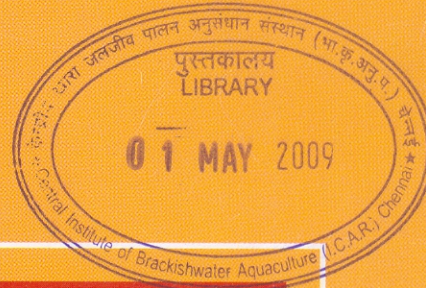


Price : Rs 125.00 per copy

636 (06) CODEN : IJLAA4 79 (3) : 233-342 (2009) II ISSN 0367-8318



The Indian Journal of Animal Sciences



**INDIAN COUNCIL OF AGRICULTURAL RESEARCH
NEW DELHI**

3 Indian J Anim Sci Vol. 79 No. 3 pp. 233-342 New Delhi March 2009

Descriptors of a Fish Genetic Resources

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Red Variant of *Labeo rohita* Cuvier

SESSION CODE.INDIA_FINFISH_LABEO_34323_02

GENERAL DESCRIPTION

Name of the Finfish Species *Labeo rohita* (Hamilton)
(Scientific Name)
Name of the Variant Red variant of rohu
Local Name & Language Sundari Rohu (Bengali)
Background of the local name This new variants has been named after its species specific rosy pink coloration over the body.
Labeo rohita (rohu)
Close related common species/variant
Max. Size Reported 502 mm TL/ 2.0 kg
Common Habitat Rivers, Freshwater Ponds, Acclimatized to Farm Conditions.
Native Distribution This red variant is so far only known from River Punarbhava North Bengal.
River basin/ Major River Ganga River System
Reservoir/ Any other water body Not Known Yet
Local region of High Abundance(if any) **a.** Punarbhava is a rain fed perennial Small River flowing in southeastern part of Maldah district in West Bengal. Originating from the Himalayan foot hills at Darjeeling, North Bengal it flows about 400 km. in the Indian Territory and finally meets into Bay of Bengal, Bangladesh. In India near Maldah, the river flows all along the international border with Bangladesh.
b. Silty clay substrate having submerged aquatic vegetation.

Collection site (Name & Lat. - Long., Altitude) Beldanga, District Malda, North Bengal N 25° 56.570', E 088° 20.641; altitude 155 ft.
Nearest Railway Station Maldah

14. Specific Gear Used
15. Known Economic Importance

a. The new variant can be considered as a potential food fish due its size, which comparable to other commercially important *Labeo*.
b. The new variant can also be used as ornamental fish due to presence of attractive rosy coloration (Figure 1).
c. Captive breeding was successful through induced spawning and upto F2 generations red variant was produced. Captive bred individuals are being maintained at NBFGR wet laboratory and in the farmer's farm at Beldanga, District Malda, North Bengal.
d. Growth performance: Attained 500 - 700 gm per year under pond culture system at Beldanga, Malda, and North Bengal.
Food Usage, Potential food fish
Not known

16. Local Importance

17. Any specific use such as Medicinal / Local Dish & Recipe/Special occasions/Tribal
18. Traditional knowledge (Give Details): Ref. In Local/ Community/tribal mythology
19. Restrictions/Protection/ Conservation / under any local/Regional/ Community/ Religious sentiments.

Not known

Not known

II. DIAGNOSTIC TAXONOMIC CHARACTER (Description)

- i. Morphological and Meristic Characters

a. Body moderate (163.2-502 mm), deep (25.55-33.55 mm in % of SL).
b. Abdomen rounded, mouth moderate (27.93-34.63 in % of head length),

subterminal and slightly overhanging, snout blunt and without any tubercles, broadly rounded and projecting beyond mouth.

c. Eyes are moderate (13.81-17.11 mm in % of HL), dorso-lateral in position and placed at the commencement of the posterior half of the head and are visible from underside of head, barbel not visible.

d. Dorsal fin concave with 3 branched and 11 unbranched, inserted anterior to origin of pelvic fins, with total 14 rays.

e. Pectoral fin laterally positioned on the body, reaching beyond the origin of dorsal fin and is longer than head length excluding snout.

f. Pelvic fins insert in the third dorsal fin ray and reach beyond anus.

g. Anal fin short consists of 2 branched and 4 unbranched rays.

h. Caudal fin deeply forked with somewhat rounded dorsal and ventral lobes consisting 10 upper and 9 lower principal rays along with 12 upper and 10 lower procurent rays.

