ON A COLLECTION OF FISH FROM THE HEADWATERS OF THE MAHANADI RIVER, RAIPUR DISTRICT, C. P.

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In December 1939 my colleague, Dr. H. S. Rao, made a survey of the aquatic fauna of the Mahanadi river and its affluents in the Raipur District of the Central Provinces. The Mahanadi rises near Sihawa in Dhamtari Tahsil and the area surveyed by Dr. Rao comprises a part of the headwaters of the river. It may be noted that the Sihawa range, the general altitude of which ranges between 2,000 to 2,500 feet, forms a watershed between the affluents of the Mahanadi and those of the Godavari. The general characteristic of the Mahanadi and its affluents is that the beds of these streams are wide wastes of sand, dry for more than half the year, and never containing much water except during seasons of high floods. At the time of Dr. Rao's visit, therefore, most of the streams had either scanty flowing water or were cut up into pools and puddles, which were sometimes connected by a small trickle of water. Only in a very few instances fish were collected from rocky streams. It is no wonder, therefore, that the collection under report comprises young specimens of a large number of pool-dwelling species. Incidentally, the material collected shows that most of the small freshwater fishes in this part of India breed in the autumn months after the cessation of the monsoon. I give below brief descriptions, based on Dr. Rao's notes, of the localities from which fish were collected, and the lists of fishes obtained from each locality. A general account of the collection and the zoogeographical significance of some of the species represented are also given.

DESCRIPTIONS OF LOCALITIES WITH LISTS OF FISHES COLLECTED FROM EACH.

Bokori Nallah, about 3 miles North-East of Kusumkhunta. 7.xii.1939.

It is a small stream broken up into pools of depths varying from 2 to 5 feet, with sandy bottom which, in parts, is strewn with large stones over which there is a slight trickle of water. Weeds of various types, and algae occur in abundance.

	mm.	Specimens.
Brachydanio rerio (Ham.)	15—24	9
Rasbora daniconius (Ham.)	41—43	3
Barbus (*Puntius*) *ticto* Ham.	28	1
Lepidocephalichthys guntea (Ham.)	43	1

Village tank, Singpur. 9.xii.1939.

The tank is used for washing and bathing; it is overgrown with lilies, *Elodea*, and other water plants. Near the edge of the tank a species of Scrophularinae with spines and blue flowers and the reeds of a species of Cyperaceae are common.

	mm.	Specimens.
Brachydanio rerio (Ham.)	24—29	4
Rasbora daniconius (Ham.)	32—71	3
Barbus (*Puntius*) *sophore* Ham.	67	1

'Jheel' at Nagri on the Raipur Forest Tramway. 11.xii.1939.

The 'jheel' is about ½ a mile from the Forest Rest House at Nagri; it is situated in an open maidan and is surrounded by rice fields on all sides. It is apparently fed by rains as no streams of any size are to be seen in the vicinity. The 'jheel' is full of weeds of all kinds—*Potamogeton, Elodea, Trapa spinosa,* lilies, etc. Various grasses grow at the edge, and a few strands of filamentous algae are also seen.

	mm.	Specimens.
Brachydanio rerio (Ham.)	19—29	26
Esomus danricus (Ham.)	36—42	2
Barbus (Puntius) ticto Ham. . ..	30—40	2
Lepidocephalichthys guntea (Ham.)	24—56	19
Ophicephalus gachua Ham.	70	1
Ophicephalus punctatus Bloch	65	1
Nandus nandus (Ham.)	83	1

Mahanadi river at Sihawa. 12.xii.1939.

	mm.	Specimens.
Barilius prox. *bendelisis* Ham.	11—19	49
Brachydanio rerio (Ham.) ..	15—29	33
Barbus (Puntius) ticto Ham.	22—37	2
Nemachilus denisonii Day	25	1

Tank in Forest Village about 4 miles from Sihawa. 13.xii.1939.

