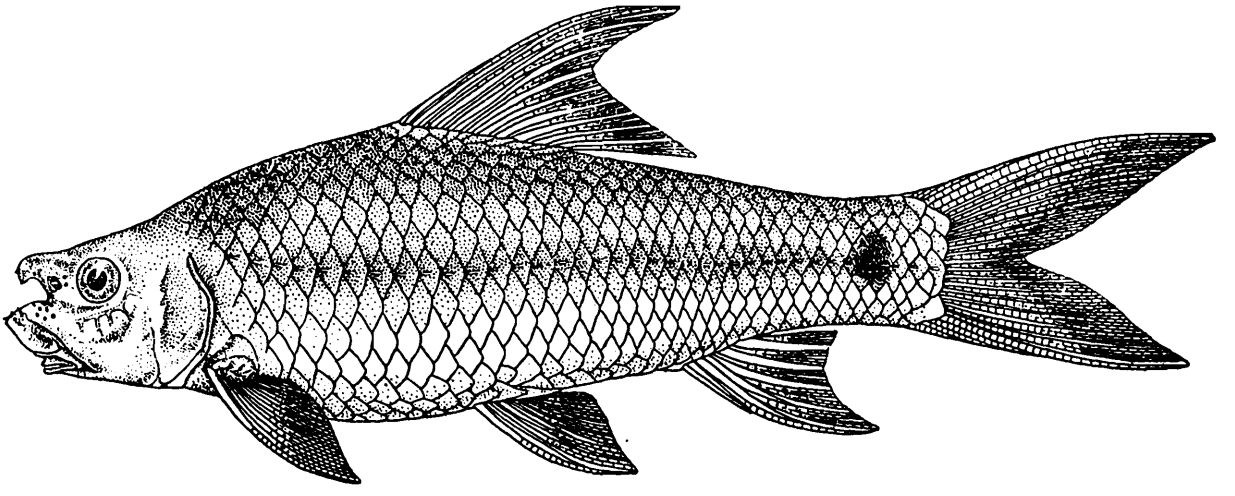
Measurements in millimetres, scale-counts and fin-rays of Osteochilus (Osteochilichthys) thomassi (*Day*), O.(Osteochilichthys) nashii (*Day*) *and* O. (Kantaka) brevidorsalis (*Day*).

	O. thomassi.			*O. nashii.*				*O. brevi-dorsalis.*	
Total length ..	166	143+C.	82	141	104	95	92	264	103
Length of caudal	33	—	20	29	23	22	19	63	29
Depth of body	47	56	24	35	26	21	20	77	25
Length of head	31	33	16	26	19	18	17	43	18
Width of head	18	22	10	16	12	11	10	32	11
Height of head	26	28	13	19	16	14	14	41	15
Diameter of eye	9	10	5	7	6	6	6	11	7
Interorbital distance	12	17	7	11	8	7	7	23	8
Length of caudal peduncle.	19	21	9	18	12	11	12	32	11
Least height of caudal peduncle.	16	20	8	14	10	9	9	26	10
Scales along lateral line	40	39	40	43	41	41	41	40	41
Transverse rows of scales.	13	12	14	14	13	14	14	14	14
No. of predorsal scales	13	13	13	14	13	13	13	12	12
No. of rows of scales between L. 1. and V.	5	4½	5	5	5	5	5	5	5
No. of rays in dorsal .	4/11	4/11	4/11	4/11	4/11	4/11	4/11	4/12	4/11
No. of rays in pectoral	14	14	14	14	14	14	14	14	14
No. of rays in ventral	9	9	9	9	9	9	9	9	9
No. of rays in anal ..	2/6	3/6	3/6	3/5	3/5	3/6	3/5	3/6	3/5
No. of rays in caudal	19	19	19	19	19	19	19	19	19

XLIII. ON THE SYSTEMATIC POSITION OF *CYPRINUS NUKTA* SYKES.

In describing his *Cyprinus nukta* from the Inderanee river, 18 miles north of Poona, Sykes[1] stated that the character of its head—" with

