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LIX.—*Descriptions of new Fishes from the Collection made by Mr. E. Degen in Abyssinia.* By G. A. BOULENGER, F.R.S.

THE splendid collection of Abyssinian fishes brought home by Mr. E. Degen is one of exceptional interest from the fact that it contains examples of every one of the species described by Rüppell in 1835\*, of which only some of the types are preserved, in a dry condition, in the Senckenberg Museum at Frankfort a. M., and which had not been rediscovered since the expedition of that illustrious zoologist and traveller; and that it has brought to our knowledge the existence in those waters of a Loach, a group of which no African representative was on record, and of an astonishing multiplicity of species of the genus *Barbus*, as well as of two new Silurids of the genus *Clarias*. Twenty-one species are here described as new; fifteen of these belong to the section of which the Nilotic *Barbus bynni* is the type and of which representatives are known to occur in East and South Africa and in the

\* The material now available shows *Varicorhinus beso*, Rüpp., to be the same as the fish since described as *Chondrostoma Dilloni*, C. & V. *Gobio quadrimaculatus*, Rüpp., should bear the name *Crossochilus quadrimaculatus*, and *Chondrostoma dembeensis*, Rüpp., that of *Discognathus dembeensis*. *Gobio hirticeps*, Rüpp., is not the male of *G. quadrimaculatus*, as suggested by Rüppell, but of *D. dembeensis*, the eye being situated in the posterior half of the head.

great Central African lakes. The study of these fishes is a bewildering one from the very close affinity which connects them, as I have already pointed out in a recently published paper dealing with the collection made by Mr. Hinde in the Kenia district \*; and nothing short of the large series (about 350 specimens) got together by Mr. Degen could have enabled me to estimate correctly, as I believe, the value of the characters which have been regarded by some authors as generic, whilst by others they have been refused even specific importance. Thus, the character on which Rüppell founded his genus *Labeobarbus*, though insufficient for generic separation, is of the greatest value for the distinction of species, as I have ascertained that it is not sexual nor dependent on age in the Abyssinian fishes, since the lips are as much produced in a *Barbus* (*Labeobarbus*) *nedgia* of  $6\frac{1}{2}$  inches as in one of 20. The idea expressed by Günther a few years ago †, that adult specimens of *Barbus intermedius* have the lips more developed, is not supported by the evidence available at present, and is clearly the result of an error of determination, since the largest specimen named "*Barbus intermedius*, Rüppell," from East Africa ‡, on which this view is founded, measures only  $9\frac{1}{2}$  inches, whilst the type of *B. intermedius* from Lake Tsana§, for the loan of which I am indebted to the kindness of the Directors of the Senckenberg Museum, measures 13 and lacks the mental lobe.

It is extremely surprising how fishes, agreeing completely in the form and scaling of the body and in the position and structure of the fins, in the pharyngeal teeth, and also in the skeleton, so far as I have been able to ascertain, may differ very considerably in the proportions of the various parts of the head,

\* P. Z. S. 1902, ii. p. 221.

† P. Z. S. 1894, p. 91.

‡ I propose the name *Barbus Gregorii* for the species referred by Günther to *B. intermedius*, from which it differs in the much-developed lower lip with a rounded median lobe, and in the longer barbels, the anterior measuring  $1\frac{1}{2}$  to  $1\frac{3}{4}$ , the posterior  $1\frac{2}{3}$  to 2 diameters of the eye. D. IV 8-9; A. III 5; Sc. 31-33  $\frac{5\frac{1}{2}-6\frac{1}{2}}{5\frac{1}{2}}$ . In its smaller scales, of which three series intervene between the lateral line and the ventrals, it differs from the other allied species of the Tana system (*B. tanensis*, Gthr., *Hindii*, Blgr., *perplexicans*, Blgr., *labiatus*, Blgr.); in these the number of scales is 25-30  $\frac{4\frac{1}{2}-5\frac{1}{2}}{4\frac{1}{2}}$ , 2 between the lateral line and the ventrals, and the number of branched dorsal rays is 9 or 10. A specimen from the Gota River, in the Degen collection, appears to be referable to *B. Gregorii*.

