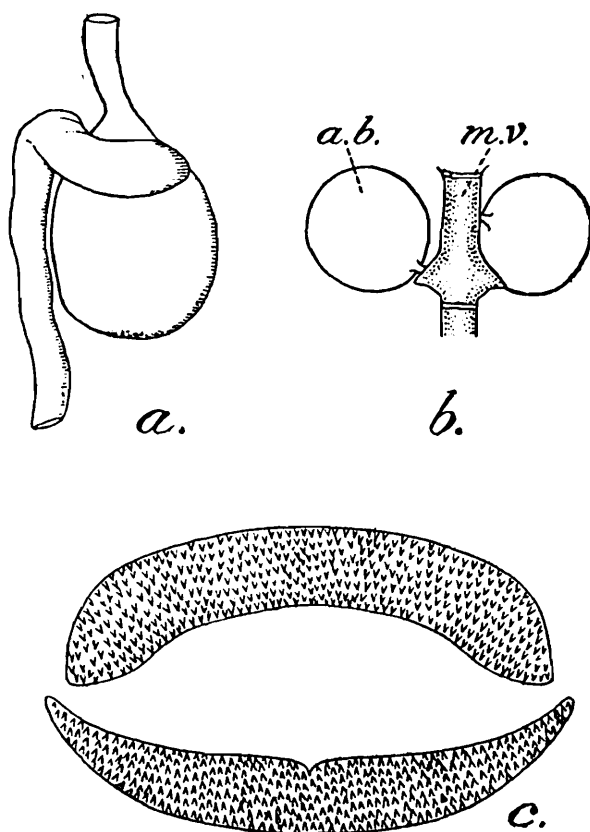


is a black band across the middle of the caudal rays. The ventral and the anal fins are also streaked with black. The barbels are variegated with black. In the young specimens the three black marks on the body are discontinuous and not so wide. The general body colour is pale-olivaceous.



TEXT-FIG. 2.—Alimentary canal, air-bladder and dentition of *Akysis* Bleeker.

a. Alimentary canal of *Akysis variegatus* (Bleeker). $\times 3\frac{3}{4}$; *b.* Air-bladder of *A. prashadi*, sp. nov. $\times 8\frac{1}{4}$; *c.* dentition of *A. prashadi*, sp. nov. $\times 25\frac{1}{2}$.

a. b. = air-bladder; *m. v.* = compound vertebra.

Length of specimen of *A. variegatus* 31 mm. without caudal.

Length of specimen of *A. prashadi* 28 mm. with caudal.

Localities.—Indawgyi Lake and round about Kamæing in the Myitkyina District, Upper Burma.

Type-specimen.—F. 10873/1, Zoological Survey of India (*Ind. Mus.*), Calcutta.

Remarks.—Prashad and Mukerji have already discussed the distinguishing features of this species. The larger number of rays in the pectoral (8 *versus* 5-7) and anal (11 *versus* 8-9) fins are very characteristic of *A. prashadi*. From *A. variegatus* it further differs in having two fontanels (instead of one) on the head. In *A. pictus* the nasal barbels are stated to be only half as long as the length of the head.

III. FISHES OF THE GENUS *Olyra* McCLELLAND.

There appears to be considerable disagreement among ichthyologists regarding the systematic position of the loach-like fishes of the genus *Olyra* McClelland¹ which was characterised as follows:—

“Body soft, long, and cylindrical, with two dorsals, the first radiated, the second adipose, head elongated and flat at the snout, operculum terminates behind in an oblique

¹ McClelland, *Calcutta Journ. Nat. Hist.*, II, p. 588 (1842).

point directed towards the dorsal fins, anal long, caudal entire, teeth like velvet, confined to the jaws, no dorsal spine nor anything peculiar about the branchæ; from six to eight slender cirri."