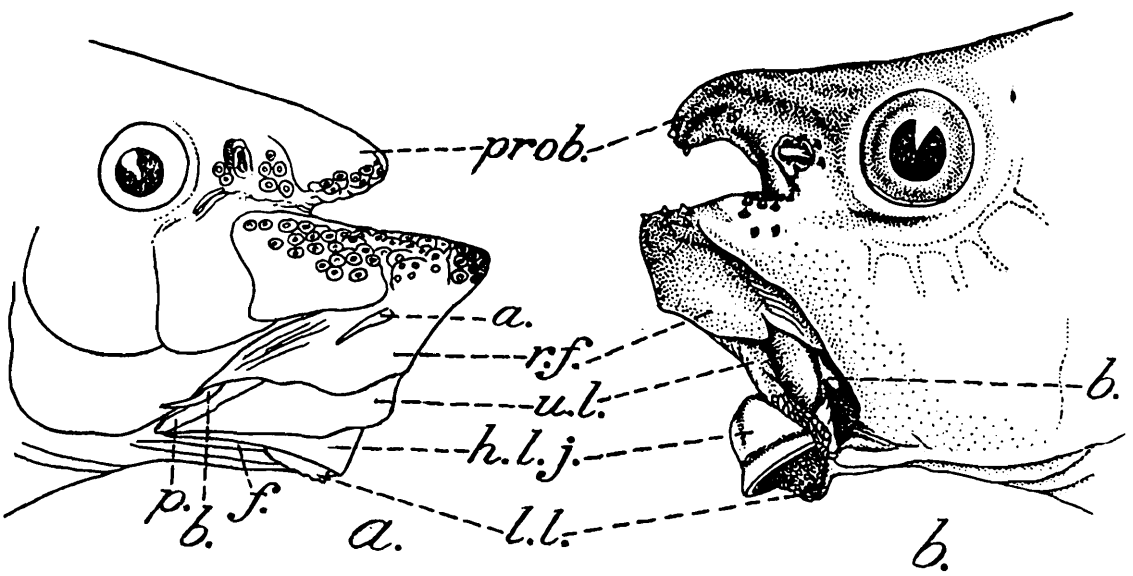


TEXT-FIG. 7.—Lateral view of *Schismatorhynchus* (*Nukta*) *nukta* (Sykes) : ×½.

two short horns or bosses on the space between the eyes "—is sufficient to distinguish it from all other species of *Cyprinus*. According to him, both Rüppell and Yarrell, after examining the fish, pronounced it as " a monstrosity of *C. auratus* " Sykes, however, found it very common in the Deccan and the local people recognised it as a distinct kind and called it by the specific name *Nukta*, in which reference is made to the

[1] Sykes, W. H., *Trans. Zool. Soc. London* II, p. 325 (1841).

fist-shaped proboscis on the snout. Jerdon[1] referred to it with a query, but Günther[2] included it definitely under the synonymy of *Carassius auratus*. Day,[3] after examining two specimens from Poona, 10 and 12 inches respectively in length, included the species under *Labeo* Cuvier and gave a complete account of the fish. With regard to the structure of the head he observed, " *Head* compressed, snout projecting over the mouth and having a deep groove passing from one orbit to the opposite one, thus occasioning the appearance as if there were a blunt compressed knob, between and before the orbits " When further material became available to Day[4] from " the rivers of the Deccan ", he emended his first description to a certain extent. In the *Fauna* he[5] gave two Marathi names of the species, *Nakta* and *Naktashendva*. A reference to the literature shows that this remarkable character in *Labeo*-like fishes is shared by only one other species, *Schismatorhynchus heterorhynchus* (Bleeker), for which Bleeker[6] had proposed a distinct



TEXT-FIG. 8.—Lateral view of head of two species of *Schismatorhynchus* Bleeker.

a. Schismatorhynchus (*Schismatorhynchus*) *heterorhynchus* (Blkr.): × Nat. Size. After Weber and de Beaufort; *b. Schismatorhynchus* (*Nukta*) *nukta* (Sykes): × 1⅓.

a. rostral barbel; *b.*, maxillary barbel; *f.*, frenulum; *h. l. j.*, horny layer of lower jaw; *l. l.*, lower lip; *p.*, prolongation of the lip; *prob.*, proboscis; *r. f.*, rostral fold; *u. l.*, upper lip.

genus, though Günther[7] and later authors included it under *Tylognathus* Heckel or *Labeo* Cuvier. Weber and de Beaufort[8] have recognised Bleeker's genus as valid and in giving its distribution noted " Fresh water of Indo-Australian Archipelago (Sumatra and Borneo); perhaps also represented on the Indian continent " Presumably the authors had in mind *Labeo nukta* (Sykes), for no other species of *Labeo* on the Indian mainland possesses a proboscis on the snout.