The tank was full of weeds of all kinds, lilies, *Cyperus,* etc.

	mm.	Specimens.
Rasbora daniconius (Ham.)	30—41	5
Amblypharyngodon mola (Ham.)	20	1
Lepidocephalichthys guntea (Ham.)	25—44	8
Ophicephalus gachua Ham.	106	1

Biweekly Market at Sihawa. 13.xii.1939.

	mm.	Specimens.
Rhynchobdella aculeata (Bloch)	109—122	2
Barilius bendelisis Ham.	46—150	9
Brachydanio rerio (Ham.)	21—23	2
Rasbora daniconius (Ham.)	42—71	8
Barbus (Puntius) dorsalis (Jerdon)	44—74	20
Barbus (Puntius) guganio (Ham.)	29—33	10
Barbus (Puntius) sarana (Ham.)	81—161	5
Barbus (Puntius) ticto Ham.	32—42	26
Garra mullya (Sykes)	69—97	2
Labeo boggut (Sykes)	109—116	2
Lepidocephalichthys guntea (Ham.)	32—60	14
Mystus cavasius (Ham.)	49—89	4
Mystus tengara (Ham.)	48—70	3
Mystus vittatus (Bloch)	44—72	16
Bagarius bagarius (Ham.)	287	1
Ophicephalus gachua Ham.	92	1
Nandus nandus (Ham.)	98	1

Mahanadi river before its junction with the Balka Nallah about 3 miles from Sihawa. 14.xii.1939.

The Mahanadi proper before it receives the Balka Nallah is a deep-cut stream with high banks. In places it is 7-10 feet deep. The bottom is muddy ; in places it is sandy and strewn over with small pebbles.

	mm.	Specimens.
Laubuca laubuca (Ham.)	22—36	11
Barilius bendelisis Ham.	35	2
Brachydanio rerio (Ham.)	13—30	48
Esomus danricus (Ham.)	40—41	2
Rasbora daniconius (Ham.)	30	1
Barbus (Puntius) gelius Ham.	18	1
Barbus (Puntius) guganio (Ham.)	26—31	2
Barbus (Puntius) ticto Ham.	20—41	55
Nemachilus botia (Ham.)	22—28	2
Nemachilus denisonii Day	21—42	21
Lepidocephalichthys guntea (Ham.)	29—65	52
Mystus tengara (Ham.)	42—48	3
Erethistes hara (Ham.)	37	1
Ophicephalus punctatus Bloch	102	1

Balka Nallah about 3 miles from Sihawa. 14.xii.1939.

The Balka is a sandy stream with only ankle-deep water in which algae and other weeds occur.

	mm.	Specimens.
Laubuca laubuca (Ham.)	25—29	13
Barilius prox. *bendelisis* Ham.	16—23	3
Brachydanio rerio (Ham.)	16—31	46
Barbus (Puntius) gelius Ham.	17	1
Barbus (Puntius) ticto Ham.	25—34	15
Lepidocephalichthys guntea (Ham.)	43—48	7

Muddy road-side pools between Sihawa and Birgudi. 15.xii.1939.

	mm.	Specimens.
Brachydanio rerio (Ham.)	10—18	36
Barbus (Puntius) ticto Ham.	12—32	12

Village tank near Birgudi about 3 miles from Sihawa. 15.xii.1939.

The tank is used as a buffalo-wallow ; it is overgrown with reeds (Cyperaceae) and weeds (*Potamogeton* and *Elodea*) of various kinds, and its sides are swampy.

	mm.	Specimens.
Brachydanio rerio (Ham.)	15—25	6
Barbus (Puntius) sophore Ham.	15—34	3

Small, deep stream close to the Forest Rest House at Gattasilli. 16.xii.1939.

	mm.	Specimens
Brachydanio rerio (Ham.)	9—15	7

Ama Nallah about 2 miles from Gattasilli. 17.xii.1939.

A shallow stream on the edge of the forest at Gattasilli in the Birgudi range. The bottom is flat and sandy with a few rocks here and there.

The water is only ankle-deep, and there is a layer of green algae at the bottom. Many patches of long trailing grass also occur.

	mm.	Specimens.
Brachydanio rerio (Ham.)	12—35	206
Esomus danricus (Ham.)	25—46	39
Rasbora daniconius (Ham.)	40—68	4
Barbus (*Puntius*) *sophore* Ham.	42	1
Barbus (*Puntius*) *ticto* Ham.	17—51	16
Lepidocephalichthys guntea (Ham.)	36—53	9

Nenginallah swamp near Gattasilli. 18.xii.1939.