McClelland described two species in this genus from the Khasi Hills, Assam. Gill¹ restricted *Olyra* for the first species—*O. longicaudata*—and proposed a new genus *Branchiosteus* for the second species—*O. laticeps*. The two genera were distinguished on the number of the branchiostegal rays (6 in *Olyra*, 13 in *Branchiosteus*), the number of the anal rays (more than 20 in *Olyra*, 15 in *Branchiosteus*) and the number of rays in the ventral fin (5 in *Olyra*, 7 in *Branchiosteus*). Günther² recognised this division in his *Catalogue* but had no specimens of either of the species for examination. The two genera were included by him in the group *Akysina* characterised by a toothless palate and six rays in the ventral fin. In 1871, Day³ described a new species of *Olyra* from the Pegu Yomas in Burma and emended the definition of the genus. According to the position assigned to this genus in his paper, it seems probable that he regarded it as a form allied to *Wallago* and *Silurus*. In his *Fishes of India*, *Olyra* is placed near *Pseudeutropius*, *Callichrous*, *Wallago* and *Silurus*; from the last three it is separated by the character of the adipose fin. In 1883, Günther⁴ described from a number of specimens a new species of *Olyra*—*O. elongata*—from Tenasserim and emended the definition of the genus still further. He remarked that "the genus belongs to the group *Silurina*; and I should be inclined to place it in the vicinity of *Saccobranchus*." Vinciguerra⁵ redescribed *O. elongata* from two examples and discussed at length the systematic position of *Olyra* and agreed with the contention of Günther. He also indicated that *O. laticeps* shows affinities with *Amblyceps* and may belong to that genus. Recent workers, such as Regan⁶ and Jordan,⁷ include *Olyra* among Bagridæ and regard *Olyra* and *Branchiosteus* as synonyms. Chaudhuri⁸ still further emended the definition of *Olyra* when he described a new species with a forked tail from Assam. This species was later recorded by me⁹ from below the base of the Darjeeling Himalayas. I have already indicated that *Amblyceps horae* Prasad and Mukerji¹⁰ from the Myitkyina District, Upper Burma, is a species of *Olyra*.

It would thus appear that the precise generic limits of *Olyra* and its position in the system of genetic classification are not clear. Judging from the short descriptions and figures of McClelland's two species

¹ Gill, *Proc. Boston Soc. Nat. Hist.*, VIII, p. 52 (1862).

² Günther, *Cat. Fish. Brit. Mus.*, V, p. 97 (1864).

³ Day, *Proc. Zool. Soc. London*, p. 711 (1871).

⁴ Günther, *Ann. Mag. Nat. Hist.* (5), XI, p. 139 (1883).

⁵ Vinciguerra, *Ann. Mus. Civ. Stor. Nat. Genova* (2), IX, p. 192 (1890).

⁶ Regan, *Ann. Mag. Nat. Hist.* (8), VIII, p. 561 (1911).

⁷ Jordan, *Classification of Fishes*, p. 148 (1923).

⁸ Chaudhuri, *Rec. Ind. Mus.*, VII, p. 443 (1912).

⁹ Hora, *Rec. Ind. Mus.*, XXII, p. 737 (1921).

¹⁰ Hora, *Rec. Ind. Mus.*, XXXV, p. 609 (1933); also Mukerji, *Journ. Bombay Nat. Hist. Soc.*, XXXVI, p. 819 (1933).

there seems hardly any doubt that the two forms are not congeneric. The main points of difference may be tabulated as follows :—

Olyra longicaudata.

1. Branchiostegal rays 6.
2. Pectorals 1/6.
3. Ventrals 5.
4. Anal 23. .
5. Jaws equal. .
6. Middle rays of caudal prolonged. .
7. Dorsal fin opposite ventrals.

Olyra laticeps.

- Branchiostegal rays 13.
- Pectorals 9.
- Ventrals 7.
- Anal 15.
- Lower jaw considerably longer than upper.
- Caudal entire. [Truncate].
- Dorsal fin between bases of pectorals and ventrals.

The absence of a rough spine in the pectoral fin¹, the large number of branchiostegal rays, the small number of anal rays, the unequal jaws and the forward position of the rayed dorsal in *Olyra laticeps* indicate that it is an *Amblyceps* as already surmised by Vinciguerra. The description is probably based on a young specimen of *Amblyceps mangois*, a very widely distributed and variable species², but until material of *Amblyceps* becomes available from the Khasi Hills it seems desirable to regard *O. laticeps* as a distinct species of *Amblyceps*.