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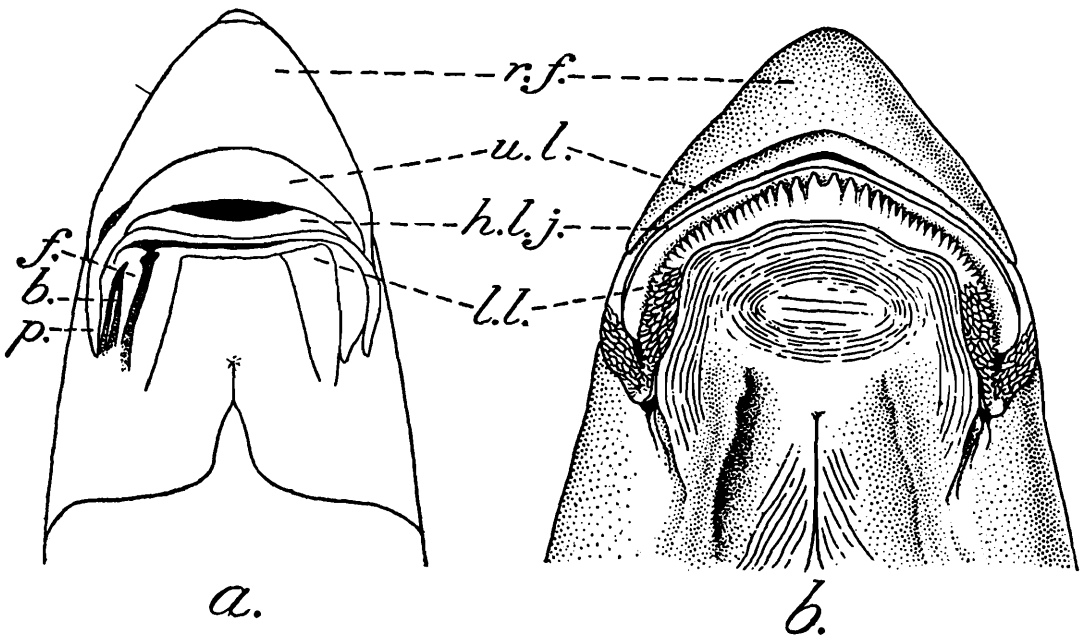
[1] Jerdon, T. C., *Madras Journ. Litt. Sci.* XV, p. 303 (1849).
[2] Günther, A., *Cat. Fish. Brit. Mus.* VII, p. 32 (1868).
[3] Day, F., *Journ. As. Soc. Bengal* XLI, p. 319 (1872).
[4] Day, F., *Fish. India*, p. 543 (1877).
[5] Day, F., *Faun. Brit. Ind.* Fish I, p. 270 (1889).
[6] Bleeker, P., *Nat. Tijdschr. Ned. Ind.* IX, pp. 258, 269 (1855).
[7] Günther, A., *loc. cit.*, p. 67 (1868).
[8] Weber, M. and de Beaufort, L. F., *Fish. Indo-Austral. Archipel.* III, p. 216 (1916).

There is undoubtedly a great similarity between the Indo-Australian species *Schismatorhynchus heterorhynchus* and the Deccan form *Labeo nukta*, but when the specimens of the latter are compared with Weber



TEXT-FIG. 9.—Ventral surface of head in two species of *Schismatorhynchus* Bleeker.

a. Schismatorhynchus (*Schismatorhynchus*) *heterorhynchus* (Blkr.). Nat. Size, After Weber and de Beaufort; *b. Schismatorhynchus* (*Nukta*) *nukta* (Sykes): ×2.

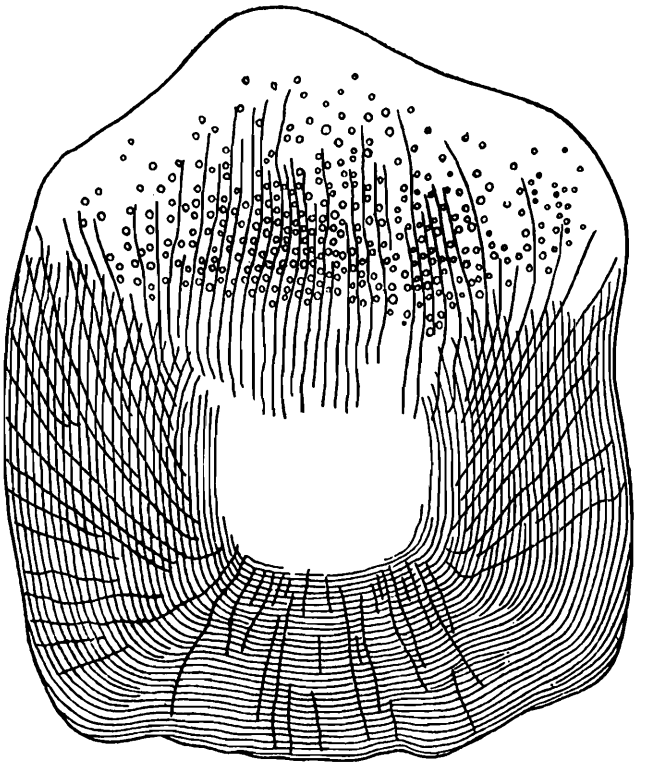
b., maxillary barbel; *f.*, frenulum; *h. l. j.*, horny layer of lower jaw; *l. l.*, lower lip; *p.*, prolongation of jaw; *r. f.*, rostral fold; *u. l.*, upper lip.