§ Often written "Tana" on modern maps. I think it desirable to retain the old orthography, in order to avoid confusion with the system of the Tana River further south in East Africa, the fishes of which have much in common with those of the great Abyssinian lake which is the source of the Blue Nile.

the form and development of the lips, and the relative length of the barbels. I trust that the rich material which I have had the privilege of studying has enabled me, through comparisons of numerous specimens of all sizes, to form a more correct estimate of the changes that take place with age, and that the number of species has not been unduly multiplied, although it is, of course, quite possible that some of them are founded on hybrids. In order to facilitate the discrimination of the species of the *Barbus bynni* group here described as new, I append a tentative synopsis of all the African species of that group, one of the most difficult with which it has ever been my lot to deal.

Mr. Degen deserves great credit for the manner in which he has collected and preserved in spirit this large and well-selected series of fishes—some as much as 2 feet in length—accompanied by notes and coloured sketches made by him on the spot, which have been of great assistance to me.

The altitude of the localities mentioned in this paper are only approximative, Mr. Degen not having been in a position to determine them with precision.

*Synopsis of the African Species of Barbus related to  
B. bynni, Forsk.*

Dorsal fin with a very strong, bony, non-serrated spine and 8 to 10 branched rays; anal with 5 branched rays\*; scales large, 40 or less in the lateral line; barbels four.

A. Sc. 33-40  $\frac{6\frac{1}{2}-7\frac{1}{2}}{5\frac{1}{2}-6\frac{1}{2}}$  4 †; D. IV 8-9; lower lip continuous across the chin.

Sc. 40  $\frac{7\frac{1}{2}}{6\frac{1}{2}}$ ; barbels not longer than eye; interorbital width 3 times in length of head; lower lip not forming a median lobe. . . . .

[p. 426.  
*B. microterolepis*, Blgr.,

Sc. 32-37  $\frac{6\frac{1}{2}}{6\frac{1}{2}}$ ; barbels 2 to 2 $\frac{1}{2}$  diameters of eye; interorbital width 2 $\frac{3}{4}$  to 3 times in length of head; lower lip with a median lobe. . . . .

[p. 427.  
*B. macronema*, Blgr.,

Sc. 33-36  $\frac{6\frac{1}{2}}{5\frac{1}{2}-6\frac{1}{2}}$ ; barbels 1 $\frac{1}{2}$  to 2 diameters of eye; interorbital width 3 to 3 $\frac{1}{3}$  times in length of head; lower lip not forming a median lobe. . . . .

[p. 427.  
*B. Rueppelli*, Blgr.,

Sc. 36-39  $\frac{6\frac{1}{2}}{6\frac{1}{2}}$ ; barbels not or but slightly longer than eye; interorbital width 2 $\frac{3}{4}$  to 3 times

\* This character excludes the Moroccan species, which agree with the East-African ones in the structure of the dorsal fin, but have 6 or 7 branched rays in the anal.

† The figure or figures after the numbers in the transverse series refer to the series of scales between the lateral line and the ventral fin.

in length of head; dorsal fin nearer caudal than occiput. . . . . *B. Holubi*, Stdr.

B. Sc. 30-38  $\frac{5\frac{1}{2}-6\frac{1}{2}}{4\frac{1}{2}-5\frac{1}{2}}$   $2\frac{1}{2}$ -3; D. III-IV 8-9.

1. Lower lip not continuous across the chin.

a. Mouth inferior, evenly curved.

a. Anterior barbel  $1\frac{1}{3}$  to  $1\frac{1}{2}$ , posterior  $1\frac{1}{2}$  to  $1\frac{3}{4}$  diameters of eye; interorbital width  $2\frac{1}{2}$  to 3 times in length of head.

Depth of body  $2\frac{2}{3}$  to 3 times in total length; snout less than  $\frac{1}{3}$  length of head . . . . .

*B. surkis*, Rüpp.

Depth of body more than 3 times in total length; snout more than  $\frac{1}{3}$  length of head . . . . .

[p. 428.  
*B. Harringtoni*, Blgr.,

β. Barbels not more than  $1\frac{2}{3}$  diameters of eye.

\* Ventrals not in advance of origin of dorsal; interorbital width  $2\frac{1}{2}$  to 3 times in length of head.

Length of head  $3\frac{1}{2}$  to  $3\frac{3}{4}$  times in total length; snout rounded, not more than  $1\frac{1}{2}$  diameters of eye, which is 3 times in length of head. . . . .