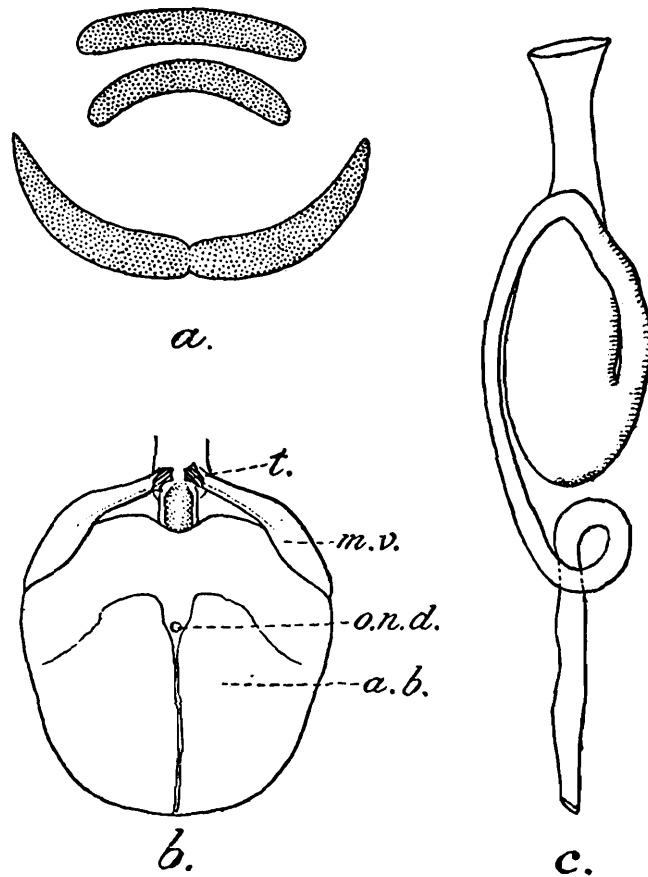
Having eliminated *O. laticeps*, it may now be possible to give a clear definition of the genus *Olyra* and to discuss its probable relationships.

The genus *Olyra* comprises small loach-like fishes in which the body is long and slender; anteriorly it is somewhat depressed but in the tail region it is greatly compressed. The eyes are small, superior and subcutaneous. The nostrils are wide apart; the anterior is tubular while the posterior is oval with a rim which is anteriorly produced into a long barbel. The mouth is small and anterior. The jaws are almost equal. The lips are thin and continuous. The labial groove is widely interrupted. Both the jaws are provided with a number of open pores. There are eight thin and long barbels; one pair nasal, one pair maxillary and two pairs mandibular. The teeth are small, villiform and arranged in bands. The palate is provided with a broad, lunate band of teeth. The gill-openings are very wide and extend as far forward as the eyes; gill-membranes are extensive and united with each other across the isthmus. There are 6-7 branchiostegal rays. The functional part of the gill-opening is greatly restricted while flaps of skins are developed along the lower edges of the gill-openings to act as valves for closing the openings. The chest is devoid of any adhesive apparatus. The dorsal fin is short with 7-8 rays but without a strong, bony spine; it is situated opposite the ventrals. The adipose fin, though present, is short and low. The pectoral fin has a strong, serrated spine and about 4-6 rays. The ventral fins are small and horizontally placed. The anal fin is of moderate length, containing 16-23 rays which increase

¹ It is interesting to note that in the list of "Newly discovered species", McClelland (*Calcutta Journ. Nat. Hist.* II, p. 574, 1842), uses the specific name '*Olyra inermis*' for '*Olyra laticeps*'. The former name was not retained for the description of the species, but it shows all the same that the absence of an armed spine in the pectoral fins was regarded as a very characteristic feature of the species.

