



FISHES OF INDIAN UPLANDS



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FOREWORD

The resource base of coldwater fisheries extends from the Western Himalayas, Deccan plateau, Kumaon and Shivalik foot hills. Most of this resource due to difficult terrain and other logistic problems cannot be brought under fish farming activity but there exists sizeable area which could be ecologically managed to produce the fish protein for the local population. Most of the fish fauna inhabiting the Indian uplands are slow growing and hence small sized. The important subsistence and sport fishery of the Himalaya mainly comprise indigenous and exotic species. It is necessary to have updated information on fish biodiversity in the region in order to develop any scientific fishery management action plan for the upland regions. The existing information on biodiversity of coldwater fishes in the country is scattered and diffused. Therefore, any researcher in coldwater fishery sector faces paucity of basic information.

The present compilation of fish species pertaining to Indian uplands is an attempt made by the scientists of National Research Centre on Coldwater Fisheries, who have more than two decades of research experience in this field, to bring in one volume all the necessary information connected with the species identification, distribution and other attributes which are very useful in field identification of coldwater fish species. The bulletin will be useful to a wide spectrum of persons such as fishery workers, students and departments who are involved in hill fishery development programme in the country.



K. Gopakumar

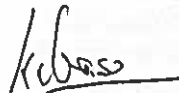
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Indian Council of Agricultural Research
Krishi Bhawan, New Delhi.

Date : 25 February, 1999

PREFACE

Cold water fishes occupy an important place amongst the freshwater fishes of India. Their importance is even far greater in Himalayan uplands where coldwater fish species have established themselves as an important candidate for sport and food. The country has significant aquatic resources in terms of upland rivers/streams, high and low altitude natural lakes, man-made reservoirs, both in the Himalayan region and Western Ghats, which hold large population of both indigenous and exotic, cultivable and non-cultivable fish species. Even though the magnitude of resources in coldwater is small in comparison to tropical waters but the fact remains that any meaningful poverty alleviation in our hilly regions has to be linked with sustainable exploitation of natural resources. In this connection, we need to have detailed inventory about the availability and distribution of our fish biodiversity in our upland waters. The information though available is scattered in different works. The National Research Centre on Coldwater Fisheries has taken initiative to publish various bulletins for the benefit of researchers, students, development agencies and NGO's engaged in this sector.

The bulletin on the **Fishes of Indian Uplands** is one such exercise. The effort put in by the authors who are scientists of this institute in compiling this information is praiseworthy. The bulletin indeed will be useful to a cross-section of workers involved in R & D efforts in coldwater fishery sector.



K.K. Vass

Director

NRC on Coldwater Fisheries

Place : Bhimtal

Date : Feb 20, 1999

Brief Background

The uplands zones of the Himalaya and Peninsular India are endowed with plentiful and varied fish wealth. The differences in micro-climates and habitats induce variations in aquatic biotopes and their thermal regimes with the result that the coldwater fish fauna range from eurythermal to stenothermal. Further, many species by continuously inhabiting the benthic zones have developed various morphological adaptations to withstand the impact of fast and turbulent water currents *e.g.*, development of holdfast, dorso-ventral flattening of body, reduction of scales, eyes, bladder, size of barbels, ventral or dorso-ventral position of mouth. The distributional pattern of hillstream fish fauna depends primarily on water flow, nature of substratum, thermal regime, dissolved oxygen content and the availability of food.

A number of workers have carried out detailed investigations with regard to nomenclature, availability and disposition of freshwater fishes including coldwater species in different aquatic systems of Indian subcontinent and elsewhere. To quote a few important ones are Hamilton (1822 *Off-Print*, 1881), McClelland (1839), Heckel (1844), Gunther (1868), Day (1875-78), *Off-Print*, 1878), Mukerjee (1936), Hora (1936, 1939-43 & 1952), Misra (1962), Das and Subla (1963 & 64), Malik (1966), Tilak (1971 & 87), Bhatnagar (1973), Badola and Pant (1973), Menon (1974), Badola (1975), Yazdani (1975), Tilak and Hussain (1977), Sehgal (1974, 83 & 1992), Talwar (1978), Jayaram (1981), Dutta and Malhotra (1984), Singh *et al.* (1984), Nelson (1984) and Talwar and Jhingran (1991).

Even though above works have encompassed the uplands fish fauna but the information remains scattered one which is not easily accessible to a basic scientific worker in coldwater fishery. Accordingly in the present bulletin, an attempt has been made to embody the available information on the occurrence of various fish species from Indian uplands at one place based on the earlier works and that generated by the authors during their wide experience in coldwater fisheries. 258 fish species (both indigenous and exotic ones) belonging to 76 genera reported from Indian uplands in particular and adjacent countries in general for ready information have been included. It may be pointed out that the present list does not include some of the species reported earlier by Sehgal (1992) as those are not available in Indian waters.

of controversial nature has been left out. Certain exotic fish species e.g. common carp (*Cyprinus carpio*), silver carp (*Hypophthalmichthys molitrix*) and grass carp (*Ctenopharyngodon idellus*) introduced and established in Indian uplands for farming and fishery enhancement have been included in the document. On the other hand, Indian major carps, though introduced in upland waters, have not been taken into account as their stocks are limited to a few lakes and reservoirs.

There is diverse opinion about the speciation and nomenclature of snow-trouts (Subfamily, Schizothoracinae) but in present document, their inclusion is based on the treatment given by Misra (1962) and Talwar and Jhingran (1991). Similar problem has been faced in respect of mahseers. Menon (1992), considers *Tor mussullah* as an abnormal (hump back) form of *Tor khudree*. Further more, he does not recognise *Tor mosal* as valid species. Specimens examined by him partly belonged to *Tor tor* or *Tor putitora*. However, he has described a new species (*Tor kulkarni*) from R. Darna (Godavary drainage) at Deolali, Nasik District, Maharashtra. In addition, *Tor mosal mahanadicus*, *Tor khudree malabaricus* and *Tor khudree longispinus* are not considered separate subspecies by Menon (*op. cit.*) Therefore, six valid species described by Hora (1939-43) have been enlisted in the present communication besides *Tor chelynoides* which was formerly kept under the genus *Barbus*.

The nomenclature, main diagnostic characters, and distributional pattern of various fish species included in the document are mostly based on the monumental works of renowned ichthyologists mentioned earlier and especially those of Day (*Off-Print*, 1958) and Talwar and Jhingran (1991). Their work is gratefully acknowledged. The authors are also thankful to Dr. M. Sinha, Director CICFRI, Barrackpore and President, IFSI for permitting to reproduce the photographs (Plates, 1-7) from IFSI book entitled, "*Coldwater fishes of India*" by V.G. Jhingran and K.L. Sehgal (1978). Few drawings of snow-trouts have been taken from Heckel's *Fishes aus Caschmir* with a deep sense of gratitude. We are deeply indebted to all those distinguished ichthyologists whose valuable works referred hitherto, or omitted unintentionally due to our own negligence, were the main source of our inspiration. The authors are grateful to Dr. K.K. Vass, Director, NRC CWF, Bhimtal for critically going through the manuscript and offering his valuable suggestions. Thanks are also due to Sh. Amit K. Joshi for taking pains in typing the manuscript.

Every possible care was taken to compile the available information on "Fishes of Indian uplands" and being a first trial of its kind, the authors may please be excused for any errors and omissions those might have crept in despite their best efforts. The suggestions, if any, for the improvement and updating of this document would be

FISHES OF INDIAN UPLANDS

Group : Pisces
 Class : Osteichthyes
 Subclass : Actinopterygii
 Subdivision : Teleostei
 Order : Osteoglossiformes
 Suborder : Notopteroidei
 Family : Notopteridae
 (Featherbacks)
 Genus : *Notopterus* Lacepede

1. *Notopterus notopterus* (Pallas)

Common name : Grey featherback

Distinguishing characters : D 7-9; A + C 100-110; V 5-6

Silvery white having various tiny grey spots on the body and head whereas dark ones on the back. Attains a length of about 250 mm.

Geographical distribution : India : Uttar Pradesh, Himachal Pradesh, Assam, upper reaches of Cauvery, Tamil Nadu; Pakistan; Nepal; Bangladesh; Indonesia; Burma; Thailand; Malaya;

Order : Cypriniformes

Family : Cyprinidae
 (Carns/Minnows)

2. *Carassius auratus auratus* (Linnaeus)

Common name : Goldfish, Gold carp

Distinguishing characters : D iii 16-18; A ii-iii 5; P i 16; V i 8

Varied colour oftenly olivaceous-bronze to deep golden above, being lighter on the flanks and silvery white on abdomen. Fins comparatively dark olive bronze. Ornamental fish.

Geographical distribution : India: Originally from Japan and China, now introduced and domesticated in almost all the inland waters for ornamental purpose.

3. *Carassius carassius* (Linnaeus)

Olive green on the upper side of the body; yellowish to brilliant golden-yellow on sides and belly. Dorsal and caudal fins yellowish-red. Attains size of about 200 mm.

Geographical distribution : India : Normaly fish of quite waters, introduced fairly well upto the Central Siwalik Himalayas.

Genus : *Chagunius* Smith

4. *Chagunius chagunio* (Hamilton)

Common name : Chaguni

Distinguishing characters : D v 8; A iii 5; P i 15; V i 8

Body silvery with pinkish tinge. Scale margins black. Fins reddish with light margins. Dorsal fin apex black. Attains a size of about 300 mm.

Geographical distribution : India: Brahmaputra and Ganga drainage, all along the himalayan foothills, Eastern himalaya; Myanmar; Thailand.

Genus : *Cirrhinus* Cuvier

5. *Cirrhinus fulungee* (Sykes)

Common name : Deccan white carp

Distinguishing characters : D ii 8; A ii 5; P i 14; V i 8

Flanks and belly silvery and back

Geographical distribution : India : Maharashtra, Karnataka and some other parts of Peninsular India.

6. *Cirrhinus reba* (Hamilton)

Common name : Reba carp

Distinguishing characters : D ii-iii 8; A iii 5; P i 15; V i 8

Dark grey dorsally, white silvery on belly and flanks. Scales oftenly darkest at edges forming bluish longitudinal bands above lateral line. Pelvic and anal fins orange tipped. Attains a size of about 300 mm.

Geographical distribution : India: Himachal Pradesh, Uttar Pradesh; Pakistan; Bangladesh; Myanmar; Thailand.

Genus : *Ctenopharyngodon*
Steindachner

7. *Ctenopharyngodon idellus*
(Valenciennes)

Common name : Grass carp

Distinguishing characters : D iii 7; A iii 7-8; P i 17; V i 8

Body dark grey. Belly and flanks silvery. Scales dark brown at the base. Fins dark. Attains size more than 500 mm.

Genus : *Cyprinion* Heckel

8. *Cyprinion semiplotum*
(McClelland)

Common name : Assamese kingfish.

Distinguishing characters : D iii 24-25;
A ii 7; P i 15; V i 9

Body leaden silvery, darkest on back. Anal, pectoral and pelvic fins orange. Attains a size of about 600 mm.

Geographical distribution : India : Meghalaya, Arunachal Pradesh, Assam and North Bengal; Nepal; Upper Myanmar.

Genus : *Cyprinus* Linnaeus

9. *Cyprinus carpio* Linnaeus

Common name : Common carp

Varieties :

i. *Cyprinus carpio communis*
(Linnaeus)

Common name : Scale carp

ii. *Cyprinus carpio specularis*
(Lecepede)

Common name : Mirror carp

iii. *Cyprinus carpio nudus* (Bloach)

Common name : Leather carp.

Distinguishing characters : D iii-iv 18-20; A iii 5; P i 15; V i 8

Colour varied on account of adaptability to different situations

Geographical distribution : The introduced exotic fish flourishing in almost all the upland waterbodies of himalayan and southern states of India.

Genus : *Labeo* Cuvier

10. *Labeo bata* (Hamilton)

Common name : Bata labeo

Distinguishing characters : D ii - iv 9-10; A ii-iii 5; P i 15 - 17; V i 8

Back and dorsal half of flanks golden yellow and silvery on remaining half of the flanks and the belly. At anterior scales of lateral line, an irregular black blotch. Anal and pelvic fins dark having orange red tips, other fins are finely dotted. Attains a size of more than 500 mm.

Geographical distribution : India : Krishna, Cauvery and Godavary river systems in South India, Orissa, Uttar Pradesh, West Bengal, Assam, Bangladesh and Nepal.

11. *Labeo boga* (Hamilton)

Common name : Boga labeo

Distinguishing characters : D ii-iii 9-10; A ii 5; P i 15; V i 8

Body orange coloured usually with a dark spot above pectoral fin. Fins with reddish tinge. Attains a size of about 300 mm.

Geographical distribution : India : Garhwal Himalaya (U.P). rivers of

12. *Labeo calbasu* (Hamilton)

Common name : Kalbsu

Distinguishing characters : D iii - iv 13-16; A ii-iii 5; P i 16-18; V i 8

Body blackish green. Flanks either buff pink or with scarlet spots having dark edges. Fins black. Upper lobe of caudal fin usually white tipped. Attains a size of more than 500 mm.

Geographical distribution : India : Inhabits rivers and ponds; Pakistan; Bangladesh; Myanmar; Yunan (S.China).

13. *Labeo dero* (Hamilton)

Common name : Kalabanas

Distinguishing characters : D ii-iii 9-12; A ii-iii 5; P i 16-17; V i 7

Back brownish black or bluish; flanks and belly bluish silvery. Scales generally red tinged. An obscure band along the flanks. Blackish fins with a faint reddish hue. Attains a size more than 500 mm.

Geographical distribution : India : all along the Himalaya, Arunachal Pradesh; Bangladesh; Myanmar; China.

14. *Labeo dyocheilus* (McClelland)

Common name : Brahmaputra labeo

Distinguishing characters : D ii-iii 10-11; A ii 5; P i 16; V i 8

Geographical distribution : India : All along Himalaya, Assam, Mahanadi, and Damodar rivers; Bangladesh; Pakistan; Nepal

15. *Labeo pangusia* (Hamilton)

Common name : Pangusia labeo

Distinguishing characters : D ii-iii 10-11; A ii 5; P i 14-15; V i 8

Dull green with lighter belly and flanks. Scales generally have a dark mark. Caudal and dorsal fins grey while anal ones hyaline, often tinged red. Attains a size of more than 500 mm.

Geographical distribution : India : Ganga and Brahmaputra drainage systems; Pakistan; Bangladesh.

Genus : *Neolissochilus*
Rainboth

16. *Neolissochilus hexagonolepis* (McClelland)

Common name : Katli

Distinguishing characters : D iv 9; A iii 5; P i 16; V i 8

Back olive-green. Scales pale slate fading to white on belly. Scales above the lateral line coppery coloured, deepening to bronze-green at the base. Fins deep slate paling towards margins. Iris bright coppery red. Attains a size of more than 500 mm.

17. *Neolissochilus hexastichus*
(McClelland)

Common name : McClelland's Bokar

Distinguishing characters : D iv 9; A iii 5; P i 16; V i 8

Back brownish-green fading to dull white shot with yellow on flanks and belly. Reddish anal and caudal fins. Attains a length of more than 500 mm.

Geographical distribution : India : All along the himalayan foothills; Myanmar.

18. *Neolissochilus wynaadensis*
(Day)

Distinguishing characters : D iv 9; A iii 5; P i 16; V i 8

Leaden silvery back with a dark band arising from behind the eye to the middle of the caudal fin base where it generally terminates in black blotch. Orange light belly. Fins greyish at edges. Attains a length of about 250 mm.

Geographical distribution : India : Wynaad (Kerala) and headwaters of Cauvery river.

Genus : *Osteobrama* Heckel

19. *Osteobrama cotio cotio*
(Hamilton)

Common name : Cotio

Distinguishing characters : D iii-iv 8; A iii 22-23; P i 18; V i 9

Geographical distribution : India : Brahmaputra drainage, Uttar Pradesh and Himachal Pradesh; Bangladesh.

20. *Osteobrama cotiocunma* (Day)

Common name : Cunma osteobrama

Distinguishing characters : D iii 9; A iii 25-29; P i 12; V i 9

Silvery olive colour being darkest on back having a brassy tinge over operculum, cheeks and along the lateral-line. Fins greyish; Caudal and dorsal ones with dusky edges. Attains a length of about 150 mm.

Geographical distribution : India : Manipur; Myanmar.

21. *Osteobrama neilli* (Day)

Common name : Nilgiri osteobrama

Distinguishing characters : D iv 8; A iii 16-18; P i 12; V i 10

Silvery coloured with golden operculum. Attains a size of about 120 mm.

Geographical distribution : India: Karnataka, Tamil Nadu and Maharashtra.