The sides of the swamp are overgrown with reeds, while the water is full of *Potamogeton*, *Cyperus*, filamentous algae, and other weeds.

	mm.	Specimens.
Brachydanio rerio (Ham.)	20—27	29
Barbus (*Puntius*) *guganio* (Ham.) ..	21—25	2
Barbus (*Puntius*) *sophore* Ham. ..	14—19	4
Barbus (*Puntius*) *ticto* Ham.	20—26	2
Lepidocephalichthys guntea (Ham.) ..	50—70	2
Ophicephalus punctatus Bloch ..	46—61	4
Nandus nandus (Ham.)	46—51	2

Small stream and swamp near Dokal Forest Rest House. 20.xii.1939.

Some portions of the stream are muddy while others are sandy; it flows over rocky ground before reaching the swampy portion. The edges of the stream are overgrown with grass, weeds and shrubs. In the rocky portion there are small rounded buttons of mucilaginous light green algae in small patches.

The swamp was obviously lately cultivated as the stumps of paddy 2 to 3 feet high, which are still to be seen over it, show. Puddles of water full of *Potamogeton* are left in various parts of the swamp.

	mm.	Specimens.
Brachydanio rerio (Ham.)	18—34	157
Danio aequipinnatus (McClell.)	53—60	5
Esomus danricus (Ham.)	33—47	36
Rasbora daniconius (Ham.) ..	34—92	29
Barbus (*Puntius*) *dorsalis* (Jerdon) ..	36—41	2
Lepidocephalichthys guntea (Ham.)	48	1
Nemachilus denisonii Day ..	21—43	23
Ophicephalus gachua Ham.	64—73	4

Morrumsilli Reservoir, about 5 miles to the south-west of Banroud. 23.xii.1939.

The reservoir is formed by putting a dam across the Silari river and is about 180 sq. miles in extent. Below the dam the Silari continues as a small stream. There are great numbers of fish of all kinds, but it is difficult to catch them without suitable appliances.

	mm.	Specimens.
Brachydanio rerio (Ham.)	22—29	11
Rasbora daniconius (Ham.)	36	1
Barbus (*Puntius*) *ticto* Ham.	16	1
Lepidocephalichthys guntea (Ham.)	30	1
Xenentodon cancila (Ham.)	41	1

Mahanadi river at Rudri. 24.xii.1939.

The Mahanadi river is situated at a distance of about one mile from the P. W. D. Inspection Bungalow at Rudri; it is about a mile broad. The main stream flows about the centre of the bed and is knee-to waist-deep in many places. The bed is mostly sandy though, in places, sand is mixed with mud. The current is fairly swift.

	mm.	Specimens.
Mastacembelus pancalus (Ham.)	57—73	2
Rasbora daniconius (Ham.)	19	1
Barilius prox. *bendelisis* Ham.	10—17	4
Barbus (*Puntius*) *dorsalis* (Jerdon)	30—48	27
Barbus (*Puntius*) *guganio* (Ham.)	19—23	7
Barbus (*Puntius*) *sophore* Ham.	24	1
Barbus (*Puntius*) *ticto* Ham.	15—34	133
Oreichthys cosuatus (Ham.)	21—25	3
Lepidocephalichthys guntea (Ham.)	36—54	86
Nemachilus botia (Ham.)	26—40	5
Ophicephalus gachua Ham.	70	1

Dhamtari Bazaar (*Mahanadi river*). 24.xii.1939.

	mm.	Specimens.
Mastacembelus pancalus (Ham.)	44—106	5
Rhynchobdella aculeata (Bloch)	120	1
Chela bacaila Ham.	54—75	3
Barilius barna Ham.	58—66	2
Barilius bendelisis Ham.	46—140	15
Rasbora daniconius (Ham.)	28—53	24
Amblypharyngodon mola (Ham.)	44—64	3
Aspidoparia morar (Ham.)	32—82	17
Barbus (*Puntius*) *dorsalis* (Jerdon)	42—61	43
Barbus (*Puntius*) *gelius* Ham.	27	1
Barbus (*Puntius*) *sarana* (Ham.)	130—143	3
Barbus (*Puntius*) *sophore* Ham.	40—59	36
Barbus (*Puntius*) *tetrarupagus* (McClell.)	49—89	5
Barbus (*Puntius*) *ticto* Ham.	30—55	4
Labeo boggut (Sykes)	35—84	2
Lepidocephalichthys guntea (Ham.)	28—54	10
Nemachilus botia (Ham.)	45—56	4
Clarias batrachus (Linn.)	140—153	2
Heteropneustes fossilis (Bloch)	92—96	2
Mystus aor (Ham.)	190—195	2
Mystus cavasius (Ham.)	65—86	5
Mystus tengara (Ham.)	46—78	15
Mystus vittatus (Bloch)	58—65	6
Pseudeutropius atherinoides (Bloch)	50	2
Xenentodon cancila (Ham.)	230	1
Ophicephalus punctatus Bloch	86—118	2
Ambassis ranga (Ham.)	30—32	2
Nandus nandus (Ham.)	48—125	6
Badis badis (Ham.)	17	1

