

***Racoma ramzani*, A New Snow Carp (Teleostei: Cyprinidae: Schizothoracinae) From Pakistan**

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ABSTRACT

Snow carps of Pakistan were represented by eleven species belonging to four tribes of subfamily schizothoracinae of family cyprinidae. A new species *Racoma ramzani* has now been described from the river Indus, near Manser, five kilometers upstream of Kabul – Indus confluence. The new species is easily distinguishable from the related species in shape and structure of lower lip, number and position of serrations, structure of dorsal spine and number of lateral line scales.

Key words: Snow carps, Schizothoracinae, Pakistan, Kashmir.

INTRODUCTION

The fishes of the subfamily schizothoracinae of family cyprinidae are commonly found in mountain streams of Pakistan and Kashmir. These are of great economic importance as food and game fishes. Earlier, they were known as snow trouts and mountain barbells but now popularly known as snow carps as suggested by Mirza (1990). Previously eleven species of subfamily schizothoracinae described from Pakistan has been classified in four tribes by Mirza & Afridi (2002), which are

Schizothoracinae

Schizocyprini

Diptychini and

Schizopygopsini

Genus *Racoma* was represented by only one species and *Racoma ramzani* is an addition to it. It is distinguishable from *Racoma labiata* in the shape and structure of lower lip and number of lateral line scales. It differs from another closely related fish *Schizothorax fedtschenkoi* Kesler, as described by Berg (1964), in the structure of dorsal spine and number and position of serrations.

MATERIALS AND METHODS

The description of new species is based on a 345 mm SL specimen collected from the river Indus, five km upstream of Kabul – Indus confluence near Mansar, Punjab, Pakistan. It was fixed in 10 % commercial formalin and later preserved in 70 % alcohol. Measurements were made with the help of mm ruler and vernier caliper having accuracy of 1/10th of a mm. Hand lens of 2X, 4X and dissecting microscope was used for minute features. Photographs were taken with the help of 10 Megapixel, digital Sanyo camera. Measurement procedures follow Jayaram (1999)

RESULTS

***Racoma ramzani*, new species**

Holotype: 345 mm S L, 412mm TL, deposited in Museum of Natural History, Department of Zoology, Government College University, Lahore, Pakistan
D. I, 8; P, 15; V. 9; A. I, 5; C. 19; L1. 90; 29/20

Body from: A medium sized fish with strong, well built, muscular, typically streamlined body which is somewhat ideal for living in swift waters. Dorsal profile rises steeply from the tip of snout to the posterior part of head then slightly up to the middle of the distance between the tip of snout to the origin of dorsal fin, becomes almost flat to the dorsal origin, then slopes down gently to the base of caudal fin; ventral profile slightly arched uniformly between the tip of snout to the base of caudal fin. Body deepest in front of dorsal fin; 18.33% of total length, 22.65% of standard length and 96.25% of head length. Lateral line complete with relatively larger and prominent scales.

Head: Head acutely triangular from lateral and dorsal view; longer than high and higher than broad, longer than maximum body depth; its length 19.05% of total length and 23.53% of standard length; its height 70% of its length, 13.33% of total length, 16.47% of standard length and 72.73 % of body depth; its breadth 82.14% of its height, 10.95% of total length and 13.93% of standard length.

Snout: Acute and somewhat pointed with pairs of nostrils very close to the eye; nasal flap very well developed; a small area in front of each nostril slightly depressed (or sunken); a patch of very fine tubercles present between the nostril and eye of each side at dorsolateral position; relatively larger and prominent tubercles starting from below the nostril of each side, concentrated on lateral and anterior side of snout; its length 7.98% of total length, 9.85% of standard length and 41.86% of head length.

Eyes: Prominent, dorsolateral in position, nearer to the tip of snout than to the posterior margin of head; only a small bulged out part visible from the ventral side; its diameter 2.94% of standard length, 12.5 % of head length, 29.85 % of snout length and 35.09 % of interorbital space. Interorbital space slightly convex, a little shorter than the snout length; its width 6.78% of total length and 8.38% of standard length.