22. *Osteobrama vigorsii* (Sykes)

Common name : Bheema osteobrama

Distinguishing characters : D iii 8; A iii 21-27; P i 18; V i 9

Back greenish with silvery belly and flanks. Caudal fin with a black spot.

Genus : *Osteochilus* Gunther

23. *Osteochilus* (*Kantaka*)
brevitor-salis (Day)

Common name : Kantaka barb

Distinguishing characters : D iv 11-12;
A iii 5-6; P i 14; V i 8

Silvery coloured, darker on back.
Fins greyish. Attains a length of
about 150 mm.

Geographical distribution : India :
Western Ghats (Kerala).

24. *Osteochilus* (*Osteochilichthys*)
nashii (Day)

Common name : Nash's barb

Distinguishing characters : D iv 11; A iii
5-6; P i 14; V i 8

Back reddish brown coloured with
silvery abdomen. A black lateral
band runs from eye to caudals. A
dark band edged above with scarlet
in the middle of dorsal fin. Anal fin
also with a dark band. Attains a size
of about 180 mm.

Geographical distribution : India :
Hill streams of Western Ghats of
Karnataka and Kerala.

Genus : *Puntius* Hamilton

25. *Puntius* *arulius* (Jerdon)

Common name : Longfin barb / Aruli
barb

Distinguishing characters : D iii 8; A ii

five black blotches. Operculum with
an iridescent green dot. Prominent
transverse bars at the base of dorsal
fin origin, anal fin and caudal
peduncle. Caudal fin yellowish to
reddish with bright red tips. Attains
a length of about 120 mm.

Geographical distribution : India :
Tamil Nadu, Kerala and Cauvery
river system.

26. *Puntius* *bovanicus* (Day)

Common name : Bowany barb

Distinguishing characters : D iii-iv 8-10;
A iii 5; P i 18; V i 8

Greenish coloured having golden
tinge, darkest along the back.
Attains a size of about 120 mm.

Geographical distribution : India :
Bhavani river at the base of Nilgiri
hills, Cauvery river system.

27. *Puntius* *carnaticus* (Jerdon)

Common name : Carnatica carp

Distinguishing characters : D iv 8; A ii-
iii 5; P i 14; V i 8

Back olivaceous-green fading to
dull-white with a golden tinge on
the sides and belly. Golden eyes.
Four to five faint longitudinal stripes
above lateral line. Rostral barbels
black. Fins Dusky, dorsal one
having black margin. Attains a size
more than 500 mm.

28. *Puntius cauveriensis* (Hora)

Common name : Cavery barb

Distinguishing characters : D ii 8-9; A ii 5-6; P i 14-16; V i 6

Greyish brown coloured. Attains a size of about 70 mm.

Geographical distribution : India : Cauvery river system (Karnataka).

29. *Puntius chola* (Hamilton)

Common name : Chola / Swamp barb

Distinguishing characters : D iii 8; A ii 5; P i 14; V i 8

Silvery coloured with dark olive green back; yellowish flanks and pale underside. A large rosy blotch on operculum and a black blotch behind gill-cover. A deep black blotch often framed in golden near caudal base. Eyes orange red. Dorsal fins range from yellow to orange; other fins yellowish. Attains a size of about 120 mm.

Geographical distribution : India : Kerala, Tamil Nadu; Pakistan; Nepal; Sri Lanka; Bangladesh; Myanmar.

30. *Puntius conchoni* (Hamilton)

Common name : Rosy / Red barb

Distinguishing characters : D iii 7-8; A ii-iii 5; P i 18; V i 8

Back olive-green with sides and

Geographical distribution : India : Ganga, Brahmaputra, Mahanadi and Cauvery river systems; Nepal; Bangladesh; Pakistan; Afghanistan.

31. *Puntius dorsalis* (Jerdon)

Common name : Long-snouted barb.

Distinguishing characters : D iii - iv 8; A iii 5; P i 11-14; V i 8

Dorsally olive coloured with silvery sides and whitish belly. Generally a black blotch on caudal fin and an indistinct black band on the lateral line. Fins orange. Attains a size of about 200 mm.

Geographical distribution : India : Cauvery and Krishna river systems; Sri Lanka.

32. *Puntius filamentosus*
(Valenciennes)

Common name : Black spot / Indian tiger barb.

Distinguishing characters : D iii (iv) 8; A ii-iii 5; p i 14; V i 8

Silvery to greenish silvery, somewhat darker above. A distinct oval blotch on lateral line usually extending from 14-16th scales. Yellow greenish fins. Dorsal fin rays partly dark violet, generally dark tipped.

33. *Puntius jerdoni* (Day)

Common name : Jerdon's barb

Distinguishing characters : D iii - iv 9; A iii 5 (6); P i 13-14; V i 8

Silvery coloured. Orange tinted fins with black tips. Attains a size of about 450 mm.

Geographical distribution : India : South Karnataka, Kerala, Tamil Nadu and Maharashtra.

34. *Puntius phutunio* (Hamilton)

Common name : Pigmy / dwarf barb

Distinguishing characters : D ii-iii 8; A iii 5; P i 14; V i 8

Brownish green to grey-green with a glossy green shine on the head, operculum and scales of the nape. Silvery sides with a violet or bluish lustre. Abdomen silvery white. An oblique dark bar on the dorsal fin besides a small spot at its origin. Fins orange-red while pectorals being hyaline. Attains a size of about 35 mm.

Geographical distribution : India : Uttar Pradesh, Orissa, West Bengal; Pakistan; Bangladesh; Myanmar.

35. *Puntius sarana sarana* (Hamilton)

Common name : Olive barb

Distinguishing characters : D iii- iv 8; A

fin. Fins dusky brown to orange. Attains a size of about 300 mm.

Geographical distribution : India : Throughout India except peninsular region, south of Krishna river; Pakistan; Afghanistan; Nepal; Bangladesh; Bhutan.

36. *Puntius shalynius* Yazdani and Talukdar

Common name : Shalyani barb

Distinguishing characters : D iii 7; A ii 5; P i 12-13; V i 7

Females yellow to black on back and sides. Black edged scales. Fins mainly orange with light blackish tinge. Males relatively more blackish barring caudal fin, Jet black. Both sexes with distinctive blotches on sides of caudal peduncle and horizontal blue line on body sides. Attains a size of about 60 mm.

Geographical distribution : India : Khasi and Jaintia hills (Meghalaya) and Assam.

37. *Puntius sophore* (Hamilton)

Common name : Spotfin swamp barb

Distinguishing characters : D iii - iv 8-9; A iii 5; P i 14-16; V i 8

Back grey-green to brownish, sides with a bluish lustre and underside white. A black deep thick circular blotch at the base of caudal fin, central part of dorsal fin and / or

Geographical distribution : India : Inhabits plains and submontane regions; Pakistan; Nepal; Bangladesh; Myanmar; Yunan (China).

38. *Puntius ticto* (Hamilton)

Common name : Firefin / Ticto / Two - spot barb

Distinguishing characters : D iii-iv 8; A ii-iii 5; P i 12-14; V i 8

Back grey to grassy green coloured with shining silvery flanks and whitish belly. A black transverse blotch above the pectoral fin and a golden edged blotch over the end of anal fin. Fins with a greenish tinge. Attains a size of about 100 mm.

Geographical distribution : India : Montane and submontane regions; Nepal; Sri Lanka; Bangladesh; Myanmar; Nepal; Pakistan.

Genus : *Tinca* Cuvier

39. *Tinca tinca* (Linnaeus)

Common name : Tench / Doctor-fish

Distinguishing characters : D iii - iv 8-9; A iii-iv 6-7; P i 15-17; V ii 8-9

Olive green coloured with blackish back. Abdomen paler and sides with golden brightness. Fins grey to

Genus : *Tor* Gray

40. *Tor chelynoides* (McClelland)

Common name : Dark mahseer

Distinguishing characters : D iii 8; A ii 5; P i 14; V i 8

Back dark brown becoming silvery below. Scale margins with numerous black spots. Fins reddish.

Geographical distribution : India : Himalaya as far as east up to Assam; Pakistan; Baluchistan and NWFP.

41. *Tor khudree* (Sykes)

Common name : Deccan / Yellow mahseer

Distinguishing characters : D iv 9; A ii 7; P i 14; V i 8

Back and sides above the lateral line dark bluish while flanks below the lateral line pale golden-yellow. Head dark olive above and creamy yellowish to white below. Belly bluish-grey. Base of scales with reddish-grey margins. Eyes red. Fins bluish-grey generally tipped yellowish pink. Attains a length of more than 400 mm.

Geographical distribution : India : Maharashtra, Madhya Pradesh, Orissa, Peninsular India; Sri Lanka.

42. *Tor mosal* (Hamilton)

Common name : Copper / Mosal mahseer

posteriorly. Yellowish flanks above lateral-line while bluish to silvery white below it. Under the orbits, the sides of head with shade of silvery-blue and pink. Pectoral and pelvic fins light orange-yellow, dorsal fin light reddish orange, anal fin reddish neutral while caudal fin base pinkish. Attains a size of more than 500 mm.

Geographical distribution : India : rivers of Himalaya, Assam, Sikkim, Mahanadi drainage; Myanmar.

43. *Tor mussullah* (Sykes)

Common name : High-backed mahseer

Distinguishing characters : D iv 9; A iii 5; P i 15; V i 8

Body dark coloured with bronzy reflections. Abdomen reddish creamy. Below lateral line, scale bases bluish-grey with creamy margins. Reddish grey caudal and dorsal fins with inter-spinous membranes bluish grey, shot with bright blue. Attains a size of more than 500 mm.

Geographical distribution : India : Peninsular region mainly Krishna and Godavari river systems.

44. *Tor progeneius* (McClelland)

Common name : Junga mahseer

Distinguishing characters : D iv 9; A iii

Geographical distribution : India : North-east Himalaya, Assam, Naga hills and Manipur.

45. *Tor putitora* (Hamilton)

Common name : Golden / Himalayan / Putitor-mahseer

Distinguishing characters : D iv 8; A ii 5; P i 16-17; V i 8

Back reddish sap-green. Flanks below the lateral-line light orange fading into silvery-white on belly. Scales above the lateral line marked by sap-green while bright orange in the centre. Head below eyes light yellow. Iris light green and pupil dark blue. Fins yellowish. Distal tip of caudal fin reddish orange. Attains a size of more than 1m.

Geographical distribution : India : Inhabits montane and submontane regions all along the Himalaya from Jammu and Kashmir to Darjeeling hills and even further east. Introduced in Whalwan reservoir (Maharashtra); Bangladesh; Pakistan; Afghanistan; Nepal.

46. *Tor tor* (Hamilton)

Common name : Tor mahseer

Distinguishing characters : D iv 8; A iii 5; P i 14-17; V i 8

Dorsally greyish green, the sides pinkish with greenish golden above and light green below. Silvery abdomen. Above gill-openings, head light orange while light yellow

Geographical distribution : India : Distributed all along the sub-himalaya and also in freshwaters of Punjab, Haryana, Uttar Pradesh, Darjeeling, Assam, Madhya Pradesh, Ganga, Narmada and Tapti are its principal habitats; Bangladesh.

Subfamily : Cultrinae

Genus : *Chela* Hamilton

47. *Chela cachi* (Hamilton)

Common name : Silver hatchet chela

Distinguishing characters : D ii 7-8; A ii-iii 19-23; P i 8-11; V i 5-6

Light olive back with whitish belly. A shining greenish longitudinal band from the level of dorsal fin. Fins yellowish. Attains a size of about 60 mm.

Geographical distribution : India : Flowing waters of submontane regions; Pakistan; Myanmar; Bangladesh.

48. *Chela laubuca* (Hamilton)

Common name : Indian glass barb/
Indian hatchet fish

Distinguishing characters : D ii 8-10; A ii 17-22; P i 8-11; V i 6

Shining silver to greenish grey with a violet lustre on caudal peduncle besides steel blue vertical markings on the body flanks. Arising before the level of dorsal fin, a green to

extends upto operculum where it surrounds a deep black blotch. Fins yellow, sometimes light orange to brownish. Attains a length of about 50 mm.

Geographical distribution : India : Gangetic water shed; Pakistan; Bangladesh; Sri Lanka; Myanmar; Malaya Peninsula; Sumatra.

Genus : *Salmostoma* Swainson

49. *Salmostoma boopis* (Day)

Common name : Boopis razorbelly minnow

Distinguishing characters : D iii 7; A iii 12-14; P i 14; V i 8

Body silvery coloured with a burnished lateral band. Dorsal, anal and caudal fins black edged. Attains a size of about 120 mm.

Geographical distribution : India : Western Ghats.

50. *Salmostoma clupeoides* (Bloch)

Common name : Bloch razorbelly minnow

Distinguishing characters : D iii 7; A iii 11-12; P i 12; V i 8

Body silvery coloured. Attains a size of about 150 mm

Geographical distribution : India : Western and Eastern Ghats; Myanmar.

Distinguishing characters : D iii 7; A iii 14-17; P i 12; V i 8

Silvery coloured body with a bright silvery lateral band. Attains a size of about 120 mm.

Geographical distribution : India : Godavary and Krishna drainages and Western Ghats.

52. *Salmostoma phulo* (Hamilton)

Common name : Finescale razorbelly minnow

Distinguishing characters : D iii 7; A iii 17-19; P i 12; V i 7

Body silvery coloured with a bright silvery lateral band. Attains a size of about 120 mm.

Geographical distribution : India : Gangetic and Brahmaputra Drainages; Bangladesh.

53. *Salmostoma untrachi* (Day)

Common name : Mahanadi razorbelly minnow

Distinguishing characters : D iii 7; A iii 14-15; P i 12; V i 6

Silvery coloured. Attains a size of about 200 mm.

Geographical distribution : India Mahanadi river drainage (Orissa), Peninsular India.

54. *Hypophthalmichthys molitrix* (Valenciennes)

Common name : Silver carp

Distinguishing characters : D iii 7; A ii-iii 12-14; P i 17; V i 7

Silvery white coloured having red spots all over the body especially on caudal peduncle. Fins dark. Attains a size of more than 500 mm.

Geographical distribution : India : Introduced and domesticated in Indian waters of sub-temperate to tropics.

Subfamily : Rasborinae

Genus : *Amblypharyngodon*
Bleeker

55. *Amblypharyngodon melettinus* (Valenciennes).

Common name : Attentive carplet

Distinguishing characters : D ii-iii 7; A ii-iii 5; P i 13-14; V i 8

Body greenish along the back while silvery on the belly and flanks. A bright greenish-yellow band dividing colours of back from a silvery line along the side. Fins hyaline. Attains a size of about 80 mm.

Geographical distribution : India : Western Ghats and Tamil Nadu; Sri Lanka.

Genus : *Barilius* Hamilton

Dark olivaceous back. 14-15 vertical blue bands extending from back to lateral-line. Fins pinkish and operculum golden. Attains a size of about 100 mm.

Geographical distribution : India : Jammu and Kashmir, Uttar Pradesh, Assam, Manipur, West Bengal; Myanmar; Nepal.

57. *Barilius barna* (Hamilton)

Common name : Barna baril

Distinguishing characters : D ii 7; A iii 10-11; P i 14; V i 8

Dull green-silvery having 7-11 well defined vertical bars on the body. Dorsal and caudal fins black edged. Attains a length of about 75 mm.

Geographical distribution : India : Ganga and Brahmaputra river systems, Garo hills; Nepal; Bangladesh.

58. *Barilius bendelisis* (Hamilton)

Common name : Hamilton's baril

Distinguishing characters : D ii 7; A ii-iii 7-8; P i 14; V i 8

Body silvery with greyish back. 8-12 dark bands descending towards the lateral line becoming indistinct spots in adults. Two black spots at the base of lateral line scales. Fins yellowish-orange. Dorsal and caudal fins with greyish edges. Lower lobe of caudal fin generally

of hills; Pakistan; Bangladesh; Nepal; Sri Lanka.

59. *Barilius canarensis* (Jerdon)

Common name : Jerdon's baril

Distinguishing characters : D ii 10-11; A ii 12-14; P i 14; A i 8

Back greenish with golden flanks having generally double row of large vertical green spots along the body. Fins grey with broad wide margins. Attains a length of about 150 mm.

Geographical distribution : India : Western Ghats of Kerala and Karnataka.

60. *Barilius gatensis* (Valenciennes)

Common name : River-carp baril

Distinguishing characters : D ii-iii 8-9; A iii 12-14; P i 14; V i 8

Silvery grey having 13-15 more or less broken vertical bars descending from back. Anal and dorsal fins dark based and light edged. Attains a length of about 150 mm.