[p. 429.  
*B. jarsinus*, Blgr.,

Length of head  $3\frac{3}{4}$  to  $4\frac{1}{2}$  times in total length; snout rounded, not twice as long as eye, which is more than 3 times in length of head . . . . .

*B. intermedius*, Rüpp.

Length of head 4 to  $4\frac{1}{2}$  times in total length; snout rather pointed, nearly twice as long as eye in the adult . . . . .

*B. Fergussonii*, Blgr.

\*\* Ventrals anterior to origin of dorsal.

Interorbital width  $2\frac{1}{2}$  times in length of head. . . . .

*B. Eduardianus*, Blgr.

Interorbital width more than 4 times in length of head . . . . .

*B. Breyeri*, M. Weber.

b. Mouth inferior, forming a broken arch, a feebly curved transverse line in front; lips very feebly developed; barbels not longer than eye . . . . .

[p. 429.  
*B. plagiostomus*, Blgr.,

c. Mouth terminal; anterior barbel not longer than eye.

Interorbital width  $2\frac{3}{4}$  to 3 times in length of head; posterior barbel  $1\frac{1}{4}$  to  $1\frac{2}{3}$  diameters of eye. . . . .

[p. 430.  
*B. platystomus*, Blgr.,

Interorbital width  $3\frac{1}{2}$  to  $4\frac{1}{2}$  times in length of head; posterior barbel not longer than eye.

*B. gorguari*, Rüpp. †

2. Lower lip continuous across the chin, sometimes produced into a median lobe.

a. Spine of dorsal fin as long as or longer than head; interorbital width  $2\frac{1}{2}$  to 3 times in length of head.

Snout strongly projecting beyond lower jaw; anterior barbel not or but slightly longer

† *B. elongatus*, Rüpp., cannot be separated from *B. gorguari*.

- than eye; depth of body  $2\frac{2}{3}$  to  $3\frac{1}{2}$  times in total length ..... *B. bynni*, Forsk. [p. 431.]
- Snout feebly projecting; anterior barbel  $1\frac{1}{2}$  as long as eye; depth of body  $3\frac{1}{2}$  times in total length ..... *B. kassamensis*, Blgr.,
- Snout feebly projecting; anterior barbel a little shorter than eye; depth of body  $3\frac{2}{3}$  to 4 times in total length ..... *B. gananensis*, Vincig.
- b. Spine of dorsal fin shorter than head; depth of body  $3\frac{1}{3}$  to  $4\frac{1}{3}$  times in total length.
- a. Anterior barbel shorter than eye, posterior as long as eye or a little longer; interorbital width  $3\frac{1}{3}$  to  $3\frac{2}{3}$  times in length of head. [p. 431.]
- Length of head  $3\frac{2}{3}$  to  $3\frac{1}{2}$  times in total length. . . . . *B. brevibarbis*, Blgr.,
- Length of head 4 to  $4\frac{1}{4}$  times in total length. . . . . *B. leptosoma*, Blgr., [p. 432.]
- β. Anterior barbel at least as long as eye.
- \* No subtriangular dermal lobe above the mouth.
- † Interorbital width  $2\frac{1}{2}$  to 3 times in length of head.
- ‡ Anterior barbel not or but slightly longer than eye.
- Posterior barbel  $1\frac{1}{4}$  to  $1\frac{1}{3}$  diameters of eye; depth of body equal to length of head; snout 3 times in length of head ..... *B. oreas*, Blgr., p. 432.
- Posterior barbel not or but slightly longer than eye; depth of body nearly equal to length of head; snout more than 3 times in length of head ..... *B. altianalis*, Blgr.
- ‡‡ Anterior barbel at least nearly  $1\frac{1}{2}$  as long as eye.
- Posterior barbel about  $1\frac{1}{3}$  diameters of eye; depth of body equal to length of head .... [A. Smith.]
- B. marequensis*,
- Posterior barbel  $1\frac{2}{3}$  to  $1\frac{3}{4}$  diameters of eye; depth of body greater than length of head ..... *B. Duchesnii*, Blgr., [p. 433.]
- Posterior barbel  $1\frac{2}{3}$  diameters of eye; depth of body equal to length of head; a subtriangular mental lobe. .... *B. mento*, Blgr., p. 434.
- †† Interorbital width  $3\frac{1}{4}$  to  $3\frac{3}{4}$  times in length of head; anterior barbel  $1\frac{1}{2}$  to  $1\frac{3}{4}$ , posterior  $1\frac{2}{3}$  to 2 diameters of eye.
- Ventrals below origin of dorsal. .... *B. Gregorii*, Blgr.
- Ventrals posterior to origin of dorsal ..... *B. hursensis*, Blgr., [p. 434.]
- ††† Interorbital width  $3\frac{1}{2}$  to 4 times in length of head; barbels 1 to  $1\frac{1}{2}$  diameters of eye.
- \*\* A subtriangular dermal lobe above the upper jaw; posterior barbels not more than  $1\frac{2}{3}$  diameters of eye; interorbital width  $3\frac{1}{4}$  to  $3\frac{3}{4}$  times in length of head.
- Lips not produced into long triangular median