Mouth ventral in position, gape of mouth arched and somewhat horse shoe shaped. Lips fleshy and continuous across the angles of mouth. Upper lip in the form of a thick broad flap rolled on itself forming a fleshy rostral fold along the anterior as well as lateral sides, extending up to a vertical from the anterior margin of nostril; lower lip in the form of two broad ventral flaps connected anteriorly having very prominent muscular ridges in the posterior half which may help the fish in sticking to the stones and rocks in fast moving water; two pairs of moderately developed barbels, a rostral and a maxillary pair, almost equal in length; longer than eye diameter; rostral reaching the nostril and maxillary reaching the posterior margin of eye.

Fins: Three median (dorsal, anal and caudal) and two paired (pectoral and pelvic) fins present. Dorsal fin commences slightly in the posterior half of standard length; nearer to the caudal fin base than to the tip of snout, its height shorter than the head length, caudal fin length and maximum body depth; length of dorsal fin 19.12% of standard length and 15.48% of total length, predorsal distance

51.47% of standard length. Last simple ray modified into a stiff stout spine; paired denticles (or serrations) are present on its posterior margin, from base right up to the feeblest part at the tip of spine and are 30 in number. Pectoral fin horizontally inserted just behind the opercular clefts and somewhat triangular in shape; its length 14.76% of total length and 18.88% of standard length. Anal fin originated immediately behind the anal aperture, reaching the middle of caudal peduncle; its length 13.81% of total length and 17.06 % of standard length.

Caudal fin deeply forked; the longest of all other fins, equal to the head length; its length 19.05 % of total length and 23.53 % of standard length. Caudal peduncle strong and muscular very effective in propelling the fish forward in association with caudal fin; its length 16.16 % of total length, 20.00 % of standard length and 85 % of head length; least height of caudal peduncle 55.88 % of its length and 11.18 % of standard length.

Colouration: Grayish brown back, dark brown upper lateral half, lower half light brown, ventral side silvery pale, fins yellowish.

Squamation: Small sized scales present on the body; scales in 135 transverse series; lateral line scales relatively larger and more prominent, 90 in number, 29 scales above and 20 below the lateral line; ventral scales smaller in size in the anterior thoracic region which ultimately disappear in the region between the anterior margins of the pectoral fin bases.

Two rows of large tile like scales present, one on each side of the anus and anal fin; anus in the form of a tubular aperture.

Locality: River Indus (near Manser) about 5km upstream of Attock Fort.

Etymology: The name of the new species is derived from Dr. Muhammad Ramzan Mirza, a very eminent ichthyologist of Pakistan.

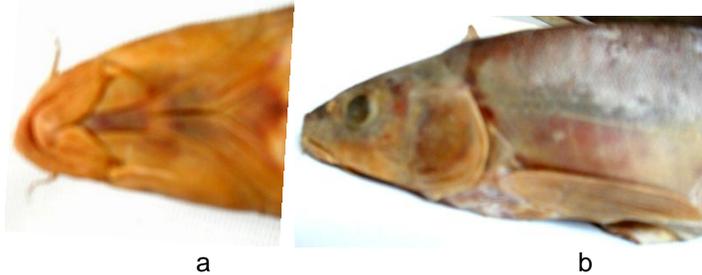


Fig.,1: *Racoma ramzani* sp. nov. a) ventral view b) lateral view

DISCUSSION

The new species is clearly distinct from the related species. It differs from *Racoma labiata* which is sympatric with it, in the shape and structure of lower lip which is soft, smooth, fleshy and trilobed in *R. labiata* but in the case of *R. ramzani*, it forms two muscular, strongly built lateral plates having longitudinal folds, forming a very effective adhesive apparatus in rapid streams. Moreover it has fewer number of lateral line scales, 90 as compared to more than hundred in *Racoma labiata*.

Another related species discussed by Berg (1949) is *Schizothorax fedtschenkoi* Kessler recorded from the river Amur and the Samarkand region. Here the dorsal spine is feeble with 10 to 22 serrations up to the middle, while in *R. ramzani*, spine is strong with 30 serrations spread all over up to the tip of the spine.

It can be differentiated from *Schizothorax plagiostomus* which has transverse papillated plate, with sharp cutting edge. This plate is absent in *R. ramzani*.

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