Geographical distribution : India : Hill streams of Western Ghats in Maharashtra, Southern Karnataka, Kerala and Nilgiri hills.

61. *Barilius modestus* Day

Common name : Indus bail

Distinguishing characters : D ii 7; A ii

Geographical distribution : India : Jammu, Himachal Pradesh; Pakistan; Indus plains and adjoining hill areas and R. Ravi.

62. *Barilius shacra* (Hamilton)

Common name : Shacra baril

Distinguishing characters : D ii 7; A ii-iii 8; P i 14; V i 8

Back olive with pinkish silvery belly and flanks. About 12 vertical bars descending down from back to lateral line. Dorsal fin with a black band along its upper portion. Attains a length of about 120 mm.

Geographical distribution : India : Ganga, Yamuna and Brahmaputra drainages; Nepal; Bangladesh.

63. *Barilius tileo* (Hamilton)

Common name : Tileo baril

Distinguishing characters : D ii 7; A iii 10; P i 13; V i 8

Back bluish brown with silvery belly and flanks. 2-3 rows of blue blotches and spots having vertical character on the lateral sides. Dark grey pinkish edged caudal and dorsal fins. The remaining fins yellow. Attains a length of about 150 mm.

Geographical distribution : India : Eastern Himalaya, Uttar Pradesh; Nepal; Bangladesh.

Silver coloured having 10-14 bluish bars oftenly above the lateral line. Fins bright yellow or pink. Caudal and dorsal ones grey edged. Attains a length of about 120 mm.

Geographical distribution : India : Himalayan and sub-himalayan rivers; Pakistan: Indus plain and the adjoining hills; Nepal; Bangladesh; Sri Lanka; Afghanistan.

Genus : *Brachydanio* Weber & de Beaufort

65. *Brachydanio rerio* (Hamilton)

Common name : Zebra danio / Zebrafish

Distinguishing characters : D ii 6-7; A ii-iii 12-13; P i 11-12; V i 6

Silvery-grey back with yellowish white belly. Shining blue flanks with four well defined shining golden stripes from head to caudal fin. Operculum with golden blotches. Iris golden red. Dorsal fin yellow olive at the base while others blue with a white tip. Paired fins hyaline. Attains a length of about 45 mm.

Geographical distribution : India : Siwalik himalaya, Eastern parts from West Bengal to Krishna river system; Bangladesh; Nepal.

Genus : *Danio* Hamilton

66. *Danio aequipinnatus*

Brilliant blue coloured having a well marked bluish lateral band along the sides from caudal fin to head which divides into three bands separated by golden lines before reaching gill opening. Below and above the lateral band are thinner golden bands. A black blotch near the upper angle of gill-opening. Bright orange fins. Attains a length of about 150 mm.

Geographical distribution : India : Streams and rivers of central and Eastern Himalayas; Bangladesh; Myanmar, Thailand.

67. *Danio dangila* (Hamilton)

Common name : Dangila danio

Distinguishing characters : D ii 9-11; A ii-iii 12-15; P i 11-12; V i 7

Back olive coloured having silvery sides with several narrow blue lines forming an attractive net work in the anterior $1/2 - 2/3$ of the body. Gill openings bear a dusky spot at the upper angle. Anal fin with 2-3 blue stripes. Length upto 150 mm.

Geographical distribution : India : Mountain streams of Assam, Meghalaya, Arunachal Pradesh, West Bengal, Manipur, Uttar Pradesh; Bangladesh; Myanmar; Nepal.

68. *Danio devario* (Hamilton)

Common name : Devario danio

reticulated at centre by steel-blue lines divided from each other by narrow vertical yellow bands. Three bluish lines divided by yellow ones extend backward to caudal fin. A pair of blue marks usually present at the base of caudals. Attains a length of about 100 mm.

Geographical distribution : India : Submontane regions of Northern India to Krishna-Godavari river system; Nepal; Bangladesh.

69. *Danio naganensis* Chaudhuri

Common name : Naga danio

Distinguishing characters : D ii-iii 8-9; A ii 12-13; P i 11-12; V i 6

Greenish brown back having silvery belly and flanks. Sides with a light, steel-grey longitudinal band extending to caudal fin base. Fins hyaline. Attains a length of about 45 mm.

Geographical distribution : India : Manipur and Nagaland.

70. *Danio neilgherriensis* (Day)

Common name : Peninsular danio

Distinguishing characters : D ii - iii 9-11; A ii 11-12; P i 12-13; V i 6

Greenish back having sides and belly silvery with a purplish tinge along the belly. Behind the orbit upto caudal fin, extends a lateral longitudinal dark broad steel blue

Genus : *Esomus* Swainson

71. *Esomus barbatus* (Jerdon)

Common name : South Indian flying barb

Distinguishing characters : D ii 6; A iii 5; P i 14; V i 8

Body silvery white, darkish above and lighter below. A indistinct broad silvery band with a dark coloured streak which runs along the middle of the body becoming prominent behind the pelvic fins. Fins diaphanous. Attains a length of about 120 mm.

Geographical distribution : India: Tamil Nadu and Karnataka.

72. *Esomus danricus* (Hamilton)

Common name : Flying barb

Distinguishing characters : D ii 6; A iii 5; P i 14-15; V i 6-7

Grey-green to olive-green with iridescence fine dots. Sides silvery-violet to light reddish and belly silvery-white. A broad dark lateral band from mouth to base of caudal fin which broadens on caudal peduncle to form a dark brown triangular blotch. Fins brownish to orange excepting pelvics which are reddish. Attains a length of about 125 mm.

Genus : *Raiamas* Jordan

73. *Raiamas bola* (Hamilton)

Common name : Indian trout.

Distinguishing characters : D iii 7-8; A iii 10; P i 12; V i 8

Back greenish-grey separated from silvery flanks by a longitudinal golden stripe. Sides with 15-17 greenish-blue spots indicating the presence of second series of spots below the main ones. Fins yellowish orange. Attains a length of about 300 mm.

Geographical distribution : India : Confined to hilly areas of the Haryana, Himachal Pradesh, Uttar Pradesh, Assam, West Bengal, Orissa; Bangladesh; Myanmar; Nepal.

74. *Raiamus guttatus* (Day)

Common name : Burmese trout

Distinguishing characters : D ii 7; A iii 9-10; P i 14; V i 8

Silvery shot purple coloured. Varying numbered and sized, 1-2 rows of dark blue spots at different body lengths. Lower lobe of caudal fin orange coloured having a dark longitudinal band along its upper half. Upper caudal lobe dark edged. Attains a length of about 175 mm.

Genus : *Rasbora* Bleeker

75. *Rasbora daniconius* (Hamilton)

Common name : Blackline rasbora

Distinguishing characters : D ii 7; A ii 5;
P i 14; V i 8

Back olive while sides and belly silvery. A blue black distinct stripe edged below and above by a thin metallic golden line passes from eye to caudal fin base. Above anal fin, a narrow dark stripe. Fins hyaline, yellow tinged. Attains a length of about 120 mm.

Geographical distribution : India : Uttar Pradesh, Jammu and Kashmir Sri Lanka; Myanmar; Pakistan.

76. *Rasbora rasbora* (Hamilton)

Common name : Gangetic scissortail rasbora

Distinguishing characters : D ii 7; A ii-iii 5; P i 14; V i 8

Body olive-brown and silvery below. A blue-black iridescent lateral stripe from head to base of the caudal fin. Caudals with a sharply defined black margin. Other fins yellowish. Attains a length of about 130 mm.

Geographical distribution : India : Gangetic provinces and Assam;

Genus : *Diptychus* Steindachner

77. *Diptychus maculatus*
Steindachner

Common name : Tibetan snow-trout

Distinguishing characters : D ii-iii 8-9;
A ii 5; P i 7-8; V i 8

Back dark with a bluish tinge and yellowish belly. Lateral line with a narrow dull band. Caudal and dorsal fins dusky and the others yellowish. Attains a length of about 350 mm.

Geographical distribution : India : Rocky, mountainous streams and lakes of Indus river system (Ladakh), high altitude lakes of Kashmir, Chandra Bhaga river in Lahaul Spiti valley (H.P); Nepal; Tibet; Pakistan.

Genus : *Gymnocypris* Gunther

78. *Gymnocypris biswasi* Talwar

Common name : Ladakh snow-trout

Distinguishing characters : D iii 7-8; A iii 5; P i 18-19; V i 10

Body greyish black, belly and sides lighter covered with dark spots. Fins hyaline.

Geographical distribution : India : Lakes of Ladakh (J&K).

Genus : *Lepidopygopsis* Raj

79. *Lepidopygopsis* Raj

Olive brownish back, ventral surface of body and flanks silvery. Iris silvery. Dorsal, caudal and distal half of anal fins olive-green; anterior half of anal fin and caudal lobes dusky. Terminal half of dorsal fin with a broad indistinct dusky band. paired fins hyaline. Attains a size of about 250 mm.

Geographical distribution : India : Periyar river and lake in Kerala.

Genus : *Ptychobarbus*
Steindachner

80. *Ptychobarbus conirostris*
Steindachner

Common name : Indus snow-trout

Distinguishing characters : D ii 8; A ii - iv 5; P i 20-21 V i 9

Silvery coloured. Dorsal side of body and head dark. Scales dark edged on upper half of body. Fins yellowish. Attains a length of about 300 mm.

Geographical distribution : India : Headwaters of R. Indus in Ladakh and Kashmir; Pakistan; Yasin river and Gilgit; Tibet.

Genus : *Schizopygopsis*
Steindachner

81. *Schizopygopsis stoliczkae*
Steindachner

Common name : Kinnaur snow-trout

covered with irregular blackish spots. Fins pink. Attains a size of about 350 mm.

Geographical distribution : India : Higher reaches of Sutlej river (Distt. Kinnaur, H.P) and Indus river (Ladakh); Afghanistan; Pakistan.

Genus : *Schizothoraichthys* Misra

82. *Schizothoraichthys curvifrons*
(Heckel)

Common name : Sattar snow-trout

Distinguishing characters : D ii 7 A iii 5; P i 18; V i 9

Light brownish with silvery belly. Grows more than 400 mm.

Geographical distribution : India : Kashmir valley and upper reaches of Garhwal Himalaya.

83. *Schizothoraichthys esocinus*
(Heckel)

Common name : Chhiru snow-trout

Distinguishing characters : D iii - iv 8; A iii 5; P i 18-19; V i 9

Silvery with numerous small, dark, irregular spots on back and flanks of the body. Silvery grey fins spotted similarly, however more dense at their bases. Grows more than

84. *Schizothoracichthys hugelii*
(Heckel)

Common name : Grot snow-trout

Distinguishing characters : D ii 7; A iii 5; P i 17; V i 9

Back dark greyish, lighter on flanks and belly yellowish-white. Fins hyaline. Attains a size of more than 300 mm.

Geographical distribution : India : Kashmir valley.

85. *Schizothoracichthys labiatus*
(McClelland)

Common name : Kunar snow-trout

Distinguishing characters : D iii 8; A ii 5; P i 17; V i 10

Back dark brown with black specks, yellow white below. Fins pinkish yellow. Attains a length of about 300 mm.

Geographical distribution : India : Kashmir valley, R. Indus (Ladakh); Nepal; Pakistan; Afghanistan.

86. *Schizothoracichthys longipinnis*
(Heckel)

Common name : Dapghad snow-trout

Distinguishing characters : D iv 7; A iii 5; P i 18; V i 10

Dark brown back, lighter on flanks and belly yellowish-white to silvery

87. *Schizothoracichthys micropogon*
(Heckel)

Common name : Ladakh snow-trout

Distinguishing characters : D ii 7; A iii 5; P i 16-18; V i 9-10

Silvery coloured with back somewhat darker. Fins hyaline without any marking. Max. length, 250 mm.

Geographical distribution : India : Lakes and adjoining streams of Ladakh and Kashmir valley, Uttar Pradesh (Garhwal).

88. *Schizothoracichthys nasus*
(Heckel)

Common name : Dongu snow-trout

Distinguishing characters : D iii 7; A iii 5; P i 17; V i 9

Back dark brown, sides lighter and belly yellowish-white. Fins dusky brown. Attains a length of about 300 mm.

Geographical distribution : India : Kashmir valley.

89. *Schizothoracichthys niger*
(Heckel)

Common name : Algad snow-trout

Distinguishing characters : D ii 7; A iii 5; P i 17; V i 9

Dark silvery back, lighter on flanks and belly pale yellowish. Black spots on upper part of the body. Fins slightly brownish. Attains more than 300 mm.

90. *Schizothoraichthys planifrons*
(Heckel)

Common name : Chush snow-trout

Distinguishing characters : D iii 7; A iii 5; P i 16-17; V i 8

Yellowish brown body having lower flanks and belly silvery. Dusky fins. Grows more than 300 mm.

Geographical distribution : Lakes and adjoining streams of Kashmir valley, Uttar Pradesh (Garhwal).

91. *Schizothoraichthys progastus*
(McClelland)

Common name : Dinnawah snow-trout

Distinguishing characters : D iii 8; A iii 5; P i 16; V i 10

Body uniformly silvery with a few fine spots. Fins dark edged. Grows more than 400 mm.

Geographical distribution : India : Jammu and Kashmir Ganga river (U.P) and Brahmaputra (Assam).

Genus : *Schizothorax* Heckel

92. *Schizothorax kumaonensis*
Menon

Common name : Kumaon snow-trout

Distinguishing characters : D iii 8; A iii 5; P i 17; V i 9

Silvery coloured. Attains a length of about 200 mm

93. *Schizothorax richardsonii*
(*plagiostomus*) (Gray)

Common name : Alwan snow-trout

Distinguishing characters : D iii 8; A iii 5; P i 15-16; V i 9

Back steel-grey coloured becoming lighter below gradually. Belly yellowish white generally with small grey spots. Dorsal and caudal fins greyish white, the remaining ones brown yellowish. Attains a length of more than 350 mm.

Geographical distribution : India : Along the himalaya, from Jammu and Kashmir to Assam; Sikkim; Pakistan; Nepal; Afghanistan; Myanmar.

Subfamily : Garrinae

Genus : *Crossocheilus* Kuhl et van Hasselt

94. *Crossocheilus latius diplocheilus*
(Heckel)

Common name : Kashmir latia

Distinguishing characters : D iii 8; A ii 5; P i 13; V i 8

Usually brownish coloured or grey with large dark irregular spots on back and light pink below. Caudal and dorsal fins grey edged. Attains a length of about 120 mm.

95. *Crossocheilus latius latius*
(Hamilton)

Common name : Gangetic latia

Distinguishing characters : D iv 8; A ii 5; P i 13; V i 8

Body greyish to light brownish. Lower half yellowish. A faint longitudinal stripe on flanks which broadens slightly near the caudal fin base. Dorsal and caudal fins yellowish grey while other ones orange. Attains a length of about 130 mm.

Geographical distribution : India : All along the Himalaya, Mahanadi drainage in Orissa and Western Ghats, South to the headwaters of Krishna river.

Genus : *Garra* Hamilton

96. *Garra annandalei* Hora

Common name : Annandale garra

Distinguishing characters : D iii 7-8; A ii 5; P i 12-14; V i 7

Back dark-grey becoming paler on the belly. A black spot on the upper angle of gill opening. Attains a length of about 230 mm.

Geographical distribution : India : North Bengal and Assam; Eastern Nepal; Kosi drainage and Bangladesh.

97. *Garra bicornuta* Rao

Back dark brown fading to pale yellowish on flanks and belly. A pale lateral band on sides of body. A black spot at the upper angle of gill opening. Attains a size of about 100 mm.

Geographical distribution : India : Thunga river system (Karnataka) and Maharashtra.

98. *Garra gotyla gotyla* (Gray)

Common name : Gotyla

Distinguishing characters : D iii 7-8; A ii 5; P i 14; V i 8

Back dark brown coloured while flanks and belly light pink. A dusky spot behind the upper angle of gill opening. Base of dorsal fin beset with a row of dark spots. Attains a length of about 150 mm.

Geographical distribution : India : All along Himalaya and Vindhya-Satpura mountains of Indian Peninsula; Bangladesh; Upper Myanmar.

99. *Garra hughi* Silas

Common name : Cardamon garra

Distinguishing characters : D ii 7; A i-ii 5; P i 11-13; V i 7-8

Sides and upper half of the body greyish. Ventral side and belly yellowish-white. From gill-opening to caudal base, runs a dark lateral band present along scaleless area

Geographical distribution : India :
Peninsular region, Cardamon and
Palni hills, Western Ghats.

100. *Garra kempfi* Hora

Common name : Kemp garra

Distinguishing characters : D ii 8; A ii 5;
P i 12; V i 7

Body and upper surface of head blackish while belly and flanks dirty white. A pale narrow lateral band runs from gill-opening to caudal fin. A tiny dusky spot behind upper angle of gill-opening. Caudal and dorsal fins dusky. Attains a length of about 150 mm.