² Hora, *Rec. Ind. Mus.*, XXXV, pp. 607-621 (1933).

in length posteriorly. The caudal fin is long and lanceolate ; usually it is forked but in some species it may be entire. The anal-opening is situated midway between the ventral fins. The lateral line is present and complete. The air-bladder is fairly extensive and lies free in the



TEXT-FIG. 3.--Dentition, air-bladder and alimentary canal of *Olyra* McClelland.

a. Dentition of *Olyra horae* (Prashad & Mukerji) $\times 5$; b. Air-bladder of *O. longicaudata* McClelland $\times 3\frac{1}{2}$; c. Alimentary canal of *O. longicaudata* McClelland $\times 2\frac{1}{2}$.

a. b.= Air-bladder ; m. v.= modified vertebral element ; o. n. d.= Opening of pneumatic duct ; t.= tendon.

Length of specimen of *O. horae* 70 mm. without caudal.

Length of specimen of *O. longicaudata* 108 mm.

abdominal cavity though dorsally and laterally it is surrounded by thin wing-like extensions of the transverse processes of the complex vertebrae. The walls of the bladder are fairly thick and a distinct pneumatic duct is present.

Type-species.—*Olyra longicaudata* McClelland.

As defined above the genus *Olyra* differs from the Bagridae in having a spineless dorsal and a peculiar type of air-bladder with the associated modifications of the anterior vertebrae. The anal fin is also relatively long. In many respects it is closely related to certain genera of the Siluridae, such as *Silurus*, *Silurichthys*, etc., but differs from them all in having a longer rayed dorsal, in the presence of an adipose dorsal and nasal barbels and in having a relatively shorter anal fin which is usually separated from the caudal by some distance. The presence of a relatively long, spineless, rayed dorsal and of an adipose fin, the depressed head and general facies indicate that *Olyra* may be a specialised hill-stream representative of the family Clariidae, especially of the section comprising *Heterobranchus*, *Dinotopterus*, etc. In view of

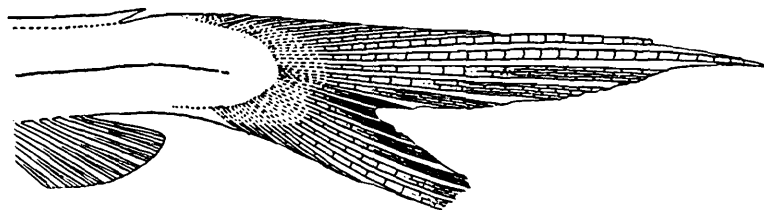
what is stated above and on account of the peculiar habitat and habits of *Olyra* it seems desirable to keep it, pending further investigation into the morphology of the so-called "degraded" genera of the Clariidae, in a separate family which may be designated as Olyridae and defined as follows:—

Body elongate, naked; gill-membranes free from isthmus. Dorsal fin with about eight rays and without a spine; adipose dorsal present; anal fin of moderate length containing 16 to 23 rays, never united with caudal which is usually long and filiform; ventrals 6-rayed. Anterior and posterior nostrils wide apart, posterior with long barbels. Barbels eight, one pair nasal, one pair maxillary and two pairs mandibular. Teeth small and villiform, arranged in bands in jaws and on palate. Vertebrae 48 to 53 (16-17 + 32-36). Lateral wing-like expansions of compound vertebra enclose air-bladder dorsally and laterally; air-bladder of moderate size, more or less free in the abdominal cavity.

The family comprises the genus *Olyra* only.

Reference should be made here to the close superficial similarity between *Amblyceps* and *Olyra*. The two genera can be distinguished externally by the position of the dorsal fin (between bases of pectoral and ventral fins in *Amblyceps* and opposite to ventrals in *Olyra*), the nature of the pectoral fin (with a broad flexible spine in *Amblyceps* and hard, rugged spine in *Olyra*). Internally the palate is edentulous in *Amblyceps* and provided with a broad band of villiform teeth in *Olyra*. In *Amblyceps* the air-bladder is greatly reduced and is divided into two lateral chambers, whereas in *Olyra* the air-bladder is of considerable size and lies free in the abdominal cavity.

In distinguishing species of *Olyra* considerable reliance is placed on the number of rays in the anal fin. This fin is usually enclosed in thick skin and to ascertain the full compliment of rays the skin has to be removed. In this way I have found that in *O. kempi* there are about 18 to 23 rays instead of 17-18 as described by Chaudhuri. In mature specimens of *O. kempi* the bifurcation of the caudal fin is not noticeable unless the fin is properly stretched. It seems to me highly probable that McClelland not only overlooked the bifurcation of the caudal fin in describing *O. longicaudata* but probably for the sake of symmetry regarded the "middle rays of the caudal prolonged to a lengthened point." Both in geographical distribution and taxonomic characters these two species are similar and it is likely that they are synonymous.