Mahanadi Irrigation Canal, Rudri. 25.xii.1939.

The water is standing in disconnected pools at various places throughout the canal. The sides of the canal are rocky and the bed is strewn

over with small and large pieces of stone. The bed is pebbly, except in fairly deep water where it is muddy.

	mm.	Specimens.
Mastacembelus armatus (Lacép.)	94	1
Chela bacaila Ham.	95—107	2
Laubuca laubuca (Ham.)	29	1
Brachydanio rerio (Ham.)	22—24	2
Rasbora daniconius (Ham.)	36—44	4
Barbus (Puntius) guganio (Ham.)	34	1
Barbus (Puntius) sophore Ham.	83	1
Barbus (Puntius) tetrarupagus (McClell.)	93	1
Barbus (Puntius) ticto Ham.	33—57	64
Garra mullya (Sykes)	73—85	2
Oreichthys cosuatus (Ham.)	33—34	2
Lepidocephalichthys guntea (Ham.)	33—48	5
Nemachilus botia (Ham.)	35—58	19
Nemachilus denisonii Day	22—50	20
Mystus cavasius (Ham.)	93—98	2
Amblyceps mangois (Ham.)	26—49	7
Ambassis ranga (Ham.)	52	1
Glossogobius giuris (Ham.)	93	1

SYSTEMATIC ACCOUNT.

The collection under report comprises 1,872 specimens of 43 species. The systematic position of these species is shown in the following table :

Family MASTACEMBELIDAE.

1. *Mastacembelus armatus* (Lacépède).
2. *Mastacembelus pancalus* (Hamilton).
3. *Rhynchobdella aculeata* (Bloch).

Family CYPRINIDAE.

Subfamily *ABRAMADINAE.*

4. *Chela bacaila* Hamilton.
5. *Laubuca laubuca* (Hamilton).

Subfamily *RASBORINAE.*

6. *Barilius barna* Hamilton.
7. *Barilius bendelisis* Hamilton.
8. *Brachydanio rerio* (Hamilton).
9. *Danio aequipinnatus* (McClelland).
10. *Esomus danricus* (Hamilton).
11. *Rasbora daniconius* (Hamilton).

Subfamily *CYPRININAE.*

12. *Amblypharyngodon mola* (Hamilton).
13. *Aspidoparia morar* (Hamilton).
14. *Barbus (Puntius) dorsalis* (Jerdon).
15. *Barbus (Puntius) gelius* Hamilton.
16. *Barbus (Puntius) guganio* (Hamilton).
17. *Barbus (Puntius) sarana* (Hamilton).
18. *Barbus (Puntius) sophore* Hamilton.
19. *Barbus (Puntius) tetrarupagus* (McClelland).
20. *Barus (Puntius) ticto* Hamilton.
21. *Garra mullya* (Sykes).
22. *Labeo boggut* (Sykes).
23. *Oreichthys cosuatus* (Hamilton).

Family COBITIDAE.

24. *Lepidocephalichthys guntea* (Hamilton).
25. *Nemachilus botia* (Hamilton).
26. *Nemachilus denisonii* Day.

Family BAGRIDAE.

27. *Mystus aor* (Hamilton).
28. *Mystus cavasius* (Hamilton).
29. *Mystus tengara* (Hamilton).
30. *Mystus vittatus* (Bloch).

Family AMBLYCEPIDAE.

31. *Amblyceps mangois* (Hamilton).

Family SISORIDAE.

32. *Erethistes hara* (Hamilton).
33. *Bagarius bagarius* (Hamilton).