Geographical distribution : India :
Abor and Naga hills, Arunachal Pradesh.

101. *Garra lamta* (Hamilton)

Common name : Lamata garra

Distinguishing characters : D iii 7-8; A ii 5; P i 12; V i 7-8

Dark backed with upper surface of head dusky. Belly dirty white. A broad lateral band from gill-opening to base of caudal fin, bordered above and below by incomplete narrow lateral stripes. A black spot behind the angle of operculum. A short dull black bar near caudal fin base. Caudal and dorsal fins dusky, the later with an oblique black longitudinal bar in its lower lobe. Attains a length of about 150 mm.

102. *Garra lissorhynchus*
(McClelland)

Common name : Khasi garra

Distinguishing characters : D ii 6-7; A i 5; P i 14-15; V i 7-8

Greenish brown back, paler below. A black spot at upper angle of gill opening. Caudal fin base with a indistinct dusky blotch. Near free margins, dorsal fin with a dark streak. A broad black W-shaped band on anterior half of caudal fin. Attains a length of about 75 mm.

Geographical distribution : India :
Assam himalaya, Khasi hills, Brahmaputra river system.

103. *Garra maclellandi* (Jerdon)

Common name : Cauvery garra

Distinguishing characters : D ii-iii 8; A i-ii 5; P i 15; V i 8

Back olivaceous fading to yellow on flanks and belly. A black spot behind the angle of gill-opening. Anal, dorsal and caudal fins yellowish with grey markings. Paired fins yellow with their outer portions dark grey margined with orange. Attains a length of about 180 mm.

Geographical distribution : India :
Cauvery drainage

104. *Garra mullya* (Sykes)

on sides, bordered below and above by incomplete dark narrow lateral stripes specially in the posterior half of the body. Belly dull white. A distinct black spot just behind the angle of operculum. Attains a size of about 170 mm.

Geographical distribution : India : Throughout India except Assam and the Himalaya.

105. *Garra naganensis* Hora

Common name : Naga garra

Distinguishing characters : D ii 7-8; A i-ii 5; P i 14; V i 7

Back and sides black with whitish underside. A minute black spot behind the angle of operculum. Caudal and dorsal fins and outer surface of paired fins dusky. Anal fin whitish. Attains a size of about 100 mm.

Geographical distribution : India : Naga hills, (Nagaland), Kahsi hills (Meghalaya).

106. *Garra nasuta* (McClelland)

Common name : Khasi garra

Distinguishing characters : D ii 8-9; A i-ii 5; P i 14; V i 7

Back dark brown fading to dirty white on sides and belly. At the base of dorsal fin rays, lie black spots. Attains a length of about 100 mm.

107. *Garra rupecula* (McClelland)

Common name : Mishmi garra

Distinguishing characters : D ii 6-7; A ii 5; P i 14-15; V i 8

Upper surface of head and body dusky with dirty-white flanks and belly. A black spot behind the upper angle of gill-opening. Caudal fin bears an indistinct blotch at the base. Dorsal fin with a dark streak near its free margin. Caudal fin has a black W-shaped marking. Attains a length of about 65 mm.

Geographical distribution : India : Manipur and Mishmi hills (Arunachal Pradesh).

Family : Parapsilorhynchidae

Genus : *Parapsilorhynchus* Hora

108. *Parapsilorhynchus discophorus* Hora

Common name : Ratnagiri minnow

Distinguishing characters : D ii 6-8; A ii 5-6; P ii 11-14; V i 7-8

Upper head surface and sides dusky. Caudal fin with a short black bar at its base while dorsal fin bears a dark bar near its free boarder. Small sized fish.

Geographical distribution : India : Western Ghats, Karnataka, etc.

109. *Parapsilorhynchus tentaculatus*
(Annandale)

Common name : Khandalla minnow

Distinguishing characters : D iii 6-7; A ii 4; P (ii) iii 12-13; V i 8

Dark purplish-grey head and body, paler below and above the mid-lateral region. Ventral surface white. Operculum iridescent edged with white behind. A black horizontal bar/spot on caudal peduncle edged with white posteriorly. Fins hyaline. Dorsal fin infuscated and with a black spot on each branched ray. Caudal fin with its median part infuscated having a vertical oval black spot at its base. Small sized fish.

Geographical distribution : India : Yenna river in Stara distt. of Western Ghats, Pachmari in Satpura hills.

Family : Psilorhynchidae

Genus : *Psilorhynchus* McClelland

110. *Psilorhynchus balitora*
(Hamilton)

Common name : Balitora minnow

Distinguishing characters : D iii 8; A ii 5; P v-viii 7-9; V ii 7

The dorsum gradually darkens causing the pattern to become somewhat obscure. Barring caudal and dorsal, fins disphanous. Towards free margin the dorsal fin

Geographical distribution : India : Hills streams and rapids of north Bengal, Assam, Upper reaches of Jammu; Bangladesh; Nepal; Myanmar.

111. *Psilorhynchus homaloptera*
Hora & Mukerji

Common name : Homaloptera minnow

Distinguishing characters : D ii 7; A ii 5; P vii-viii 9; V ii 7

Body pale olivaceous-green. Belly somewhat lighter with minute black dots. Along the lateral line, a broad dusky lateral band. Fins dusky. Small sized fish.

Geographical distribution : India : High gradient streams of Assam, Brahmaputra drainage; Myanmar; Nepal.

112. *Psilorhynchus sucatio*
(Hamilton)

Common name : Sucatio minnow

Distinguishing characters : D ii 7; A ii 5; P iv 8-9; V ii 7-8

Greenish above with darkening of entire scales, undersurface pale white. Body having vertical bands. Fins dusky. Caudal fin with a number of stripes. Attains a length of about 50 mm.

Family : Balitoridae (Loaches)

Subfamily : Balitorinae

Genus : *Balitora* Gray

113. *Balitora brucei* Gray

Common name : Gray's stone loach

Distinguishing characters : D iii 8; A iii 5; P ix - x 10-12; V ii 9-10

Body brownish with dark blotches. Caudal fin banded. Attains a length of about 100 mm.

Geographical distribution : India : Eastern Himalaya, Assam, Meghalaya and Darjeeling (W.B); hills of Uttar Pradesh; Bhutan; Bangladesh.

114. *Balitora mysorensis* Hora

Common name : Slender stone loach

Distinguishing characters : D ii-iii 8-9; A ii 5; P viii-ix 10-11; V ii 9

Body olivaceous above having 7 shortsaddle-shaped greyish bands on back. Belly dirty white. A grey diffuse band along the lateral line. Attains a length of about 60 mm.

Geographical distribution : India : Western Ghats-Cauvery and Tungbhadra river systems (Karnataka).

Genus : *Bhavania* Hora

115. *Bhavania*

Oftenly dark on dorsal surface. Irregularly distributed black spots on the body but form regular rows on fins. Attains a length of about 100 mm.

Geographical distribution : India : Extreme south of Western Ghats (Karnataka, Nilgiris and Kerala).

Genus : *Homaloptera* van Hasselt

116. *Homaloptera montana* Herre

Common name : Anamalai loach

Distinguishing characters : D ii 7; A ii 5; P iv 8; V ii 6-7.

Body and head brown with underside yellow. Across the back, ten short black bars. From eye to the base of caudals, a poorly defined dark longitudinal stripe below lateral line. Pelvic fin base with a blackish blotch besides one near its tip. Other fins hyaline. Attains a length of about 70 mm.

Geographical distribution : India : Mountain streams of Western Ghats - Anamalai hills and Silent valley.

Genus : *Travancoria* Hora

117. *Travancoria jonesi* Hora

Common name : Travancore loach

Distinguishing characters : D ii 7-8; A i 4-5; P vi 9-10; V ii 6-7

Body dark above and pale below. A

126. *Nemacheilus carletoni* Flower

Distinguishing characters : D ii 8; A ii 5;
P i 9; V i 6

Body pale brownish above, whitish below. On middle of flanks, 17-18 transverse brownish bands broader than pale interspaces. At the caudal fin base, a deep brown bar while at the origin, a dusky blotch. Three pale brownish bands across the dorsal fin. Attains length of about 35 mm.

Geographical distribution : India :
Beas river basin (H.P).

127. *Nemacheilus cincticauda* (Blyth)

Distinguishing characters : D iii 7; A ii 5;
P i 9-10; V i 6

3-4 narrow, vertical deep reddish brown bars in the middle of body. Attains a length of about 40 mm.

Geographical distribution : India
Arunachal Pradesh; Myanmar.

128. *Nemacheilus corica* (Hamilton)

Distinguishing characters : D ii 8; A ii 5;
P i 10; V i 7

Yellowish having a row of eleven rounded to oval spots along the lateral line on either side and a similar row along the back descending to between them. Along the middle of flank, oftenly a silvery band. Attains a length of about 45 mm.

Himachal Pradesh and Sutlej basin;
Pakistan; Nepal; Bangladesh.

129. *Nemacheilus denisoni dayi*
Hora

Distinguishing characters : D iii 8; A ii 5;
P i 10; V i 6

12-13 broad vertical bands with an equal number of narrow pale interspaces on the body. Base of caudal fin with a black band while a blackish spot at the origin of dorsal fin. Two and four rows of well marked spots on the dorsal and caudal fins, respectively. Other fins unspotted. Attains a length of about 50 mm.

Geographical distribution: India :
Peninsular region; Bangladesh.

130. *Nemacheilus devdevi* Hora

Distinguishing characters : D iii 8; A ii 5;
P i 18; V i 6

Body olivaceous, 4-6 broad saddle shaped bands. Caudal fin base with a black spot. Two rows of black spots across its rays on the dorsal fin. Attains a size of about 30 mm.

Geographical distribution : India :
Eastern Himalaya.

131. *Nemacheilus doonensis* (Tilak
& Husain)

Distinguishing characters : D iii 7; A iii 5;
P i 8; V i 6-7

Pale coloured. Head and predorsal

with bands on back in posterior region of the body. At the anterior base of origin of dorsal fin, a black spot. Across its middle rays, the dorsal fin with a dark band. Other fins dark spotted. Attains a size of about 35 mm.

Geographical distribution : India : Dehradun (U.P).

132. *Nemacheilus elongatus* (Sen & Nalbant)

Distinguishing characters : D iii 8; A ii 5; P i 10; V i 6

Body pale yellowish having 9-14 well-marked vertical brown crossbars of varied shapes generally interrupted on back. Bars generally divided into upper and lower fragments. A spot at the origin of dorsal fin and a dark bar at the base of caudal fin. Attains a length of about 35 mm.

Geographical distribution : India : Meghalaya near Shillong (Brahmaputra basin).

133. *Nemacheilus evezardi* Day

Distinguishing characters : D iii 7; A ii 5; P i 10-11; V i 6-7

Yellowish or greenish coloured having 9-18 (generally 14-15) vertical brown stripes from back to ventral side, the stripes usually incomplete or interrupted and of varied shapes. On the head, big round spots. Caudal fin base with

Other fins unmarked. Attains a length of about 40 mm.

Geographical distribution : India : Western Ghats, Krishna and Godavari basins, Satpura range, Pachmari hills.

134. *Nemacheilus gangeticus* (Menon)

Distinguishing characters : D ii (7) 8; A i 5; P i 10; V i 7

12 vertical bands on body. Bands anterior to dorsal fin break up and form numerous narrow bands. Caudal fin bears a black patch at its base anteriorly. A single row of spots on the caudal and dorsal fins. Attains a length of about 85 mm.

Geographical distribution : India : Western Himalaya.

135. *Nemacheilus guentheri* Day

Distinguishing characters : D iii 8; A ii 5; P i 10; V i 6-7

Body dark brown having three rows of various sized and shaped white spots. Caudal fin base with a deep short vertical bar. Caudal and dorsal fins with 3-4 rows of spots. Dorsal fin origin with a spot. Grows to a size of about 60 mm.

Geographical distribution : India : Western Ghats.

136. *Nemacheilus himachalensis* (Menon)

tapering below the lateral line. At the base of caudal fin, a dark patch. Fins unmarked. Attains a length of about 40 mm.

Geographical distribution : India : Himachal Pradesh, Kangra Distt. (Beas drainage).

137. *Nemacheilus horai* Menon

Distinguishing characters : D iii 8; A i 5; P i 10; V i 6

Brownish coloured becoming lighter below lateral line. Behind the dorsal fin, 4-5 black bands broader than whitish interspaces on the body. Attains a length of about 50 mm.

Geographical distribution : India : Himachal Pradesh, Punjab and Jammu; Pakistan.

138. *Nemacheilus kangjupkhulensis* Hora

Distinguishing characters : D ii 7; A ii 5; P i 8; V i 6

7-11 broad black bands separated by narrow white ones on the body. Usually bands on the anterior region coalesce to form a uniform dusky colour. At the caudal fin base, a black bar. Two black streaks radiating from eye to snout. A black spot at the base of anterior three rays of dorsal fin. Attains a size of about 45 mm.

139. *Nemacheilus keralensis* (Rita & Nalbant)

Distinguishing characters : D iii 7; A ii 5; P i 10; V i 6-7

Body marked with narrow, ill defined vertical bands from dorsal to ventral surface generally split up below lateral line into several spots or streaks. The bands often coalesce to form uniform dark mark with wavy margins at ventral side. Origin of dorsal fin with a black mark. A narrow stripe or two distant spots on the caudal fin base. Caudal fin irregularly spotted. Other fins plain. Attains a size of about 40 mm.

Geographical distribution : India : Western Ghats (Kerala).

140. *Nemacheilus kodaguensis* (Menon)

Distinguishing characters : D iii 8; A ii 5; P i 10; V i 6

11-14 vertical bands on the body, broader above lateral line and tapering below, reaching ventral surface only in posterior half. Caudal fin base with a dark band, a black band across its middle while the distal portion spotted black. Dorsal fin having a light margin bounded below by a jet black arched band. Attains a length of about 40 mm.

Geographical distribution : India : Western Ghats-Cauvery basin and Nilgiris

Body light brown having 20-21 indistinct narrow vertical black bands. Fins plain. Grows about 50 mm.

Geographical distribution : India : Assam, Brahmaputra, drainage; Myanmar.

142. *Nemacheilus manipurensis*
Chaudhuri

Distinguishing characters : D i 7; A ii 5;
P i 11; V i 7

Body marked with 14-20 brown vertical stripes. Attains a size of about 60 mm.

Geographical distribution : India : Manipur valley and Nagaland.

143. *Nemacheilus monilis* Hora

Distinguishing characters : D iii 7; A ii 5;
P i 9; V i 7

Colour dirty white. From snout tip to caudal fin base (interrupted by eye), runs a moniliform black band which continues as a black streak in the middle of caudal fin. Barbels black streaked. Fins whitish. Attains a size of about 50 mm.

Geographical distribution : India : Western Ghats and Nilgiri hills.

144. *Nemacheilus montanus*
(McClelland)

Distinguishing characters : D iii 7; A ii 5;
P i 9; V i 6

at its base and a bar across each lobe. Attains a length of about 65 mm.

Geographical distribution : India : Himachal Pradesh and Uttar Pradesh.

145. *Nemacheilus multifasciatus* Day

Distinguishing characters : D ii 8; A ii 5;
P i 10-11; V i 7-8

14-16 vertical bands broader than interpaces on the body. Usually the bands split up particularly in front of dorsal fin in several narrower bands. At the base of anterior dorsal fin rays lie a black spot. On outer rays of caudal and dorsal fins, short dark streaks. Attains a length of about 100 mm.

Geographical distribution : India : Eastern Himalaya-from Tista, through the base of Nepal Himalaya, Kali drainages and Garhwal Himalaya.

146. *Nemacheilus nagaensis*
(Menon)

Distinguishing characters : D ii 8; A ii 5;
P i 8; V i 6

7-11 broad black bands separated by narrower white ones on the body. Generally the bands of anterior region coalesce to form a uniform dusky surface. A black bar at the caudal fin base while a black spot at

147. *Nemacheilus nilgiriensis*
(Menon)

Distinguishing characters : D iii 8; A ii 6; P i 10; V i 6

Body marked with 11-12 light brown bands which often split up to 17 bands by appearance of pale streaks in their middle along the dorsal surface. Upper surface of head dusky while lower one dull white : A dark band at the caudal fin base. Dorsal fin with a light margin bounded below by a jet black band and having a dark base. Attains a length of about 50 mm.

Geographical distribution : India : Pykara Dam, Nilgiri Distt. (Tamil Nadu).