TEXT-FIG. 4. --Posterior part of tail and caudal fin of a typical specimen of *Olyra elongata* Günther. $\times 2$.

Through the kindness of the authorities of the British Museum (Nat. Hist.), I have examined a typical specimen of Günther's *O. elongata*

from Tenasserim. The caudal fin is bifurcate, the upper lobe is considerably longer than the lower, which is due to "the prolongation of three rays of the upper half of the fin." If properly stretched, the fin is not lanceolate as described by Günther and later figured by Vinciguerra. I am convinced that this species is also identical with McClelland's *O. longicaudata*.

No specimen of *O. burmanica* Day is now available for examination either in the collection of the Indian Museum or in that of the British Museum (Nat. Hist.). As judged from its figure, it appears to represent a somewhat stouter fish. The caudal fin is shown as asymmetrically lanceolate (probably it is forked with some filiform rays in the upper lobe). *O. horae* is known from a single specimen in which the body is fairly stout and the upper lobe of the caudal fin is not very much longer than the lower.

It is thus clear that though six species have hitherto been described in this genus, only one species—*O. longicaudata* (= *O. elongata* = *O. kempfi*)—is known from a large number of specimens collected at the base of the Darjeeling Himalayas, in Assam and Tenasserim. Until further material becomes available *O. burmanica* from the Pegu Yomas and *O. horae* from the Myitkyina District, Upper Burma, have to be regarded as distinct species, though it seems likely that they may also prove to be synonymous with *longicaudata*, as they fall within its range of geographical distribution. *O. laticeps*, as shown above, is a species of *Amblyceps*.

IV ON THE USE OF THE GENERIC NAME *Wallago* BLEEKER.

Under the vernacular name *Wallago*, Russell¹ described and figured a species of "Silurus" from Vizagapatam on the Coromandel Coast, but the fish had already been christened as *Silurus attu* by Bloch and Schneider.² Without assigning any reason Bleeker³ used *Wallago* in the generic sense while describing a new species—*W. dinema*—from Borneo. Between 1851 and 1858, Bleeker⁴ employed this generic denomination, still without any definition, for as many as eleven other Silurid fishes from India, Burma and the Malay Archipelago. There seems no doubt that the name had hitherto been used in a loose sense for in his first comprehensive revision of the Siluroid fishes Bleeker⁵ restricted its use to two species—*W. russellii* Bleeker (= *W. attu* Bl. & Schn.) and *W. leerii* Bleeker—and proposed a new genus *Belodontichthys* for his *Wallago dinema*. Four years later in his *Atlas Ichthyologique*, he⁶ fixed the limits of these genera more precisely by indicating their genotypes. All later workers have accepted the genus *Wallago* as ultimately restricted by Bleeker, and according to Weber and de Beaufort⁷ the genus should date only from 1858 since "this is the first diagnosis of the genus, although the name *Wallago* was used by Bleeker since 1851, but without description."

¹ Russell, *Fish. Vizagapatam*, II, p. 50, pl. clxv (1803).

² Bloch & Schneider, *Syst. Ichth.*, p. 378 (1801).

³ Bleeker, *Nat. Tijdschr. Ned. Ind.*, II, p. 202 (1851).

⁴ Bleeker, *Nat. Tijdschr. Ned. Ind.*, II, p. 427 (1851); *ibid.*, V, p. 189 (1853); *ibid.*, V, p. 514 (1853); *Verh. Bat. Gen.*, XXV, pp. 54, 100, 108, 109 (1853).

⁵ Bleeker, *Ichth. Arch. Ind. Prodr.*, I, Siluri, p. 259 (1858).

⁶ Bleeker, *Atl. Ichth.*, II, p. 79 (1862).

⁷ Weber & de Beaufort, *Fish. Indo-Austral. Archipel.*, II, p. 200 (1913).