking from above its coloration very similar to the general appearance of sand in and on which this little fish is found. A dark line from anterior border of eye to rostrum. A small, roundish black speck in upper half of depth of caudal base. Dorsal and caudal with bands of light brownish specks. Pectorals, ventrals, and anal colorless.

This pretty little fish lives in shallow streams with sandy bottoms which usually dry up in winter. It burrows into the sand and leaves only the head in water for breathing when disturbed or when it is waiting for prey. It usually moves its head up and down to secure food from the sand.

The present species does not exactly fit the proper definition of Miguernus since it has the mandibular barbels very short, and the lower lip prolonged longitudinally.

Type No. M 10, length to base of caudal 52 mm., Fisheries Experiment Station, Canton, from a shallow stream near Western Lake (西湖) of Hwei-yang District, Kwangtung, August, 1933, by Mr. Li Yung-ling.

Local name: 沙鳅, sah chow (sand loach).

Family Siluridae

Glyptosternum pallozonum sp. nov. (fig. 7 & 8)

Derivation of name: pallo means pale; zonum means zone referring to the white band along lateral line.

Fig. 6. Miguernus arenace sp. nov.

Color yellowish, with light brownish spots and bands on back and side of body; looking from above its coloration very similar to the general appearance of sand in and on which this little fish is found. A dark line from anterior border of eye to rostrum. A small, roundish black speck in upper half of depth of caudal base. Dorsal and caudal with bands of light brownish specks. Pectorals, ventrals, and anal colorless.

This pretty little fish lives in shallow streams with sandy bottoms which usually dry up in winter. It burrows into the sand and leaves only the head in water for breathing when disturbed or when it is waiting for prey. It usually moves its head up and down to secure food from the sand.

The present species does not exactly fit the proper definition of Miguernus since it has the mandibular barbels very short, and the lower lip prolonged longitudinally.

Type No. M 10, length to base of caudal 52 mm., Fisheries Experiment Station, Canton, from a shallow stream near Western Lake (西湖) of Hwei-yang District, Kwangtung, August, 1933, by Mr. Li Yung-ling.

Local name: 沙鳅, sah chow (sand loach).

Family Siluridae

Glyptosternum pallozonum sp. nov. (fig. 7 & 8)

Derivation of name: pallo means pale; zonum means zone referring to the white band along lateral line.
Fig. 8. *Glyptosternum pallozonum* sp. nov. Ventral view.

Color in alcohol dark brown; a white narrow band on lateral line; another broader one in medial line of back of body between two dorsals. Somewhat irregular broad, white zones on dorsal. Ventral and anal pale, with few irregular dark specks. Caudal uniformly brown.

Like other members of *Glyptosternum*, the present species lives in the clear water of mountainous streams.

Type No. G. 10, length to base of caudal 62 mm., Fisheries Experiment Station, Canton, from Loh Fau Shan, Poh-lo District, Kwangtung, April, 1932. A paratype of the same number, length to base of caudal 53 mm., presented to Lingnan Natural History Survey and Museum, Lingnan University.

---

**CONTRIBUTION TO A STUDY OF**

**KWANGTUNG AND ADJACENT WATERS**

By S. Y. Lin (Lin S. Y.)

*Fisheries Experiment Station, Canton*

(Continued from *Lingnan Science Journal*.

**Part**

**Subfamily Hypophthalmichthyinae**

Oblong, compressed. Eye greatly below the level of the angle of mouth; broadly rounded. Mouth terminal, longer; lips thin; barbels none. P. other and then narrowly to isthmus set, free or fused to form thin platelike organ present. Pseudobranchial 1 row, sole-shaped. Intestine long, fin short, without osseous spine and inserted above the interspace between forked. Lateral line complete, runs to tail. Scales small. Abdomen or pectoral immediately before anal origin. River and pond fishes of China.

**Synopsis of Aristichthys**

1. Gill-rakers free or only loosely joined; teeth with smooth masticatory surface.
2. Gill-rakers with the ends completely of teeth transversely striated...

*1 Aristichthys*


Oblong, compressed. Mouth more rather longer. Snout somewhat protractile; lips thin, postlabial corners of mouth. Barbels none. Eye depressed to the level of gill. Very closely set, but with free ends. Gill-membranes united to form a narrow lateral line little decurved, running...