i. Pelvic fin consists of one branched and 7-8 unbranched rays.

j. Lateral line complete, straight, running in the centre of the caudal peduncle upto tail with 40 scales of which 36 in the body and 4 in the base of the caudal fin, predorsal scale 11. 7.5 scale rows between dorsal fin origin and lateral line and 6.5 scales between lateral line and origin of pelvic fin.

ii. Coloration

a. Live specimen with bright pink color over the dorsal profile (three fourth of the body depth) of fish (starting from tip of the mouth to posterior region), the fins are more deeply

colored as compared to ventral profile (Fig.1).

b. The pupil of the eye is also encircled by deep pink color. Belly creamy white. No differences in coloration were observed in male and female. Fixed specimen rosy in dorsal profile, belly creamy white, base of the pelvic, anal and caudal has faded pink.

Jayaram, K. C. (1999) *The freshwater fishes of the Indian region*. Narendra Publ. House, New Delhi, pp. 551. (For Rohu)

The red variant of rohu was collected during germplasm exploration in the river Punarbhaba, North Bengal under National Agricultural Technology Project, Indian Council of Agricultural Research, New Delhi entitled "Germplasm inventory, evaluation and gene banking of freshwater fishes".

Dr U.K. Sarkar, Senior Scientist, National Bureau of Fish Genetic Resources, Lucknow - 226002 Sri Dipak Roy, Progressive Fish farmer, Beldanga, Dist. Maldah, West Bengal

iii. Ref. Taxonomic Key

iv. Source/ Reference

v. Collected by

iv. Morphometric characters and measurements of red variant of *L. rohita*

Morphometric descriptors	403 mm. TL	502 mm TL,
Total length (mm.)	403	502
Total body weight (kg.)	1.05	2.0
Fork length (mm.)	307	406
Standard length (mm.)	304	403
Head Length (mm.)	89.98	100.99
Lateral transverse rows	½ 7 / ½ 6	½ 7 / ½ 6
Lateral line scale	42	40
Predorsal scale 11	11	
Barbels	Not visible	Not visible

In relation to % of standard length (SL)

Head length	29.59	25.05
Insertion of dorsal fin	49.34	47.14
Body depth	33.55	25.55
Height of dorsal fin	23.02	19.85
Height of pectoral fin	21.38	19.85
Height of pelvic fin	21.21	18.61
Height of anal fin	21.38	19.6
Length of caudal fin	26.41	24.81

In relation to % of head length (HL)

Inter orbital distance	87.59	69.78
Head width	57.83	60.37
Eye diameter	13.81	14.84
Width of mouth	27.93	34.63
Interorbital distance	87.59	69.78
Snout length	22.87	27.68

Macrobrachium lar**ACCESSION CODE. INDIA_PRAWN_CDP433****I. GENERAL DESCRIPTION**

1. Name of the Finfish/
Shellfish Species (Scientific
Name) *Macrobrachium lar*
2. Name of the Variant NA
3. Local Name & Language
a. Mitha Pani ka Jhinga
(Hindi)
b. Glass or rock or
monkey prawn
4. Background of the local
name Prawn inhabits rocky
areas in freshwater
5. Close related common
species/variant *Macrobrachium
rosenbergii*
6. Max. Size Reported
a. Male size varies from
86mm to 112mm with
weight of 32-40 gms.
b. Female's size varies