148. *Nemacheilus pavonaceus*
(McClelland)

Distinguishing characters : D iii 14-18; A ii 5; P i 11; V i 7

About twenty darkish grey half bars on the body. At the upper portion of the caudal fin base lies a dark ocellus surrounded by light margin. Caudal and dorsal fins barred.

Geographical distribution : India : Brahmaputra basin (Assam).

149. *Nemacheilus peguensis* Hora

Distinguishing characters : D iii 9; A iii 5; P i 10; V i 7

Pale body with 18-20 vertical black bars descending from back to ventral surface. Fins unmarked

150. *Nemacheilus petrubarrescui*
(Menon)

Distinguishing characters : D iii 8; A ii 5; P i 10; V i 7

7-8 broad saddle-shaped black bands on the body of which the posterior four extend as narrow bands slightly below the lateral line. Flanks marked by varying number of bands, fairly broad behind dorsal fin and anteriorly broken up into several narrow bands. At the middle of caudal fin base, lies a black rectangular patch. A row of dark spots on the dorsal fin and two dark bands on the caudal fin. Attains a length of about 40 mm.

Geographical distribution : India : Netravati river, Dharmasthala (Karnataka).

151. *Nemacheilus prashadi* Hora

Distinguishing characters : D ii 8; A ii 5; P i 10; V i 7

Body marked with 12-14 short black vertical bands across lateral line on flanks. Characteristic reticulation formed by numerous dark bands and blotches above; undersurface olivaceous. At the caudal fin base, a deep black bar. Dorsal fin with a black spot at base of first few rays and two bands across the fin. Two dotted bands on the caudal fin and a deep black bar at its base. Other fins unmarked. Attains a length of

152. *Nemacheilus pulchellus* Day

Distinguishing characters : D ii 10; A ii 5; P i 10; V i 7

Body marked with two rows of oval yellow spots having deep black margins restricted to upper two thirds only. These spots become vertical bands behind dorsal fin, two thirds as wide as ground colour extending to belly. Behind and below the eyes lies a crescent-shaped spot and one oblique band along opercle. Two wide black bands along the centre of dorsal fin. 3-4 oblique black bands on the caudal fin. One band across anal fin. Attains a length of about 50 mm.

Geographical distribution : India : R. Bhavani (Nilgiris), Western Ghats.

153. *Nemacheilus punjabensis* Hora

Distinguishing characters : D iii 7; A ii 5; P i 9; V i 7

9-12 dark vertical bands on greyish body. At the caudal fin base lies an intensive black stripe while a black blotch at the base of anterior fin ray of dorsal fin. Caudal and dorsal fins with 2-3 rows of spots. Attains a length of about 70 mm.

Geographical distribution : India : Himachal Pradesh, Jammu and Kashmir; Pakistan.

Body light yellowish having several black irregular V-or Y-shaped crossbars, the anterior ones reticulated. A black spot on dorsal fin origin. In middle of the base of caudal fin lies a roundish dusky blotch. From eye to snout tip runs a black stripe. Dorsal fin with a row of spots while caudal fin with 2-3 rows. Attains a size of about 40 mm.

Geographical distribution : India : North Meghalaya, Jaintia hills (Brahmaputra river basin).

155. *Nemacheilus rueppelli*. (Sykes)

Distinguishing characters : D iii 10 (11); A ii 5; P i 12; V i 7

Body greenish-yellow above and white below. 18-19 brownish vertical bands on the body reaching below lateral line. Short brown bands along lateral line forming a lateral stripe. Three rows of spots on dorsal fin while 4-5 posteriorly directed V-shaped bands on caudal fin. Attains a size of about 80 mm.

Geographical distribution : India : Western Ghats of Maharashtra and Karnataka (Krishna river basin).

156. *Nemacheilus rupecola* (McClelland)

Distinguishing characters : D ii 8; A ii 5; P i 11; V i 7

9-12 vertical bands, broader than interspaces encircling posterior part

with dark streaks. Attains a length of about 70 mm.

Geographical distribution : India : Western Himalaya, Sutlej and Beas drainage. (H.P), U.P hills.

157. *Nemacheilus savona* (Hamilton)

Distinguishing characters : D iii 9; A ii 5; P i 9; V i 6

9-10 narrow yellowish bands on the body. Caudal fin base with a vertical black band. Fins generally unmarked. Caudal fin often with 1-2 V-shaped bands. Anal and dorsal fin rays with black dots in middle. Attains a length of about 25 mm.

Geographical distribution : India : Eastern Himalayan - Teesta drainage (Darjeeling), Kali drainage (U.P).

158. *Nemacheilus scaturigina* (McClelland)

Distinguishing characters : D iii 8; A i 5; P i 9; V i 7

Body greyish above and olivaceous below having 9-12 dark vertical bands tapering downwards. Base of caudal fin with a narrow black bar. Base of anterior fin rays of dorsal fin with a black spot and 1-2 series of dots forming a V-shaped

159. *Nemacheilus semiarmatus* Day
Distinguishing characters : D ii-iii 8; A ii 5; P i 10; V i 6

Body and sides of head with irregularly scattered, conspicuous black dots. Dorsal fin having three row of dots, anal fin with a row while caudal fin with many rows of dots. Attains a size of about 60 mm.

Geographical distribution : India : Peninsular India-Cauvery basin in Wynaad, Nilgiris and Mysore.

160. *Nemacheilus sijuensis* (Menon)
Distinguishing characters : D ii 8; A ii 5; P i 10; V i 7

Body with 8-10 short light grey bands across the back which break up into secondary bands below lateral line. Few spots on upper surface of head. Caudal fin base with a short grey band. Caudal fin with two V-shaped bands. Attains a size of about 55 mm.

Geographical distribution : India : Siju cave, Garo hills (Meghalaya).

161. *Nemacheilus sikmaiensis* Hora
Distinguishing characters : D ii 8; A ii 5; P i 10-11; V i 7

12-13 rings around the body, generally the anterior ones split into several narrow stripes or coalesced rings become indistinguishable and colour uniformly black. Base of

Geographical distribution : India : Manipur valley and Meghalaya; Myanmar.

162. *Nemacheilus singhi* (Menon)

Distinguishing characters : D iii 7; A ii 5; P i 8; V i 6

12-13 dark irregular vertical bars on body descending from back to sides below lateral line. Bands behind dorsal fin broader but taper below lateral line, not extending to ventral surface. Caudal fin base with a black bar and a black spot at anterior three rays of dorsal fin. Attains a length of about 40 mm.

Geographical distribution : India : Nagaland.

163. *Nemacheilus striatus* Day

Distinguishing characters : D ii 9-10; A ii 5; P i 10; V i 7

16-20 bands wider than interspaces encircling the body. Caudal fin base with a black band. Dorsal fin with a black edge, a light posterior margin and a dark base having 1-2 rows of bands across the fin. Dull black spots on anal fin. Caudal fin with two rows of spots. Attains a length of about 55 mm.

Geographical distribution : India : Western Ghats, Kerala, Wynad and Karnataka - Shimonga.

164. *Nemacheilus triangularis* Day

yellowish bands. The anterior five directed obliquely backwards while last two vertical. Above lateral line, several different shaped yellow patches. At the caudal fin base, a dusky blotch. Caudal and dorsal fins each with two bands while anal and pelvic fins with one each. Attains a length of about 60 mm.

Geographical distribution : India : Western Ghats, Kerala and Tamil Nadu.

165. *Nemacheilus vinciguerrae* Hora

Distinguishing characters : D iii 8; A ii 5; P i 11; V i 6

About 17 vertical bands on the body which are broken up anteriorly into smaller ones. Short black markings on the dorsal surface and sides of head. In the middle of base of caudal fin, a prominent vertical band. 1-2 rows of spots on the dorsal fin while anal and pelvic fins each with one band. Two V-shaped bands on the caudal fin. Attains a size of about 80 mm.

Geographical distribution : India : Manipur (Chindwin drainage); Myanmar.

166. *Nemacheilus zonalternans* (Blyth)

Distinguishing characters : D iii 10; A iii 5-6; P i 11; V i 7

10-11 bars descend down to lower 2/3 of the body to abdomen with

Geographical distribution : India : Manipur valley; Myanmar.

Genus : *Triplophysa*
(=*Nemacheilus*)
Rendahl

167. *Triplophysa gracilis* (Day)

Common name : Gracilis triplophysa-loach

Distinguishing characters : D iii 7; A iii 5; P i 11; V i 7

Body and flanks brownish, belly yellowish. Caudal and dorsal fins spotted. Attains a length of about 110 mm.

Geographical distribution : India : Kashmir valley and Ladakh; Pakistan.

168. *Triplophysa ladacensis* (Gunther)

Common name : Ladakh triplophysa-loach

Distinguishing characters : D iii 7; A iii 5; P i 10; V i 7

Body reddish-olive. Back with about nine blackish crossbands. Flanks and caudal fin with few scattered spots. Attains a size of about 100 mm.

Geographical distribution : India : Ladakh.

169. *Triplophysa marmorata* (Heckel)

Common name : Kashmir triplophysa-loach

mottled. Along the body oftenly a dark band and bands across back and caudal fin. Fins spotted. Attains a size of about 85 mm.

Geographical distribution : India : Kashmir lakes.

170. *Triplophysa microps*
(Steindachner)

Common name : Leh triplophysa-loach

Distinguishing characters : D ii 7; A ii 5; P i 9; V i 7

Numerous vermiculated narrow transverse stripes on the body. Back with 16-17 broad black crossbands. Attains a length of about 70 mm.

Geographical distribution : India : Ladakh (J & K) and Lahul Spiti (H.P.).

171. *Trilophysa shehensis* Tilak

Common name : Tilak triplophysa-loach

Distinguishing characters : D ii 7; A ii 5; P i 11; V i 7

Body greyish above, olivaceous below. Flanks having 20-22 irregular bands. Dorsal fin with four dark bands, five each on caudal and pectoral fins while one each on

172. *Triplophysa stoliczkae*
(Steindachner)

Common name : Stoliczkae triplophysa-loach

Distinguishing characters : D iii 8; A iii 5;
P i 12; V i 7

Back and flanks dark, lighter below. Body and head mottled with numerous black spots. Back with black saddle-shaped bands. Caudal and dorsal fins, dorsal surface of outer rays of paired fins and anterior rays of dorsal fin spotted. Attains a length of about 100 mm.

Geographical distribution : India : Ladakh (headwaters of Indus); China.

173. *Triplophysa tenuicauda*
(Steindachner)

Common name : Tibetan triplophysa-loach

Distinguishing characters : D iii 9; A ii 5; P i 12; V i 7

Body and flanks mottled brown irregularly. Lateral line having fairly distinct rows of spots. Caudal and dorsal fins brownish. Attains a size of about 50 mm.

Geographical distribution : India; Ladakh; Tibet.

174. *Triplophysa yasinensis* (Alcock)

Body dark mottled above and below lateral line. Ventral side pale olivaceous. Black bands on dorsal side of body extending upto flanks, more pronounced in tail region. Three bands on dorsal fin while caudal fin with three wavy bands. Anal and pelvic fins spotted. Attains a size of about 80 mm.

Geographical distribution : India; Kashmir, Ladakh; Pakistan.

Family : Cobitidae (Loaches)

Subfamily : Cobitinae

Genus : *Lepidocephalus* Bleeker

175. *Lepidocephalus annandalei*
(Chaudhuri)

Common name : Annandale loach

Distinguishing characters : D i-ii 6-7; A ii 5; P i 6-7; V i 6

Dorsal side of body variegated with brown and grey spotted patches. 10-12 irregular dark blotches along flanks. Dorsal side of head and snout engraved with dots. A dark band extending upto anterior margin of eye. Four dark bands on the dorsal fin. Paired and anal fins unspotted. Caudal fin with three oblique (>- shaped) bands. Two dark black spots (encircled in white rings), one at caudal fin base and the other near end of caudal fin just

176. *Lepidocephalus berdmorei*
(Blyth)

Common name : Burmese loach

Distinguishing characters : D ii - iii 6; A ii 5-6; P i 7 - 9; V i 6-7

Body pale reddish-clay, thickly spotted with blackish markings barring the belly. Along the flanks, about 12 large black spots. Head, caudal and dorsal fins minutely speckled while anal fins less so. Paired fins with dark centres.

Geographical distribution : India : Manipur, Khasi hills, Shillong; Myanmar.

177. *Lepidocephalus caudofurcatus*
Tilak & Husain

Common name : Tilak loach

Distinguishing characters : D ii 6; A iii 5; P i 7; V i 6

Body pale with 7-10 saddle-shaped dark bands. From snout tip to caudal fin base, a thin dark band along the body sides. 7-14 large vertically rectangular blotches extend downwards from lateral band. Irregular black dots on the back, cheek and operculum. On the upper part of the caudal fin base lies a black spot. 4-5 vertical bands on the caudal and dorsal fins while other fins with a few bands.

Geographical distribution : India : Doon valley (U.P), Brahmaputra drainage (Assam).

178. *Lepidocephalus goalparensis*

Back darkish having faded colour patches on the sides. At upper half of caudal fin base lies a black spot. Three indistinct bands on caudal fin.

Geographical distribution : India : Assam.

179. *Lepidocephalus guntea*
(Hamilton)

Common name : Guntea loach

Distinguishing characters : D ii-iii 6-7; A ii-iii 5; P i 6-7; V i 6-7

Body generally yellowish with a dull gleaming pale streak extending from snout to a small deep black blotch at the caudal fin base. On either side of stripe, 10-12 irregular dark blotches which grow in size with age and tend to fuse with one another forming a continuous dark lateral band. Above the lateral dark spots and band, another thinner dark band parallel to it and separated from it as well as the colouration of back by a band of ground yellowish colour. Row of dark spots on dorsal and caudal fins. On the upper part of the caudal fin base lies a dark spot. Attains a size of about 150 mm.

Geographical distribution : India : Flowing or even clean waters of North India, Khasi hills; Pakistan; Myanmar; Nepal; Bangladesh; Thailand.

180. *Lepidocephalus thermalis*

Body grey to grey-green. 8-10 irregular blotches along the sides. On the upper half of caudal fin, rows of spots. Attains a length of about 80 mm.

Geographical distribution : India : Kerala, Karnataka, Maharashtra; Sri Lanka.

Genus : *Somileptes* Swainson

181. *Somileptes gongota* (Hamilton)

Common name : Gongota loach

Distinguishing characters : D iii 8; A ii 5; P i 10; V i 6

Dark back with an impression of 7-8 broad vertical bands. Several dark cloudy irregular patches on sides giving a characteristic variegated pattern. Lower half of the body dirty whitish. Cheek with a prominent dark patch. Vertical band on the caudal and dorsal fins. Irregular cloudy mottlings on other fins. Attains a size of about 100 mm.

Geographical distribution : India : Muddy hill streams of North Bengal, Uttar Pradesh, Meghalaya; Bangladesh.

Subfamily : Botinae

Genus : *Botia* Gray

182. *Botia almorhae* Gray

Common name : Almora loach

Distinguishing characters : D ii 9-10; A

whereas five on each caudal lobe. Attains a size of about 150 mm.

Geographical distribution : India : Almora hills, Western Himalaya; Nepal.

183. *Botia berdmorei* (Blyth)

Common name : Blyth's loach

Distinguishing characters : D ii 9-13; A ii-iii 5-6; P 13; V i 7

Body creamy to pale brownish-yellow having 10-11 broad distinct crossbands from back to belly. Black rostral barbels joined to eyes by narrow black bands. Behind the eye, two prominent black bands which continue along flanks as rows of blotches. Transverse bars on the yellowish dorsal fins. 2-3 strong transverse bars at caudal fin base with indication of further bands on the lobes.

Geographical distribution : India : Hill streams of Manipur; Myanmar; Thailand.

184. *Botia birdi* Chaudhuri

Common name : Birdi loach

Distinguishing characters : D i 10; A i 6; P 14; V i 7

Dark yellowish dorsal surface variegated by irregular elliptical brownish black loops. These loops send down broad bands on either side and generally interlace with

caudal and dorsal fins with 2-4 broad black bands. Other fins pale yellowish-white. Attains a size of about 140 mm.

Geographical distribution : India : Jammu and Kashmir.

185. *Botia dario* (Hamilton)

Common name : Necktie loach

Distinguishing characters : D iii 9-10; A ii 5-6; P 14; V i 7

Body greyish with 7-8 brownish oblique vertical bands upto abdomen. On each lobe of caudal fin, 2-3 oblique thin black bars. Attains a size of about 90 mm.

Geographical distribution : India : Ganga and Brahmaputra drainages; Bangladesh.