Family SCHILBEIDAE.

34. *Pseudeutropius atherinoides* (Bloch).

Family CLARIIDAE.

35. *Clarias batrachus* (Linnaeus).

Family HETEROPNEUSTIDAE.

36. *Heteropneustes fossilis* (Bloch).

Family BELONIDAE.

37. *Xenentodon cancila* (Hamilton).

Family OPHICEPHALIDAE.

38. *Ophicephalus gachua* Hamilton.
39. *Ophicephalus punctatus* Bloch.

Family AMBASSIDAE.

40. *Ambassis ranga* (Hamilton).

Family NANDIDAE.

41. *Nandus nandus* (Hamilton).

Family PRISTOLEPIDAE.

42. *Badis badis* (Hamilton).

Family GOBIIDAE.

43. *Glossogobius giuris* (Hamilton).

Of the 43 species listed above, 23 belong to the order Cyprinoidea (20 Cyprinidae and 3 Cobitidae), 10 to the order Siluroidea (4 Bagridae, 1 Amblycepidae, 2 Sisoridae, 1 Schilbeidae, 1 Clariidae and 1 Heteropneustidae), while the remaining ten species are of the families Mastacembelidae (3), Belonidae (1), Ophicephalidae (2), Ambassidae (1), Nandidae (1), Pristolepidae (1) and Gobiidae (1). With the exception of a few small species of carp-minnows all the others are fairly well known and do not call for any special comments from a systematic point of view. However, notes are given on the distribution of *Rhynchobdella aculeata*, *Nemachilus denisonii* and *Amblyceps mangois*.

From a zoogeographical point of view the occurrence of *Amblyceps mangois* in the Mahanadi system, and of *Barbus* (*Puntius*) *dorsalis* and *Nemachilus denisonii* so far north and east are very significant as showing former hydrographic relations of the present-day river systems. It may be noted that the Sihawa range is only a spur of the once extensive Satpura Mountains.

Rhynchobdella aculeata (Bloch).

1938. *Rhynchobdella aculeata*, Shaw and Shebbeare, *Journ. Roy. As. Soc. Bengal, Science* III, p. 126, text-fig. 128, 1937.

Regarding the habitat of *Rhynchobdella aculeata*, Day[1] made the following observations :

" Brackish waters within tidal influence, also throughout the deltas of large Indian, Burmese, and Sind rivers, but appears to be absent from the northern portion of the Punjab and the Malabar coast : it extends to Borneo and the Moluccas : attaining about 15 inches in length. It conceals itself in the mud, and becomes drowned if placed in water so as to be unable to reach the surface, apparently requiring to respire air directly."

In 1935, while recording observations on the mode of aerial respiration in Mastacembelid fishes, I[2] stated that *Rhynchobdella aculeata* is found in great abundance in Bihar far above the tidal influence. Shaw and Shebbeare (*loc. cit.*) also made a similar observation on the authority of Mr. C. M. Inglis. The present record of the species from the Raipur District shows that fresh water is no bar to its distribution and it is likely that the fish will be found to be more widely distributed in the inland waters of India.

Barbus (Puntius) dorsalis (Jerdon).

1936. *Barbus* (*Puntius*) *dorsalis*, Hora, *Rec. Ind. Mus.* XXXVIII, p. 2, text-figs. 1, 2.

In 1936, I discussed the systematic position of *Barbus dorsalis* and showed that it had been described under several names owing to colour variations during growth. Hitherto it has been found only in South India (" Kurnool, Mysore, throughout Madras as low as the Cauvery and Coleroon rivers and Ceylon " Day), and the present record from the Raipur District considerably extends its range towards north-east. From the large number of specimens collected by Dr. Rao, it seems that the species is fairly common in the Mahanadi system.

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[1] Day, F., *Fish. India*, p. 338, pl. lxxii, fig. 1 (1876).
[2] Hora, S. L., *Trans. Nat. Inst. Sci. India*, I, p. 8 (1935).