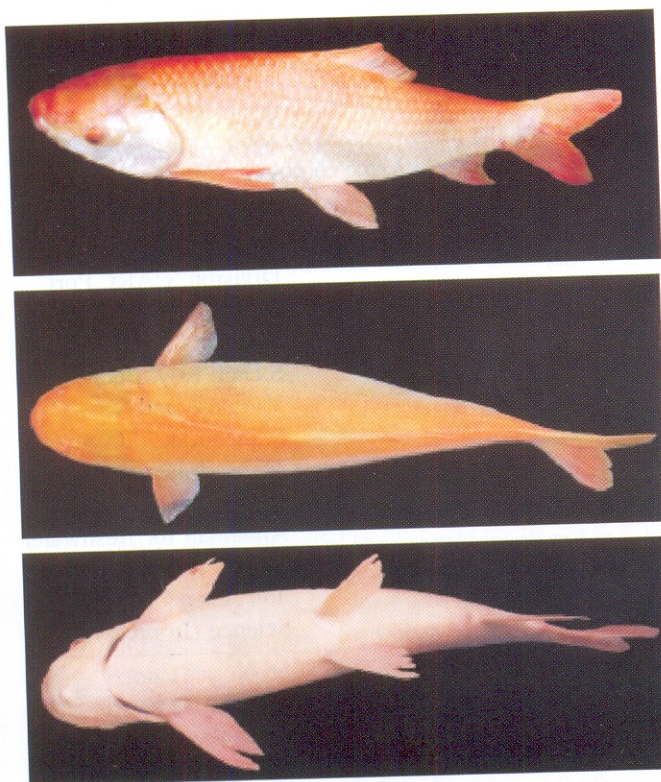


Fig 1. Lateral (top), dorsal (middle) and ventral (bottom) view of new variant of *Labeo rohita*

7. Common Habitat**8. Native Distribution**

from 66-106 mm with weight of 14-20 gms.

a. Inhabit fresh water, *M. lar* stays in clear, transparent running water with rocky substrates.

b. It is a peculiar prawn in its habits, it can move from freshwater canals to peak of the mountains where streams originate.

a. In India, *M. lar* is found only in streams of Andaman.



Freshwater prawn of Andaman, *Macrobrachium lar*

9. River basin/ Major River
10. Reservoir/ Any other water body
11. Local region of High Abundance (if any)
12. Collection site(Name & Lat. - Long., Altitude)
13. Nearest Railway Station
14. Specific Gear Used
15. Known Economic Importance
16. Local Importance
17. Any specific use such as Medicinal / Local Dish & Recipe/Special occasions/ Tribal
18. Traditional knowledge (Give Details): Ref. In Local/ Community/tribal mythology:
19. Restrictions/Protection/ Conservation / under any local Regional/Community/ Religious sentiments.

b. *M. lar* (Fabricius, 1798) is found from the east coast of the Africa to the Central pacific islands.

Galathea , Kalpong.

In a few seasonal and perennial streams and small reservoirs associated with the main rivers.

Barma Nalla, Betapur, Rangat, Diglipur, Hut Bay, South Andaman and Campbell Bay.

a. CARI Channel (6° 45' N and 13° 41' N latitude and 92° 12' E and 93° 57' E)

b. Barma Nalla (11 °.55N', 92°.73' E),

Not available

Cast net, Dip net & Hand picking.

Food purpose

Food Usage: Fresh unprocessed consumption

a.Used for table purpose.

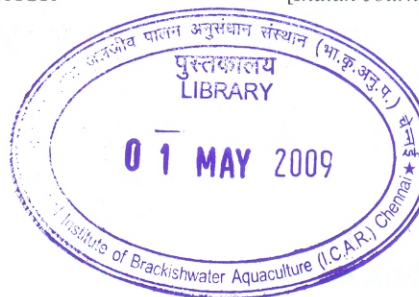
b. *M. lar* may be a candidate species alternate to *M. rosenbergii* in Andaman with potential in freshwater culture.

Not Known

Not Known

II. DIAGNOSTIC TAXONOMIC CHARACTER (Description)

- i. Morphological and Meristic Characters **a.** The rostrum is short, upturned distally before antennal flaps.



- iii. Ref. Taxonomic Key
iv. Collected by

v. Source/Reference

b. First 2-3 rostral teeth are on the carapace.

c. The rostral teeth formula is 6-8 / 2-4 (commonly 7-8 / 2-3).

d. The first and second pair of pleopods is chelated.

e. Yellow spot are found both sides of abdominal segments except 3rd abdominal segments.

f. In case of male prawn, there will be a hard point on the ventral side by physical touch where as in case of female there is no hard point on ventral side of prawn like *M. rosenbergii*.

NA

Dr. S.N.Sethi and Shri Nagesh Ram and Dr. R. Soundararajan. Post Box No.181, Central Agricultural Research Institute, Port Blair- 744101 A&N Islands
Sethi S.N., Ram N., Roy S.Dam, Varghese B., & Kohli.M.P.S. (2008) "*Macrobrachium lar* An Endemic Freshwater Prawn of Andaman". Fisheries Science Division, CARI, Port Blair.

Sethi S.N., Nagesh Ram, S.Dam Roy, Benny Varghese and V. Mahendran. (2008) "*Macrobrachium lar*, a candidate species of Andaman for freshwater aquaculture diversification Asian Fisheries Science (In press)

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