186. *Botia dayi* Hora

Common name : Hora loach

Distinguishing characters : D ii-iii 9; A ii 5; P ii 11-12; V i 7

Body and head reticulated with dark brown bands anastomosing with one another and enclose yellowish spots of varied sizes. 2-3 black bands on the fins. Attains a size of about 120 mm.

Geographical distribution : India : Darjeeling Himalaya and Brahmaputra drainage of Assam (Probably all along the base of the Himalaya); Pakistan.

Body olive with five dark vertical bands while two on head. Two broad brown bars on the fins.

Geographical distribution : India : Uttar Pradesh, Assam, Manipur; Myanmar.

188. *Botia lohachata* Chaudhuri

Common name : Y-loach

Distinguishing characters : D i 9-10; A i 5-6; P 14; V i 8

Body earthy brown or silvery-grey with a series of Y-shaped markings. Arms of Y from each side meet on the body dorsum so that a top view shows about four rounded markings. Fins hyaline to delicate grey partly with dark bars or blotches. Attains a size of about 100 mm.

Geographical distribution : India : Ganga drainage; Pakistan : Indus river system; Bangladesh; Nepal.

189. *Botia rostrata* Gunther

Common name : Gangetic loach

Distinguishing characters : D iii 9; A ii 6; P ii 12; V i 7

Body yellowish having brown crossbands of irregular pattern rarely forming blotches or rings. Caudal lobes, pelvic and pectoral fins with three brown crossbands while anal and dorsal fins with two

190. *Botia striata* Rao

Common name : Tiger loach

Distinguishing characters : D ii 9-10; A ii 5-6; P ii 11-12; V i 7

Pale pink to deep yellow body beset with narrow yellow and broad dark bands forming oblique stripes or hoops directed backward from behind the nape. Body is surrounded completely by bands. Varied number of broad dark bands generally with light streaks form complete hoops while yellowish narrow bands get broken oftenly in small distinct dots. A trident mark formed by yellow and dark streaks on the upper surface of head. Two complete and 2-3 interrupted stripes on the caudal fins. Other fins white and barred. Attains a length of about 95 mm.

Geographical distribution : India : Western Ghats.

Order : Siluriformes

Family : Bagridae (Bagrid catfishes)

Genus : *Aorichthys* Wu

191. *Aorichthys aor* (Hamilton)

Common name : Long-whiskered catfish

Distinguishing characters : D I 7; A iii -

dorsal fin with a well defined dark spot. Fins yellowish. Caudal and dorsal fins stained black. Attains a length of more than 1 m.

Geographical distribution : India : Northern India upto Krishna river system in the South, Pakistan; Nepal; Bangladesh; Upper Myanmar.

192. *Aorichthys seenghala* (Sykes)

Common name : Seenghara/Tengara/ Giant-river catfish

Distinguishing characters : D I 7; A iii 8-9; P I 9; V i 5; C 19-21

Back brownish grey while sides and belly silvery. Adipose dorsal fin with a well defined dark spot. Attains a size of about 1.5 m (common size about 400 mm).

Geographical distribution : India : Ganga, Yamuna, Krishna, Godavary and Cauvery river Systems; Afghanistan; Pakistan; Nepal; Bangladesh.

Genus : *Batasio* Blyth

193. *Batasio batasio* (Hamilton)

Common name : Tista batasio

Distinguishing characters : D I 7; A iii-iv 9-10; P I 5-8; V i 5

Leaden body being yellowish on flanks and belly. Along the lateral line, a dark longitudinal band

Geographical distribution : India : Teesta river system, North Bengal, Assam, Tripura; Bangladesh; Nepal.

194. *Batasio tengana* (Hamilton)

Common name : Assamese batasio

Distinguishing characters : D I 7-8; A iii-iv 8-11; P I 7-9; V i 5

Body olivaceous grey and lighter below. On the flanks, five oblique, irregular saddle-shaped crossbands or spots, Nape with a dusky blotch. Rayed dorsal fin cross-banded. Attains a length of about 90 mm.

Geographical distribution : India : Torrential streams of north-east, Brahmaputra; Bangladesh; Myanmar; Thailand.

195. *Batasio travancoria* Hora & Law

Common name : Malabar batasio

Distinguishing characters : D I 7; A iii-iv 9-11; P I 7-9; V i 5

A narrow dark streak along the lateral line on grey body. Fins dusky. Grows about 100 mm.

Geographical distribution : India : Streams of Western Ghats (Kerala).

Genus : *Mystus* Scopoli

196. *Mystus bleekeri* (Day)

above and below the lateral line. Generally with a dark shoulder spot. Fins greyish-white, darkest at the edges. Attains a length of about 140 mm.

Geographical distribution : India : Generally confined to northern India, the southernmost limit being the Mahanadi headwaters; Pakistan; Bangladesh; Nepal; Myanmar.

197. *Mystus montanus* (Jerdon)

Common name : Wynaad mystus

Distinguishing characters : D I 7; A iii 9; P I 6; V i 5

Body silvery having a yellow tinge along abdomen. Along the sides above the lateral line, 1-2 light bands. A silvery line along the flanks terminating in a dark spot at caudal fin base. Shoulder with a bluish spot. Fins greenish tinged. Attains a size of about 150 mm.

Geographical distribution : India : Wynaad range of hills (Kerala), Karnataka, Assam.

Family : Siluridae (Eurasian catfishes)

Genus : *Ompak* Lacepede

198. *Ompak bimaculatus* (Bloch)

Common name : Indian butter-catfish

line, a large dusky spot on the shoulder. Just above the lateral line, a small black spot on caudal peduncle. Generally a dark transverse bar across caudal fin base. Fins pale golden. Attains a length of about 500 mm.

Geographical distribution : India : Khasi hills (Meghalaya) and elsewhere; Bangladesh; Myanmar; Sri Lanka.

Family : Schilbeidae (Schilbid catfishes)

Subfamily : Schilbeinae

Genus : *Clupisoma*
Swainson

199. *Clupisoma garua* (Hamilton)

Common name : Garua Bachcha /
Guarchcha

Distinguishing characters : D I 7; A iii
26-33; P I 11; V i 5

Body silvery with back yellowish green while shoulder and head with golden gloss. Pectoral and dorsal fins dotted black. Caudal fin pale yellow; other fins hyaline. Attains a size of about 1 m.

Geographical distribution : India : Garhwal Himalaya; Jammu and Kashmir (Poonch Valley), large rivers of northern India, Assam, West Bengal; Pakistan; Nepal; Bangladesh.

Back silvery grey becoming light on flanks and belly. Attains a length of about 300 mm.

Geographical distribution : India : Hill streams of Teesta river below Darjeeling, Yamna river (U.P), Himachal Pradesh, Tripura; Bangladesh; Nepal; Pakistan.

Family : Amblycipitidae (Torrent catfishes)

Genus : *Amblyceps* Blyth

201. *Amblyceps mangois* (Hamilton)

Common name : Indian torrent catfish

Distinguishing characters : D I 5-6; A ii-
iii 6-8; P I 7; V i 5-6

Olive brown body, lighter below generally with a dark lateral band. Attains a length of about 125 mm.

Geographical distribution : India : Along foothills of Himalaya from Jammu and Kashmir to Assam; Pakistan; Bangladesh; Myanmar.

Family : Sisoridae (Sisorid catfishes)

Genus : *Bagarius* Bleeker

202. *Bagarius bagarius* (Hamilton)

Common name : Gangetic goonch

Distinguishing characters : D I 7; A iii
9-12; P I 9-12; V i 5

fins, the second from adipose fin towards anal fin and the third one centred on caudal peduncle. Paired fins black spotted. Caudal fin light yellowish-grey. Attains a size of about 190 mm.

Geographical distribution : India : R. Ganga and its tributaries, Himachal Pradesh.

Genus : *Conta* Hora

203. *Conta conta* (Hamilton)

Common name : Conta catfish

Distinguishing characters : D I 5-6; A ii-iii 7; P I 6; V i 5

Body deep brownish grey with dirty white sides. Dark and white annulations on barbels. Yellowish fins light banded. Whitish border on outer caudal fin ray. Attains a size of about 80 mm.

Geographical distribution : India : Rocky streams of Himalaya in North Bengal, Assam, Meghalaya and Tarai (U.P.).

Genus : *Erethistes* Muller & Troschel

204. *Erethistes pussilus* Muller & Troschel

Common name : Gangetic erethistes

Distinguishing characters : D I 6; A iii 8; P I 5-6; V i 5

Dorsal surface yellowish-brown while lighter below. Barbels

Brahmaputra drainages; Bangladesh; Myanmar.

Genus : *Erethistoides* Hora

205. *Erethistoides montana montana* Hora

Distinguishing characters : D I 5; A ii 7; P I 6; V i 5

Dusky above and dirty-white below. A dark band on nape and three similar bands on the body; one below the rayed dorsal fin, second below the adipose fin, and third one below the caudal fin. Distal portion of caudal and dorsal fins banded. Attains a length of about 50 mm.

Geographical distribution : India : Torrential streams of Eastern Himalaya, Tripura, Assam, Darjeeling.

Genus : *Euchiloglanis* Regan

206. *Euchiloglanis hodgarti* (Hora)

Distinguishing characters : D ii 5; A ii 6; P i 16-17; V i 5

Body yellowish above, lighter below. Fins pale. Attains a length of about 65 mm.

Geographical distribution : India : Torrential streams of Brahmaputra, Darjeeling, (North Bengal), Abor hills (Assam) and Kali river (U.P); Bangladesh.

Yellowish-grey above becoming paler below. Fins lighter. Attains a length of about 40 mm.

Geographical distribution : India; North Bengal, Meghalaya.

Genus : *Gagata* Bleeker

208. *Gagata cenia* (Hamilton)

Common name : Indian gagata

Distinguishing characters : D I 6; A ii-iii 10-14; P I 7-9; V I 5

Body grey coloured. Caudal fin whitish. Attains a size of about 150 mm.

Geographical distribution : India : Uttar Pradesh, West Bengal, Orissa, Assam; Pakistan; Nepal; Myanmar.

209. *Gagata gagata* (Hamilton)

Common name : Gangetic gagata

Distinguishing characters : D I 6; A iii-iv 10-12; P I 9; V I 5

Opaque yellow coloured merging to dull grey below. Fins dusky at the distal portion barring whitish caudal fin. Attains a size of about 300 mm.

Geographical distribution : India : Ganga and Brahmaputra river systems; Bangladesh; Myanmar.

210. *Gagata sexualis* Tilak

Common name : Koel gagata

bands on dorsal surface of head. Another four vertical black bands on the back upto lateral line. Caudal fin base with a dark blotch. Dorsal fin with a dark blotch on spine and three anterior rays on its upper half. Caudal fin with a dark band on each lobe. Anal and pelvic fins hyaline. Attains a length of about 60 mm.

Geographical distribution : India : Ganga river system.

Genus : *Glyptosternum* McClelland

211. *Glyptosternum maculatum* (Regan)

Distinguishing characters : D i 6; A i 5; P i 12; V i 5

Olivaceous with numerous irregular dark spots. Caudal fin white tipped. Attains a length of about 250 mm.

Geographical distribution : India : Brahmaputra drainage (Sikkim); Tibet.

212. *Glyptosternum reticulatum* McClelland

Distinguishing characters : D i 6; A ii-iii 5; P i 11; V i 5

Dull yellow-green to brownish above and lighter below. Yellow fins dark banded or edged. Attains a size of about 160 mm.

Genus : *Glyptothorax* Blyth

213. *Glyptothorax alaknandi* Tilak

Distinguishing characters : D I 6; A iii 7; P i 7; V i 5

Body dark chocolate-brown, underside paler. Caudal fin base and tips of anal and dorsal fins each with a dark band. Adipose fin dusky. Caudal fin with a dark band. Attains a length of about 90 mm.

Geographical distribution : India : Uttar Pradesh (Alaknada river, Pauri Garhwal).

214. *Glyptothorax anamalaiensis* Silas

Distinguishing characters : D I 6; A iii 7; P I 8; V i 5

Greyish with three broad white transverse bands; one below dorsal fin, a second beneath adipose fin and third one at caudal fin base. Fins white tipped. A broad transverse white band at bifurcation of caudal fin. Attains a size of about 100 mm.

Geographical distribution : India : Base of Anamalai hills (Kerala).

215. *Glyptothorax annandalei* Hora

Distinguishing characters : D I 6; A iii 7; P I 9; V i 5

Dark grey above becoming lighter below with two longitudinal bands

Geographical distribution : India : Western Ghats and the Vindhyas; Nepal.

216. *Glyptothorax brevipinnis* Hora

Distinguishing characters : D I 6; A ii 6; P I 7; V i 5

Reddish-brown above becoming lighter below. Eyes black. Attains a size of about 100 mm.

Geographical distribution : India : Garhwal Himalaya (U.P.).

217. *Glyptothorax cavia* (Hamilton)

Distinguishing characters : D I 6; A ii 9-10; P I 9; V i 5

Olivaceous brown body with dirty yellow sides. Dorsal surface and flanks mottled with deep coloured spots oftenly having narrow longitudinal bands on flanks. Fin bases dark banded. Attains a size of about 165 mm.

Geographical distribution : India : North Bengal, Assam; Pakistan; Nepal; Bangladesh; Myanmar.

218. *Glyptothorax conirostre conirostre* (Steindachner)

Distinguishing characters : D I 6; A ii 9-10; P I 9; V i 5

Body brownish. Fins yellow stained with black. Attains a size of about 140 mm.

Geographical distribution : India :

219. *Glyptothorax dakpathari* Tilak & Husain

Distinguishing characters : D I 6; A iv 9; P I 9; V i 5

Dorsal and lateral sides dark grey while yellowish on ventral side. Grey dots on fins. Attains a length of about 90 mm.

Geographical distribution : India : River Yamuna (Dehradun, U.P).

220. *Glyptothorax garhwali* Tilak

Distinguishing characters : D I 6; A iii 8; P I 8-9; V i 5

Lateral and dorsal sides uniformly dark while belly yellowish. Bases of all fins dark banded. Attains a size of about 85 mm.

Geographical distribution : India : Himalayan range, East of Kosi river (U.P).

221. *Glyptothorax gracile* (Gunther)

Distinguishing characters : D I 6; A ii 12; P I 10; V i 5

Body brownish. Fins light coloured. Attains a size of about 130 mm.

Geographical distribution : India : Sikkim; Nepal.

222. *Glyptothorax housei* Herre

Distinguishing characters : D I 5; A ii 10; P I 9; V i 5

Geographical distribution : India : Western Ghats, Anamalai hills (Kerala).

223. *Glyptothorax indicus* Talwar *nom. nov.*

Distinguishing characters : D I 5-6; A ii 8-9; P I 8-9; V i 5

A dark blotch on the shoulder of brownish yellow coloured body. Caudal and anal fins darker at tips and bases. Attains a length of about 110 mm.

Geographical distribution : India : Tarai (Eastern Himalaya), Punjab hills; Nepal.

224. *Glyptothorax kashmirensis* Hora

Distinguishing characters : D I 5; A ii 6; P I 8-9; V i 5

Body having uniform dark brown colour above and lighter below, generally black spotted. Attains a length of about 120 mm.

Geographical distribution : India : Kashmir valley; Pakistan : Indus river basin.

225. *Glyptothorax lonah* (Sykes)

Distinguishing characters : D I 6; A iii 8-10; P I 9; V i 5

Body yellowish-brown above lighter below. Along lateral line, a light streak. Fins yellow. Anal, caudal and dorsal fins black banded. Attains a size of about 150 mm.

226. *Glyptothorax madraspatanum*
(Day)

Distinguishing characters : D I 6; A ii-iii
8; P I 9-10; V i 5

Body yellowish with dark bands
while yellowish fins black banded.
Attains a length of about 115 mm.

Geographical distribution : India :
Western Ghats, Anamalai and
Nilgiri hills and R. Cauvery.

227. *Glyptothorax pectinopterus*
(McClelland)

Distinguishing characters : D I 5;
A i 6; P I 10; V i 5

Dark brown above becoming lighter
below. Along dorsal edge of body,
a light orange streak. Caudal and
dorsal fins greyish with light yellow
tips. Attains a size of about
180 mm.

Geographical distribution : India :
Jammu and Kashmir, Kangra valley,
Simla hills (H.P), Uttar Pradesh;
Nepal; Pakistan.

228. *Glyptothorax platypogonoides*
(Bleeker)

Distinguishing characters : D I 6-7; A
iii-iv 9; P I 8-9; V i 5

Body and flanks brownish merging
into pale yellow on the belly. Flanks
and head speckled with dark oblong
spots. Below and on either side of

Geographical distribution : India :
Manipur valley

229. *Glyptothorax saisii* (Jenkins)

Distinguishing characters : D I 6; A iii
7; P I 7; V i 5

Body greyish-black above and
whitish below. Caudal fin black
spotted. Attains a size of about
70 mm.