- lobes, but snout with a projecting dermal flap .....
- Both lips produced into long triangular median lobes .....
- B. Degeni*, Blgr., p. 435.
- B. nedgia*, Rüpp.
- C. Sc. 25-30  $\frac{4\frac{1}{2}-5\frac{1}{2}}{4\frac{1}{2}}$  2; D. IV 8-10.
1. Lower lip continuous across the chin; both upper and lower lips produced into triangular median lobes; anterior barbel as long as eye, posterior a little longer .....
- B. labiatus*, Blgr.
2. Lower lip interrupted on the chin.
- a. Mouth without horny sheath.
- Anterior barbel  $1\frac{1}{3}$  to  $1\frac{2}{3}$  diameters of eye, posterior  $1\frac{2}{3}$  to 2 .....
- B. tanensis*, Gthr.
- Anterior barbel about as long as eye, posterior  $1\frac{1}{4}$  to  $1\frac{1}{2}$  diameters of eye .....
- B. Hindii*, Blgr.
- Barbels shorter than eye .....
- B. oxyrhynchus*, Pfeff.
- b. Lower jaw with a trenchant horny edge; barbels as long as eye, or posterior a little longer .....
- B. perplexicans*, Blgr.

*Barbus microterolepis*.

Depth of body equal to length of head,  $3\frac{1}{2}$  times in total length. Snout rounded,  $3\frac{1}{2}$  times in length of head; diameter of eye 4 times in length of head, interorbital width 3 times; mouth terminal, its width  $4\frac{1}{2}$  times in length of head\*; lips moderately developed, the lower continuous; barbels two on each side, anterior  $\frac{3}{4}$  diameter of eye, posterior as long as eye, the distance between them  $\frac{3}{8}$  diameter of eye. Dorsal IV 8, last simple ray strong, bony, not serrated, slightly curved, a little shorter than head; free edge of the fin strongly emarginate; its distance from the occiput less than its distance from the caudal. Anal III 5, longest ray  $\frac{2}{3}$  length of head. Pectoral  $\frac{3}{4}$  length of head, not reaching ventral; latter a little posterior to origin of dorsal. Caudal peduncle  $1\frac{1}{2}$  as long as deep. Scales 40  $\frac{7\frac{1}{2}}{6\frac{1}{2}}$ , 4 between lateral line and ventral, 16 round caudal peduncle. Olive above, silvery beneath; fins greyish.

Total length 135 millim.

A single specimen was obtained at Buggali, from the Maki River, a fast-running stream flowing towards Lake Swai from the eastern slope of the Adami Mountains, in the Addia country, altitude about 4000 feet, March 3, 1902, together with examples of *Barbus affinis*, Rüpp.

This species is remarkable in having the smallest scales among the numerous allies of *Barbus bynni*, Forsk.

\* I. e., the greatest width of the closed mouth, the lips being lifted if necessary, and not included.