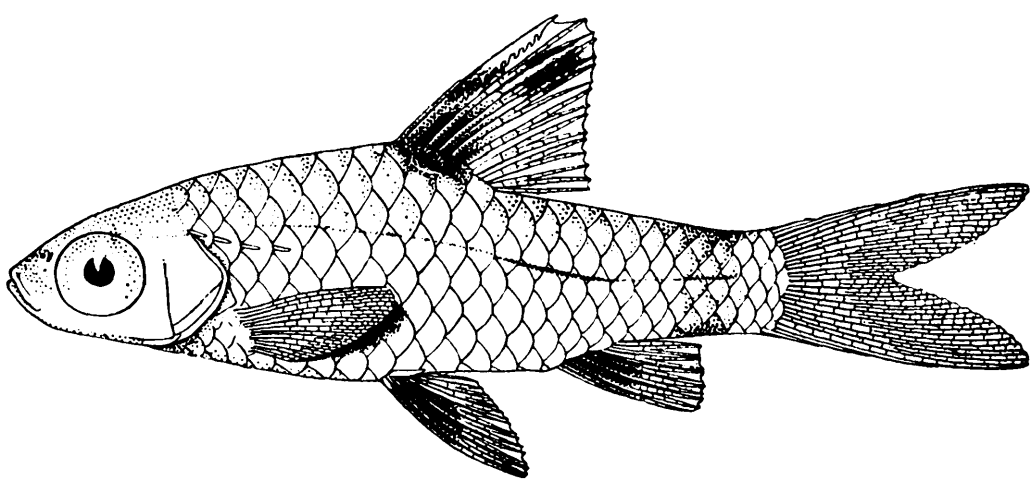
Though the specimens obtained by Dr. Rao range in total length from 30 to 74 mm., the characteristic black spots on the dorsal and anal fins are absent in all of them. The spot before the base of the caudal fin is present, being more marked in smaller specimens. The colour pattern of the scales is also indistinguishable. The dorsal spine is rather weak and articulated, and in this respect the specimens agree with the form described as *Puntius puckelli* by Day[1].

Barbus (Puntius) gelius Hamilton.

1878. *Barbus gelius*, Day, *Fish. India*, p. 577, pl. cxlv, fig. 3.

Barbus gelius is represented in the collection by three juvenile specimens. This species is liable to be confused with *Barbus phutunio*, but the two can be distinguished by their respective colour patterns. The distinguishing characters of the Indian Carp Minnows without barbels and with a serrated dorsal spine have been tabulated by Hora, Misra and Malik[2].

Hamilton's[3] *Cyprinus canius* with reddish colours has been regarded by later workers as a synonym of *Cyprinus gelius* with yellowish colours. A close study of the descriptions of the two species shows their great



TEXT-FIG. 1.—Lateral view of *Barbus* (*Puntius*) *gelius* Hamilton: ×3⅔.

similarity, and it seems probable that the colour differences between the two are correlated with sex. From our knowledge of sexual dimorphism in allied species it may be surmised that *C. canius* represents the males and *C. gelius* the females of one and the same species.

According to Day, *B. gelius* is found in Ganjam, Orissa, Bengal and Assam. It was originally described from ponds and ditches of the north-eastern parts of Bengal.

Barbus (Puntius) guganio (Hamilton).

1939. *Barbus guganio*, Das, *Rec. Ind. Mus.* XLI, p. 442, text-fig. 3.

In dealing with a collection of fish from the Hazaribagh District, Das (*loc. cit.*) discussed the systematic position of *Barbus guganio* and

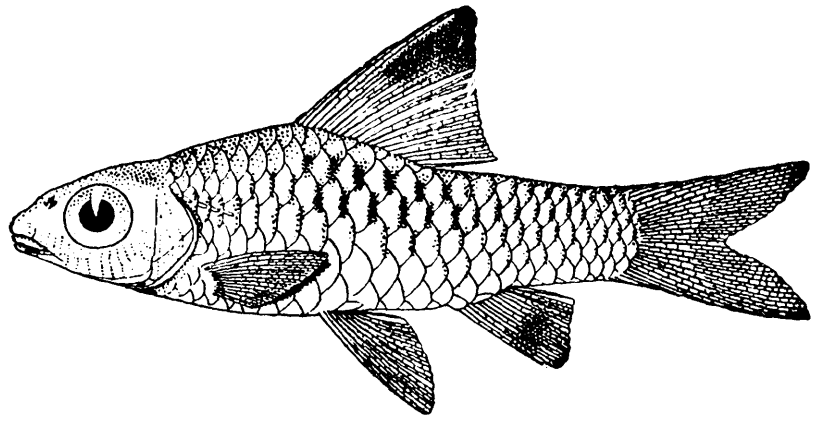
[1] Day, F., *Proc. Zool. Soc. London*, p. 197 (1868).
[2] Hora, S. L., Misra, K. S., Malik, G. M., *Rec. Ind. Mus.* XLI, p. 273 (1939).
[3] Hamilton, F., *Fish. Ganges*, p. 320 (Edinburgh, 1822).