Geographical distribution : India :
Pauri Garhwal (U.P), Parasnath hills
(Bihar).

230. *Glyptothorax sinense* (Regan)

Distinguishing characters : D I 6; A ii 9;
P I 9; V i 5

Body greenish-brown with two faint
irregular dusky patches, one below
rayed dorsal fin and other below
adipose fin. Rayed dorsal fin with a
broad black longitudinal band in the
middle. Attains a length of about
125 mm.

Geographical distribution : India :
Manipur; Upper Myanmar; China.

231. *Glyptothorax stoliczkae*
(Steindachner)

Distinguishing characters : D I 6; A i 9;
P I 9; V i 5

Uniform brown having yellowish
mark along the back. Fins yellow

232. *Glyptothorax striatus* (McClelland)

Distinguishing characters : D I 6; A ii 9; P I 11; V i 5

Colours varies considerably with age. Body and flanks uniformly dark brown with pale white belly. Dark vertical bands start appearing with the growth of body. Attains a size of about 210 mm.

Geographical distribution : India : Khasi and Garo hills (Meghalaya), Sikkim.

233. *Glyptothorax telchitta*
(Hamilton)

Distinguishing characters : D I 6-7; A ii 9-10; P I 7-9; V i 5

Body and sides grey to dark brown, belly dirty yellow. Flanks and fins mottled with dark spots. Paired dorsal and anal fins with spotted bands. Attains a length of about 100 mm.

Geographical distribution : India : Hill streams of Uttar Pradesh; North Bengal; Pakistan; Bangladesh; Nepal.

234. *Glyptothorax trilineatus* Blyth

Distinguishing characters : D I 6-7; A i 9-10; P I 10-11; V i 5

Body and flanks chestnut brown while belly pale yellow. A dirty well marked longitudinal streak along back from occiput to caudal fin base.

Geographical distribution : India : Garhwal Himalaya, Manipur; Myanmar.

Genus : *Hara* Blyth

235. *Hara hara* (Hamilton)

Common name : Kosi hara

Distinguishing characters : D I 6-7; A iv 7-8; P I 7; V i 5

Body yellowish-brown with four broad crossbands behind dorsal fin. At the end of adipose fin, a dark blotch. Fins oftenly black margined and banded. Attains a size of about 25 mm.

Geographical distribution : India : Uttar Pradesh, North Bengal, Assam and Orissa, Nepal; Myanmar.

236. *Hara jerdoni* Day

Common name : Sylhet hara

Distinguishing characters : D I 5; A iv - v 5-7; P I 4-5; V i 5

Brownish with irregular dark markings, ventral side lighter. Dark annulations of black and yellowish brown rings on barbels. Adipose dorsal fin with a dark band while caudal and anal fins with two bands. Pectoral fins irregularly banded, its spine darkly annulated. Barring tip, dorsal fin uniformly dark stained. Pelvic fins dark. Attains a length of about 35 mm.

Genus : *Laguvia* Hora

237. *Laguvia ribeiroi* Hora

Distinguishing characters : D I 6; A iii
6-9; P I 6-8; V i 5

Body dark grey above becoming dull white below having black dots. Two broad yellowish transverse bands on body; anterior one between rayed and adipose fin and posterior band below posterior half of adipose fin base. Adipose dorsal fin dusky. Other fins banded. Attains a size of about 100 mm.

Geographical distribution : India : Teesta river system (N.Bengal) and the Vindhyas; Nepal.

238. *Laguvia shawi* Hora

Distinguishing characters : D I 5-6; A i
8; P I 7; V i 5

Dark greyish-yellow above and dull whitish below with two broad crossbands. The anterior band below rayed dorsal fin and the posterior one below adipose fin. Fins unclearly marked with black transverse bands. Attains a size of about 30 mm.

Geographical distribution : India : Teesta drainage, Darjeeling Himalaya.

Genus : *Pseudecheneis* Blyth

239. *Pseudecheneis sulcatus*

Body greyish brown to black with four large irregular yellowish blotches on flanks above lateral line. On sides of the body, a narrow longitudinal yellowish band. Adhesive apparatus orange. Fins yellowish and blackpatched. Attains a length of about 200 mm.

Geographical distribution : India : Doon valley (U.P), North Bengal and Khasi hills (Meghalaya); Nepal; Bangladesh.

Genus : *Sisor* Hamilton

240. *Sisor rhabdophorus* Hamilton

Common name : Sisor catfish

Distinguishing characters : D I 6; A ii 4;
P I 8; V i 7

Blackish-white above and lighter below. Attains a length of about 180 mm.

Geographical distribution : India : Ganga, Yamuna and Brahmaputra river systems; Pakistan; Bangladesh.

Family : Olyridae

Genus : *Olyra* McClelland

241. *Olyra horai* (Prashad & Mukerji)

Common name : Hora olyra

Distinguishing characters : D i 7; A iii
18; P I 7; V i 5

Dark brownish above, white pale

Geographical distribution : India : Meghalaya; Myanmar.

242. *Olyra longicaudata* McClelland

Common name : Himalayan olyra

Distinguishing characters : D i 6-7; A iii 15-20; P i 4-6; V i 5

Body olivaceous brown coloured having two pale longitudinal bands on either side of lateral line besides a dark brown band. Belly and fins dull white. Attains a length of about 115 mm.

Geographical distribution : India : Meghalaya, Assam, Darjeeling; Myanmar.

Order : Salmoniformes

Family : Salmonidae (trouts)

Genus : *Oncorhynchus* suckley

243. *Oncorhynchus mykiss* (Walbaum)

Common name : Rainbow trout

Distinguishing characters : D iv 9-10; A iii 10-11; P i 12; V i 8

Body and head steel blue. Along the flanks, a brilliant red or purplish band. Above lateral line, red spots scattered over the body extending as far as dorsal and caudal fins. Sides of the body often show a rainbow iridescence. Fins slightly pinkish. Grows more than 400 mm.

Geographical distribution : India :

Genus : *Salmo* Linnaeus

244. *Salmo salar* Linnaeus

Common name : Atlantic salmon

Distinguishing characters : D iii 8; A iii 6; P i 12; V i 8.

Brownish back with more or less silvery flanks. Head, sides, body and fins with numerous black spots. Red patches along the sides in male. Grows more than 500 mm.

Geographical distribution : The land-locked strain of Atlantic Salmon introduced in Kashmir. Present status of this species is not known.

245. *Salmo trutta fario* Linnaeus

Common name : Brown trout/River trout.

Distinguishing characters : D iii-iv; 9-11; A iii 7-9; P i 12; V i 8

Oftenly deep brown with blue or green hues. Flanks and back with black and reddish spots surrounded by light coloured area. Fins slightly dark. Attains more than 400 mm.

Geographical distribution : Introduced in India and well established in Indian farms, uplands streams and high altitude lakes especially Jammu and Kashmir, Uttar Pradesh, Himachal Pradesh.

Genus : *Salvelinus* Richardson

246. *Salvelinus fontinalis* (Mitchill)

Upper side marbled with pale green to olive green or olive green with yellow green vermiculations. Flanks considerably light with red blotches usually bordered with blue margins, underside pale yellowish. Anal, pectoral and pelvic fins orange to red coloured. Anterior margin of anal fin snow-white with thin white streak on remaining fins followed by a black line. Dorsal fin with vermiculations or black margins on a paler background.

Geographical distribution : India : Introduced in Laribal trout farm, Kashmir. Present status unknown.

Order : Cyprinodontiformes

Suborder : Exocoetoidei

Family : Belonidae (Garfishes)

Genus : *Xenentodon* Regan

247. *Xenentodon cancila* (Hamilton)

Common name : Freshwater garfish

Distinguishing characters : D 15-18; A 16-18; P 11; V 6

Body greenish. Flanks green-silvery fading to whitish below. Flanks having silvery lateral band with a dark margin. Between pectoral and anal fins, a series of 4-5 blotches on the body. Anal and dorsal fins dark edged. Attains a length of about 300 mm.

Suborder : Cyprinodontoidei

Family : Aplocheilidae (Rivulines)

Genus : *Aplocheilus* McClelland

248. *Aplocheilus panchax* (Hamilton)

Common name : Panchax minnow/
Blue panchax

Distinguishing characters : D ii 6; A iii 12-13; P 14; V 6

Body greenish becoming dull white with a bluish tinge on flanks and belly. A distinct white occipital spot. A large black blotch at the base of lower third of dorsal fin. Anal fin orange at base while outer margins reddish with dark spots. Paired fins hyaline, Attains a length of about 90 mm.

Geographical distribution : India : mainly north, West Bengal, Assam, Uttar Pradesh; Bangladesh; Pakistan; Myanmar.

Family : Poeciliidae (Livebearers)

Genus : *Gambusia* Poey

249. *Gambusia affinis* (Baird & Girard)

Common name : Mosquito fish

Distinguishing characters : D i 7-8; A 8-10; P 13-14; V 6

Back olive-brown; sides translucent grey with a bluish-green tinge and belly silvery. Scattered black spots

Geographical distribution : India : Introduced in India and flourishing in almost all uplands lentic waters.

Order : Perciformes

Suborder : Percoidei

Family : Ambassidae (Glassfishes)

Genus : *Pseudambassis* Bleeker

250. *Pseudambassis baculis*
(Hamilton)

Common name : Himalayan glassy perchlet

Distinguishing characters : D VI + I 12-13; A III 12-13; P I 11-12; V I 5

Translucent; back yellowish green. Belly and sides silvery white. Flanks with a silvery longitudinal band. Fins hyaline generally with dusky membrane. Attains a length of about 50 mm.

Geographical distribution : India : Himalaya and Indo-Gangetic plains.

Family : Nandidae (Leaffishes)

Subfamily : Badinae

Genus : *Badis* Bleeker

251. *Badis badis* (Hamilton)

Common name : Badis/Dwarf chameleonfish

Distinguishing characters : D XVI-XVIII 7-10; A III 6-8; P 12; V I 5

Along dorsal fin base, a row of dark spots. Attains a length of about 80 mm.

Geographical distribution : India : Himachal Pradesh, Uttar Pradesh, Khasi hills, Assam, Nagaland, West Bengal; Pakistan.

Suborder : Channoidei

Family : Channidae
(Snakeheads, murels)

Genus : *Channa* Scopoli

252. *Channa gachua* (Hamilton)

Common name : Gachua snakehead

Distinguishing characters : D 32-37; A 21-23; P 32-37; V 6

Body generally greenish and lighter beneath. Dorsal and caudal fins slate coloured having orange margins. Black based pectoral fins transversally barred with orange or reddish edges. Caudal fin barred, rarely spotted white to orange. Attains a length of about 210 mm.

Geographical distribution : India : Jammu and Kashmir, Himachal Pradesh, Uttar Pradesh, North-East Himalaya.

253. *Channa orientalis* Bloch & Schneider

Common name : Asiatic snakehead

Distinguishing characters : D 32-37; A 20-22; P 14-15; V 6

series of alternating pale blue and orange vertical bands on the pectoral fins. Outer margin of caudal fin bright orange and barred. Attains a length of about 130 mm.

Geographical distribution : India : Mountain streams of Assam, West Bengal, Uttar Pradesh, Jammu and Kashmir, Orissa, Andhra Pradesh, Himachal Pradesh, Tamil Nadu, Kerala, Karnataka; Afghanistan; Pakistan; Sri Lanka; Bangladesh.

254. *Channa punctatus* (Bloch)

Common name : Spotted snakehead

Distinguishing characters : D 28-33; A 20-23; P 15-18; V 6

Dorsal side and flanks black to light-green whereas ventral side white to pale yellow. Flanks with several dark blotches. Black spots on body, dorsal, anal and caudal fins. Paired fins pale orange. Remaining fins dark grey, sometimes with a reddish tinge. Attains a length of about 300 mm.

Geographical distribution : India : Jammu and Kashmir, Himachal Pradesh, Uttar Pradesh, West Bengal, Orissa, Tamil Nadu, Kerala, Karnataka; Afghanistan; Pakistan; Sri Lanka; Nepal; Myanmar.

255. *Channa stewartii* (Playfair)

Common name : Assamese snakehead

Back dark brown fading on sides and belly. A series of several indistinct dark bands sloping forward generally above the lateral line and for a short distance below it. Many scales with a well defined, black circular spots. Dorsal fin with a deep blue iridescence along its base and white to white-orange along the outer edge. Pectoral fins partly spotted. Attains a length of about 250 mm.

Geographical distribution : India : Eastern Himalaya; Nepal.

Suborder : Mastacembeloidei

Family : Mastacembelidae
(Spinyeels)

Genus : *Mastacembelus* Scopoli

256. *Mastacembelus armatus*
(Lacepede)

Common name : Tire-track spinyeel

Distinguishing characters : D XXXII - XL 64-92; A III 64-90; P 21-27; C 14-17

Body brown with zig-zag lines, sometimes connecting to form a network but generally never extending upto abdomen. Usually a black band through eye continued in an undulating course along upper half of sides. Base of soft dorsal fin with a row of black spots and short black bands over back under dorsal spine. Pectoral fins spotted. Anal and dorsal fins usually banded

Geographical distribution : India : Jammu, West Bengal, Uttar Pradesh, Himachal Pradesh, Tamil Nadu, Kerala; Pakistan; Nepal; Sri Lanka; Myanmar.

Family : Chaudhuriidae
(Spineless-eels)

Genus : *Chaudhuria* Annandale

257. *Chaudhuria indica* (Yazdani)

Common name : Hillstream spineless-eel.

Distinguishing characters : D 34-36; A 34-36; P 7-9; C 8-10

Varied coloured. Body light to dark purplish-brown, ventral surface

yellowish. Series of dark open V-shaped and dark lines on flanks. Fins dirty white.

Geographical distribution : India : Khasi and Garo hills (Meghalaya).

258. *Chaudhuria khajuriae* (Talwar, Yazdani and Kundu)

Common name : Garo spineless-eel

Distinguishing characters : D 40-44; A 37-38; P 19-20; C 12.

Pale brownish with scattered melanophores on head, body and fins.

Geographical distribution : India : Garo hills (Meghalaya) and upper Assam.