*Barbus macronema.*

Depth of body  $3\frac{1}{2}$  to  $3\frac{3}{4}$  times in total length, length of head  $3\frac{1}{2}$  to 4 times. Snout rounded,  $3\frac{1}{4}$  to  $3\frac{1}{3}$  times in length of head; diameter of eye 6 to  $6\frac{1}{2}$  times in length of head, interorbital width  $2\frac{3}{4}$  to 3 times; mouth inferior, its width  $3\frac{1}{4}$  to 4 times in length of head; lips well developed, the lower with a very short, rounded or truncate median lobe; barbels two on each side, nearly equal, 2 to  $2\frac{1}{2}$  diameters of eye,  $1\frac{3}{4}$  to  $2\frac{1}{4}$  as long as the distance between them. Dorsal IV 8, last simple ray strong, bony, not serrated, feebly curved, about  $\frac{1}{2}$  length of head; free edge of the fin emarginate; its distance from the occiput equal to or a little less than its distance from the caudal. Anal III 5, longest ray  $\frac{2}{3}$  to  $\frac{3}{4}$  length of head, reaching root of caudal, or a little beyond. Pectoral  $\frac{3}{4}$  to  $\frac{4}{5}$  length of head, not reaching ventral; latter below origin of dorsal. Caudal peduncle  $1\frac{1}{2}$  as long as deep. Scales 32-37  $\frac{6\frac{1}{2}}{6\frac{1}{2}}$ , 4 between lateral line and ventral, 12 or 14 round caudal peduncle. Olive above, yellowish beneath; fins greyish.

Five specimens measuring 260 to 365 millim.: one was obtained at Gafersa, in the Maki River, altitude about 5000 feet, March 11, 1902; two were procured together at Dedota, altitude about 5500 feet, in the Hawash River, March 16, 1902; and two are from the Hurso River, a fast-running mountain-stream flowing northwards in the Upper Adal country, altitude about 7000 feet, Jan. 17, 1902.

This species has much in common with *B. Gregorii*, Blgr., but differs in the longer barbels and the presence of four series of scales between the lateral line and the ventral fins.

*Barbus Rueppelli.*

Depth of body equal to length of head,  $3\frac{1}{2}$  to  $3\frac{4}{5}$  times in total length. Snout broad, rounded, 3 or  $3\frac{1}{4}$  times in length of head; diameter of eye  $4\frac{1}{2}$  (young) to  $6\frac{1}{2}$  times in length of head, interorbital width 3 to  $3\frac{1}{3}$  times; mouth inferior, its width 4 times in length of head; lips broad, continued across the chin, but not forming a median lobe; barbels two on each side, anterior  $1\frac{1}{2}$  to  $1\frac{3}{4}$  diameters of eye, posterior  $1\frac{3}{4}$  to 2, the distance between them equal to or a little exceeding diameter of eye. Dorsal IV 8, last simple ray strong, bony, not serrated, feebly curved,  $\frac{2}{5}$  to  $\frac{2}{3}$  length of head; free edge of the fin emarginate; its distance from the occiput less than its distance from the caudal. Anal III 5, longest ray  $\frac{2}{3}$  length of head, reaching root of caudal or a little beyond. Pectoral

$\frac{3}{4}$  to  $\frac{4}{5}$  length of head, not reaching ventral; latter below or slightly posterior to origin of dorsal. Caudal peduncle  $1\frac{1}{2}$  to  $1\frac{1}{2}$  as long as deep. Scales 33-36  $\frac{6\frac{1}{2}}{5\frac{1}{2}-6\frac{1}{2}}$ , 4 between lateral line and ventral, 12 or 14 round caudal peduncle. Greenish above, golden on the sides and below; fins yellowish green.

Five specimens, measuring from 180 to 340 millim., from the Errer River, a mountain-stream flowing northwards from the Jebel-Amhar range of mountains, in the Upper Adal country, altitude about 4000 feet, Jan. 20, 1902.

This new species, named in memory of the first explorer of the Abyssinian fish-fauna, is distinguished from the preceding in the shorter barbels and the continuous lower lip, which is not notched on each side to form a median lobe.

### *Barbus Harringtoni.*

Depth of body equal to length of head,  $3\frac{1}{2}$  times in total length. Snout rounded, a little more than  $\frac{1}{3}$  length of head; diameter of eye 8 times in length of head, interorbital width 3 times; mouth large, subinferior, its width 3 times in length of head; lips moderately developed, interrupted on the chin; barbels two on each side, anterior  $1\frac{1}{3}$ , posterior  $1\frac{1}{2}$  diameters of eye and as long as the distance between them. Dorsal IV 9, last simple ray strong, bony, not serrated, feebly curved, nearly  $\frac{1}{2}$  length of head; free edge of the fin emarginate; its distance from the occiput equal to its distance from the caudal. Anal III 5, longest ray  $\frac{3}{4}$  length of head, nearly reaching root of caudal. Pectoral  $\frac{4}{5}$  length of head, not reaching ventral; latter below origin of dorsal. Caudal peduncle  $1\frac{1}{2}$  as long as deep. Scales 34  $\frac{5\frac{1}{2}}{5\frac{1}{2}}$ , 3 between lateral line and ventral, 12 round caudal peduncle. Olive above, whitish beneath; fins greyish.