showed that *Barbus ambassis* Day is to be regarded as its synonym. From the material collected by Dr. Rao from the Raipur District I am able to confirm the conclusions of Das. The characteristic black dorsal spine of the young specimens enables the species to be distinguished readily.

Oreichthys cosuatus (Hamilton).

1822. *Cyprinus (Cabdio) cosuatus*, Hamilton, *Fish. Ganges*, p. 333.
1877. *Barbus cosuatus*, Day, *Fish. India*, p. 581, pl. cxliv, fig. 1.
1933. *Oreichthys parvus*, Smith, *Journ. Siam. Soc. Nat. Hist. Suppl.* IX, p. 63.
1937. *Barbus cosuatus*, Hora, *Rec. Ind. Mus.* XXXIX, p. 17, fig. 6.
1937. *Oreichthys cosuatus*, Hora, *Rec. Ind. Mus.* XXXIX, pp. 331-333, text-fig. 1.

Oreichthys cosuatus is represented in Dr. H. S. Rao's collection from the Raipur District by 5 specimens, ranging from 21 mm. to 34 mm. in total length. The precise systematic position of this interesting species was discussed by me recently, and it was indicated that the range of the species extends to Siam. Comments were also made on the variation in colouration with the growth of the fish, and on the extent of the lateral line. In the specimens under report the precaudal, anal and



TEXT-FIG. 2.—Lateral view of *Oreichthys cosuatus* (Hamilton): $\times 2\frac{2}{3}$.

dorsal spots as such are absent, but the distal portions of a few of the anterior dorsal rays are black and a number of rays are dotted with black in the middle of their lengths. The rays of the anal fin are also similarly dotted so that an indistinct band is formed across the fin. The basal portions of the scales are streaked with black, and the lateral line extends only over a few of the anterior scales. The characteristic sensory folds on the head are fairly well marked, and enable the fish to be readily distinguished from a large number of small carp-minnows in the collection.

Nemachilus denisonii Day.

1939. *Nemachilus ? denisonii*, Das, *Rec. Ind. Mus.* XLI, p. 446, text-fig. 4.

In recording *Nemachilus denisonii* from the Hazaribagh District, Das was very doubtful about his identification as this species had not been found previously outside South India and the Deccan. In Dr. Rao's recent collection from the Raipur District the species is represented by a large number of young, half-grown and adult specimens. The colour

varies considerably with age, but the general pattern is fairly characteristic of the species. While in the young specimens the fins are without any markings and the body is marked with a few short bands, in the adult the bands on the body are more regular and numerous, the dorsal fin is marked with a row of spots across its middle and the caudal fin is provided with several irregular rows of spots.

Amblyceps mangois (Hamilton).

1939. *Amblyceps mangois*, Das, *Rec. Ind. Mus.* XLI, p. 448.

So far as the distribution of *Amblyceps mangois* in India proper is concerned it has hitherto been known from the Brahmaputra, Ganges and Indus river systems. The occurrence of the species in the Mahanadi system is, therefore, of considerable interest. Within the last few years the range of the species has been extended considerably—from the Kangra and the Raipur districts in the west to Siam and the Federated Malay States in the east.

SUMMARY.

A collection of fishes from the headwaters of the Mahanadi river is found to contain representatives of 43 well-known species. Short descriptions of localities with lists of fishes collected from each are given. Reference is made to the zoogeographical significance of the occurrence in the Raipur District of such forms as *Barbus* (*Puntius*) *dorsalis*, *Nemachilus denisonii* and *Amblyceps mangois*. Notes are given on *Rhynchobdella aculeata*, *Barbus* (*Puntius*) *dorsalis*, *B.* (*Puntius*) *gelius*, *B.* (*Puntius*) *guganio*, *Oreichthys cosuatus and Nemachilus denisonii*.