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<i>N. keralensis</i>	30	<i>N. wynaadensis</i>	5
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<i>N. labeosus</i>	30	<i>N. notopterus</i>	1
<i>N. manipurensis</i>	31	<i>Olyra</i>	50
<i>N. monilis</i>	31	<i>O. horai</i>	50
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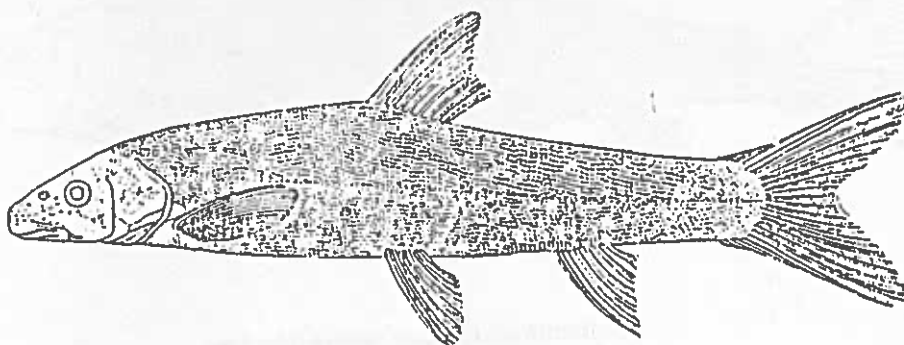
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<i>O. vigorsii</i>	5	<i>R. bola</i>	16
<i>Osteochilus</i>	6	<i>R. guttatus</i>	16
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<i>O. (Osteochilichthys) nashii</i>	6	<i>R. daniconius</i>	17
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<i>P. carnaticus</i>	6	<i>S. esocinus</i>	18
<i>P. cauveriensis</i>	7	<i>S. hugelii</i>	19
<i>P. chola</i>	7	<i>S. labiatus</i>	19
<i>P. conchoni</i>	7	<i>S. longipinnis</i>	19
<i>P. dorsalis</i>	7	<i>S. micropogon</i>	19
<i>P. filamentosus</i>	7	<i>S. nasus</i>	19
<i>P. jerdoni</i>	8	<i>S. niger</i>	19
<i>P. phutunio</i>	8	<i>S. planifrons</i>	20

<i>Sisor</i>	50	<i>Travancoria</i>	25
<i>S. rhabdophorus</i>	50	<i>T. jonesi</i>	25
<i>Somileptes</i>	39	<i>Trypophysa</i>	36
<i>S. gongota</i>	39	<i>T. gracilis</i>	36
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<i>T. tinca</i>	9	<i>T. marmorata</i>	36
<i>Tor</i>	9	<i>T. microps</i>	36
<i>T. chelynoides</i>	9	<i>T. shehensis</i>	36
<i>T. khudree</i>	9	<i>T. stoliczkae</i>	37
<i>T. mosal</i>	9	<i>T. tenuicauda</i>	37
<i>T. mussullah</i>	10	<i>T. yasinensis</i>	37
<i>T. progeneius</i>	10	<i>Xenentodon</i>	52
<i>T. putitora</i>	10	<i>X. cancila</i>	52
<i>T. tor</i>	10		

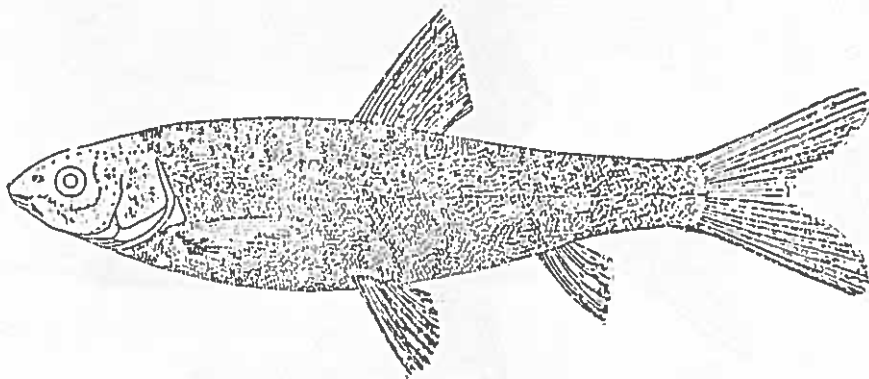
SOME IMPORTANT UPLANDS FISHES

Plate-I

SNOW TROUTS



Schizothorax richardsonii (Gray)



Schizothoraichthys curvifrons (Heckel)

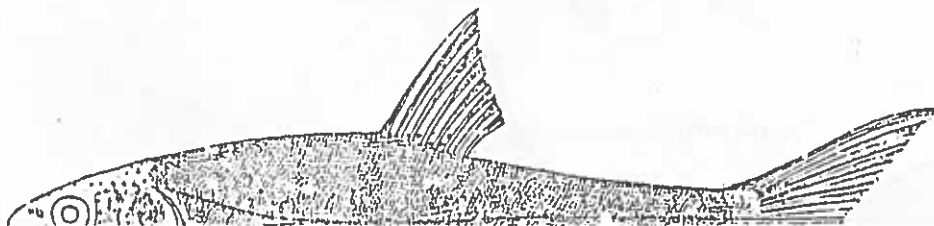
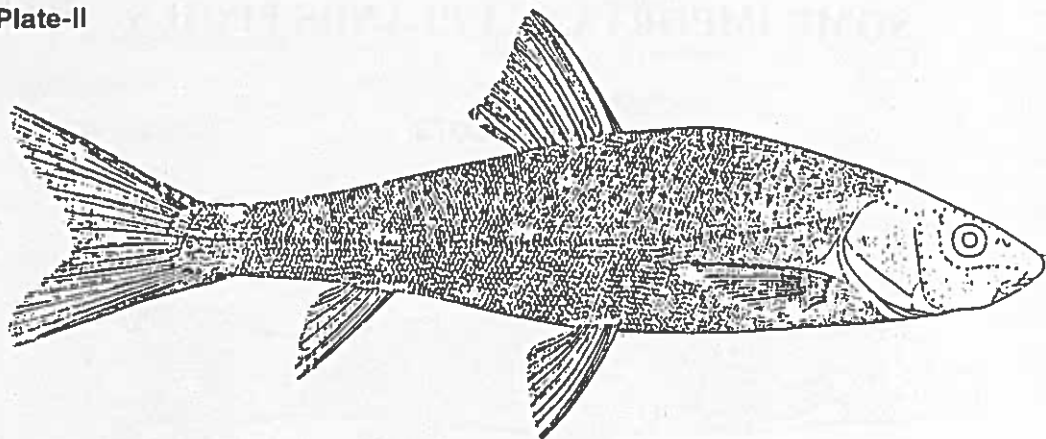
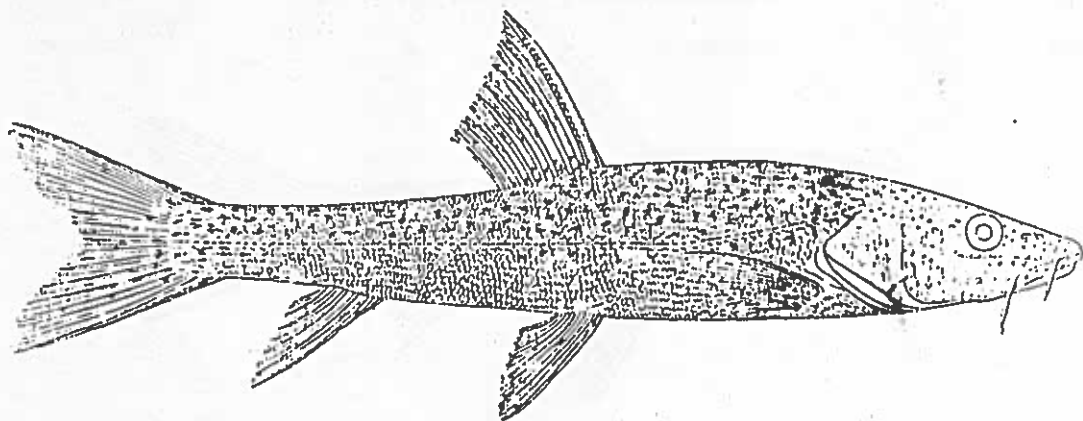


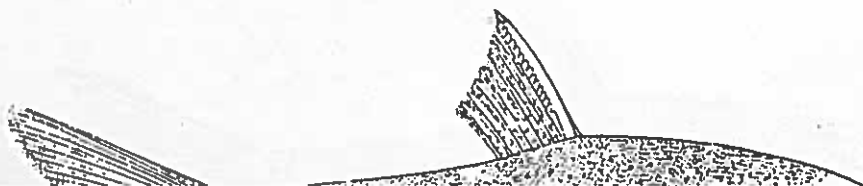
Plate-II

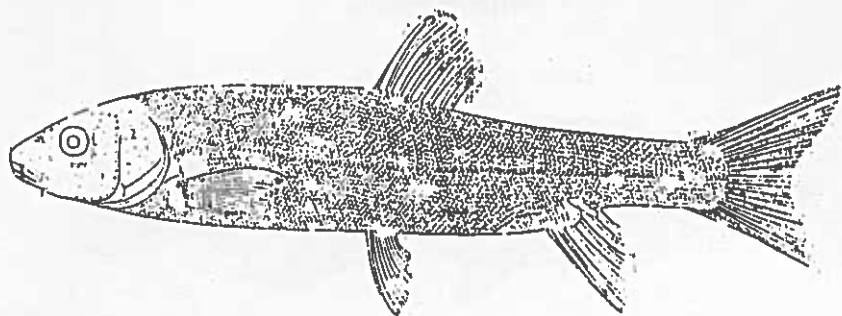


Schizothoracichthys nasus (Heckel)

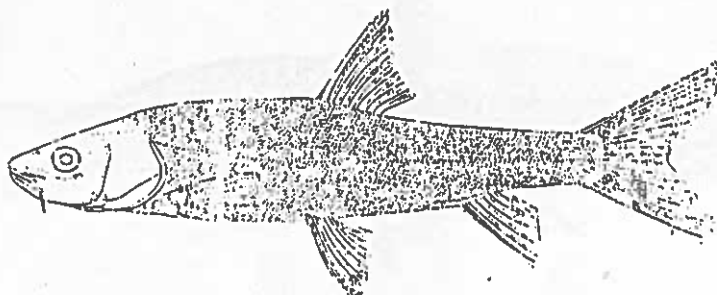


Schizothoracichthys esocinus (Heckel)

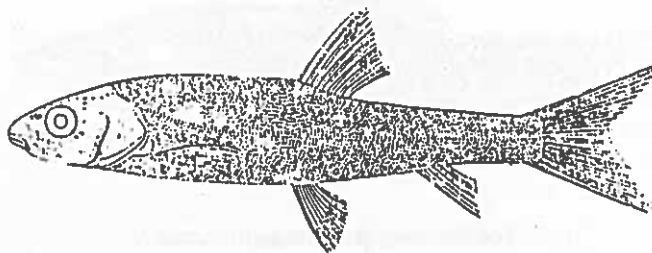




Schizothoracichthys hugelii (Heckel)

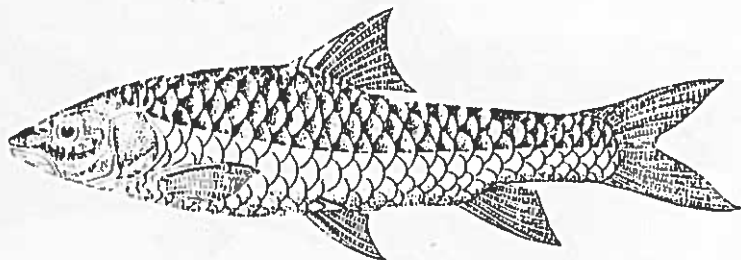


Schizothoracichthys planifrons (Heckel)

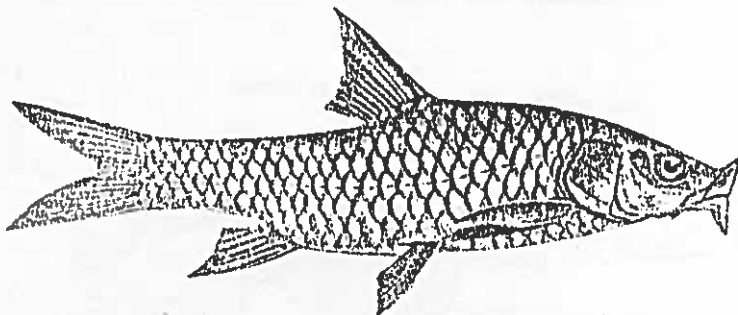


Schizothoracichthys micropogon (Heckel)

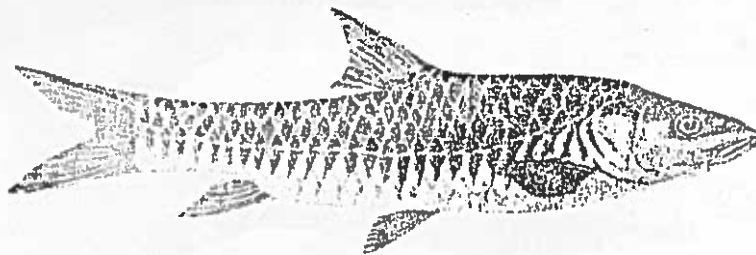
MAHSEERS



Tor khudree (Sykes)



Tor tor (Hamilton)

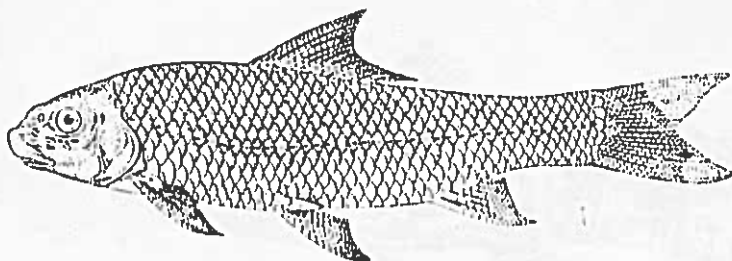


Tor putitora (Hamilton)

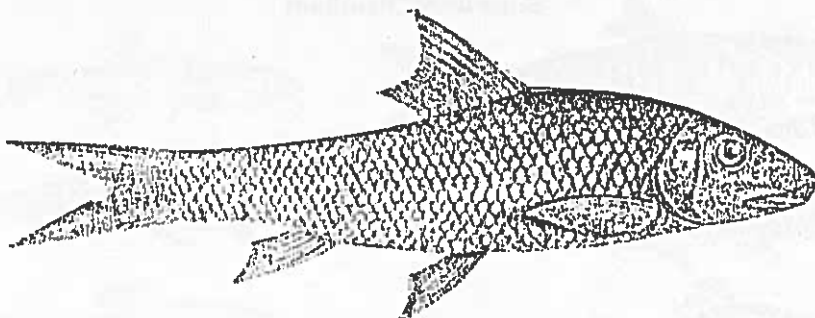


MINOR CARPS

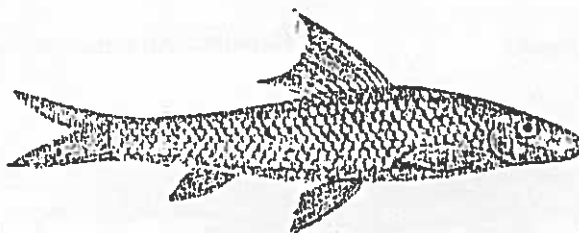
Plate-V



Labeo dyocheilus (McClelland)

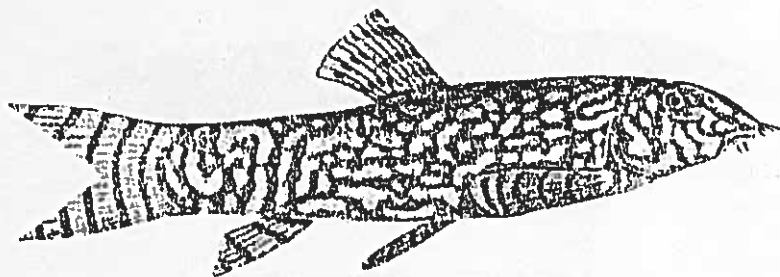


Labeo dero (Hamilton)



Crossocheilus latius latius (Hamilton)





Botia birdi Chaudhuri



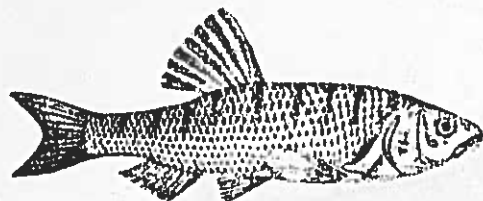
Nemacheilus botia (Hamilton)



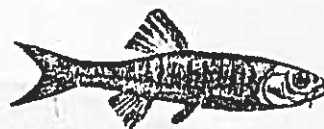
N. multifasciatus Day



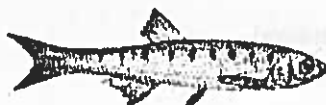
N. montanus (McClelland)



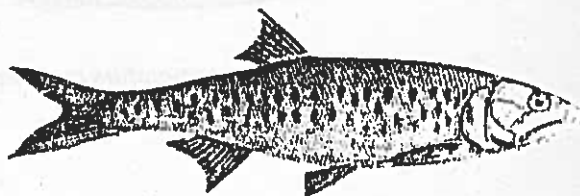
Barilius bendelisis (Hamilton)



B. barila (Hamilton)



B. vagra (Hamilton)



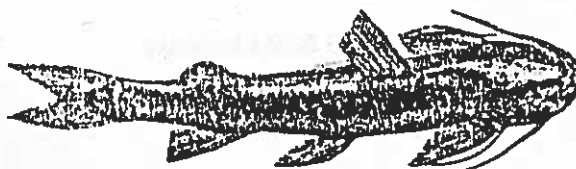
Raiamas bola (Hamilton)



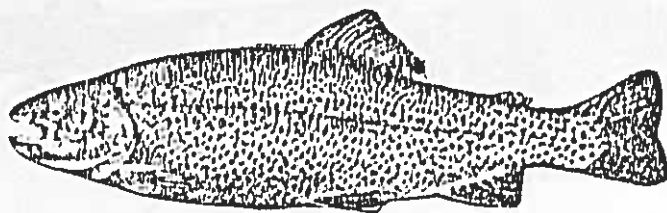
Danio aequipinnatus (McClelland)



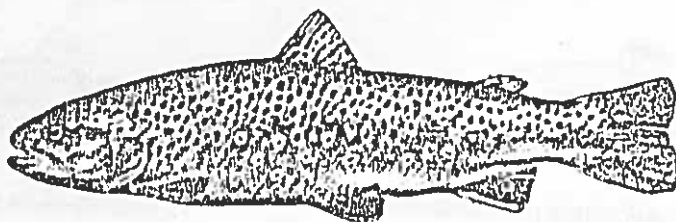
Danio devario (Hamilton)



Glyptothorax pectinopterus (McClelland)



Oncorhynchus mykiss (Walbaum)



Salmo trutta fario Linnaeus