Total length 500 millim. Stated by Mr. Degen to reach double that length.

A single specimen from the Hawash River at Warrar, altitude about 4000 feet, Feb. 6, 1902.

This large Barbel, named in honour of Col. J. L. Harrington, C.B., C.V.O., H.B.M. Consul General at the Court of the Emperor Menelek, is nearly related to *B. surkis*, Rüpp., from which it differs in the less deep body, the longer snout, the larger mouth, and the shorter barbels. The lower pharyngeal bones are much less massive, smaller in fact in this type than in a smaller *B. surkis*; the anterior pharyngeal teeth of the inner row have compressed mammiform crowns instead of the subspherical form assumed by them in *B. surkis*.



*Barbus jarsinus.*

Depth of body equal to length of head,  $3\frac{1}{2}$  to  $3\frac{3}{4}$  times in total length. Snout rounded, 3 times in length of head; diameter of eye  $3\frac{1}{2}$  to  $4\frac{1}{2}$  times in length of head, interorbital width 3 times; mouth inferior, its width 4 times in length of head; lips moderately developed, the labial fold not extending across the chin; barbels two on each side, anterior  $\frac{3}{4}$  to 1 diameter of eye, posterior 1 to  $1\frac{1}{4}$ , the distance between them  $\frac{1}{2}$  to  $\frac{2}{3}$  diameter of eye. Dorsal IV 9 (rarely 8), last simple ray strong, bony, not serrated, straight,  $\frac{2}{3}$  to  $\frac{3}{4}$  length of head; free edge of the fin feebly emarginate; its distance from the occiput less than its distance from the caudal. Anal III 5, longest ray  $\frac{2}{3}$  to  $\frac{2}{5}$  length of head. Pectoral  $\frac{2}{3}$  to  $\frac{3}{4}$  length of head, not reaching ventral; latter below anterior rays of dorsal. Caudal peduncle  $1\frac{1}{2}$  to  $1\frac{2}{3}$  as long as deep. Scales 31-34  $\frac{5\frac{1}{2}}{4\frac{1}{2}-5\frac{1}{2}}$ ,  $2\frac{1}{2}$  or 3 between lateral line and ventral, 12 or 14 round caudal peduncle. Olive-brown above, silvery on the sides and below; a darker streak along each side of the back; axil of pectoral and of ventral and base of anal bright orange.

Total length 115 millim.

Numerous specimens of this small Barbel were obtained on Jan. 13, 1902, in the Jerrer or rapid mountain-stream five hours' ride from Harrar, flowing from Mount Jarso to the Webi Shebeli, altitude about 6000 feet.

This species is most nearly related to *B. intermedius* of Rüppell. Compared with young specimens (120 millim. long) of the latter, it differs in the longer snout, the smaller eye, the narrower interorbital region, and the shorter dorsal spine.

*Barbus plagiostomus.*

Depth of body  $3\frac{1}{2}$  to 4 times in total length, length of head  $4$  to  $4\frac{1}{2}$  times. Snout rounded, 3 or  $3\frac{1}{3}$  times in length of head; diameter of eye  $4\frac{1}{2}$  to 5 times in length of head, interorbital width  $2\frac{1}{2}$  to  $2\frac{2}{3}$  times; mouth inferior, forming a broken arch, a feebly curved transverse line in front, its width 3 or  $3\frac{1}{2}$  times in length of head; lips very feebly developed, confined to the sides; a thin horny sheath, with a blunt keel, covers the jaws; barbels two on each side, subequal, as long as or a little shorter than diameter of eye. Dorsal IV 9, last simple ray very strong, bony, not serrated, nearly straight, as long as head or only  $\frac{2}{3}$  its length; free edge of the fin strongly emarginate; its distance from the occiput less than its distance from the caudal. Anal III 5, longest ray  $\frac{2}{4}$  to  $\frac{4}{5}$  length of

head, reaching or nearly reaching root of caudal. Pectoral as long as or a little shorter than head, not reaching ventral; latter a little posterior to origin of dorsal. Caudal peduncle  $1\frac{3}{4}$  to  $1\frac{3}{4}$  as long as deep. Scales  $33\frac{5\frac{1}{2}}{5\frac{1}{2}}$ , 3 between lateral line and ventral, 12 or 14 round caudal peduncle. Silvery, darker on the back; pectoral and ventral fins flesh-coloured; iris nearly white, with a fine yellow ring round the pupil.