and de Beaufort's description of the former the following points of difference may be noted :

Schismatorhynchus heterorhynchus.	*Labeo nukta.*
1. Lower part of snout much longer and more prominent than the upper.	Lower part of snout generally longer than the upper, but, though more prominent, may be equal to it.
2. Corner of mouth prolonged as a kind of gutter.	Corner of mouth not prolonged.
3. Lower lip reflected, not continuous with the upper lip.	Lower lip reflected, inner surface studded with large papillae, continuous with upper lip.
4. Lower lip separated from the posterior prolongation of the soft covering of the jaw by a longitudinal postlabial groove, which is divided by a longitudinal fleshy frenulum in a median and a lateral part, the last of which contains the maxillary barbel and the gutter-like prolongation.	Labial groove restricted to the corners of the mouth and contains flaplike, crenulated, small maxillary barbels. No longitudinal grooves continuous with the labial groove run backwards from the angles of the mouth.
5. Pair of rostral barbels.	Rostral barbels absent.

The differences noted above in the structure of the lips and associated parts are of sufficient value to separate the two species generically, but I wish at the same time to stress, particularly from a zoogeographical point of view, the great general similarity in the form and structure of the two species and have accordingly divided the genus *Schismatorhynchus* into two subgenera, *Schismatorhynchus* for *S. heterorhynchus*

and *Nukta*, subgenus nov., for *Cyprinus nukta* Sykes. (Type-species for the subgenus *Nukta* is *Cyprinus nukta* Sykes.) The distinguishing



Text-fig. 10.—A scale of *Schismatorhynchus* (*Nukta*) *nukta* (Sykes) from below base of dorsal fin : × 6.

characters of these two subgenera are given in the table above. In the three specimens of *S.* (*Nukta*) *nukta* that I have examined, the extent of the proboscis varies considerably. As sufficient material of the species is not available, I give below a table of measurements, scale-counts and fin-rays to facilitate reference in future.

Measurements in millimetres, scale-counts and fin-rays of Schismatorhynchus (Nukta) nukta (*Sykes*).

Total length	224	296	299
Length of caudal	54	66	72
Depth of body	56	67	73
Length of head	41	46	45
Width of head	28	31	32
Height of head	35	40	41
Length of proboscis from anterior margin of orbit	15	17	13
Diameter of eye	9	9	9
Interorbital distance	18	20	21
Length of caudal peduncle	26	31	30
Least height of caudal peduncle	24	31	32
Scales along lateral line	38	37	37
Transverse rows of scales	14	15	14
No. of predorsal scales	15	14	14
No. of rows of scales between L. l. and V.	5	5	5
No. of rays in dorsal	3/9	2/9	3/8
No. of rays in pectoral	1/15	1/13	1/13
No. of rays in ventral	9	9	9
No. of rays in anal	2/5	2/5	2/5
No. of rays in caudal	19	19	19

ZOOGEOGRAPHICAL REMARKS.

The great significance of the taxonomic findings reported above lies in the fact that further valuable evidence has become available to stress the Malayan affinities[1] of the fish fauna of Peninsular India ; the distribution of *Osteochilus* is at par with that of the Homalopteridae[2], *Silurus*,[3] *Batasio*,[4] *Thynnichthys*, etc. All of these fishes are widely represented in the fauna of south-eastern Asia, but a few forms are also found in Peninsular India in the Western Ghats or the hill ranges associated with them. The distribution of *Schismatorhynchus* is still more remarkable ; it is represented by one species in Sumatra and Borneo, Malay Archipelago, and by a second species, subgenerically distinct, in Peninsular India. It is remarkable that though a number of the Malayan Cyprinoid genera have undergone structural changes as a result of their long isolation in Peninsular India and have proliferated into new genera or subgenera the typically Malayan catfishes of Peninsular India, such as *Silurus* and *Batasio*, have not shown any marked change from their respective ancestral stock in the Far East.

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[1] Hora, S. L. and Law, N. C., *Rec. Ind. Mus.* XLIII, p. 242 (1941).
[2] Hora, S. L., *Rec. Ind. Mus.* XLIII, p. 222 (1941).
[3] Bhimachar, B. S. and Subba Rau, A., *Journ. Mysore Univ.* (B) I, p. 147 (1941).
[4] Hora, S. L. and Law, N. C., *loc. cit.* XLIII, p. 28 (1941).