Total length 220 millim.

Three specimens of nearly the same size, one from the Gota River at Marmusa, Jan. 21, 1902, and two from the Kassam River at Awhorra Mullka in Shoa, altitude about 4000 feet, Feb. 7, 1902.

Like the recently described *B. perplexicans* from the Tana system, this fish might be referred to the genus *Capoëta* as defined by Günther; but this, it seems to me, would be in violation of the natural affinities, which are with *B. intermedius*, Rüpp., just as those of *B. perplexicans*, Blgr., are with *B. tanensis*, Gthr., and *B. Hindii*, Blgr. Nevertheless, *Barbus plagiostomus* evidently constitutes a connecting-link between *B. intermedius* and *Varicorhinus beso* of Rüppell.

#### *Barbus platystomus.*

Depth of body  $3\frac{1}{2}$  to  $3\frac{2}{5}$  times in total length, length of head 4 to  $4\frac{1}{4}$  times. Snout very broad, rounded, not quite  $\frac{1}{2}$  length of head; diameter of eye 5 to  $5\frac{1}{2}$  times in length of head, interorbital width  $2\frac{3}{4}$  to 3 times; mouth large, terminal, its width 3 times in length of head; lips moderately developed, interrupted on the chin; barbels two on each side, anterior as long as the eye, posterior  $1\frac{1}{4}$  to  $1\frac{2}{5}$  diameters of eye, the space between them as long as the eye. Dorsal IV 8-9, last simple ray very strong, bony, not serrated, feebly curved,  $\frac{3}{5}$  to  $\frac{6}{7}$  length of head; free edge of the fin emarginate; its distance from the occiput less than its distance from the caudal. Anal III 5, longest ray  $\frac{3}{4}$  to  $\frac{4}{5}$  length of head, reaching or nearly reaching root of caudal. Pectoral  $\frac{5}{6}$  to  $\frac{7}{8}$  length of head, not reaching ventral; latter a little posterior to origin of dorsal. Caudal peduncle  $1\frac{3}{4}$  as long as deep. Scales 35-37  $\frac{5\frac{1}{2}}{4\frac{1}{2}}$ , 3 between lateral line and ventral, 12 round caudal peduncle. Bluish or steel-blue above; fins of a dark slate-colour; iris yellow or orange.

Two specimens, measuring 245 and 310 millim. respectively, from Bahardar, Lake Tsana, altitude about 5500 feet, June 4, 1902.

Intermediate between *B. Harringtoni* and *B. gorguari*,

Rüpp. Distinguished from the latter by the much broader snout and the broader interorbital region. The lower pharyngeal bones are relatively small, as in *B. Harringtoni*, from which they do not differ in the dentition.

*Barbus kassamensis.*

Depth of body  $3\frac{1}{2}$  times in total length, length of head 4 times. Snout rounded,  $3\frac{1}{3}$  times in length of head; diameter of eye  $4\frac{1}{2}$  times in length of head, interorbital width 3 times; mouth inferior, its width  $\frac{1}{4}$  length of head; lips moderately developed, lower continuous across the chin but not produced into a lobe; barbels two on each side, anterior  $1\frac{1}{2}$  diameters of eye, posterior  $1\frac{2}{3}$ , the distance between them  $\frac{2}{3}$  diameter of eye. Dorsal IV 8, last simple ray very strong, bony, not serrated, as long as the head; free edge of the fin emarginate; its distance from the occiput less than its distance from the caudal. Anal III 5, longest ray a little shorter than head and reaching root of caudal. Pectoral as long as head, nearly reaching ventral; latter below anterior rays of dorsal. Caudal peduncle  $1\frac{1}{3}$  as long as deep. Scales  $30\frac{5}{8}$ , 3 between lateral line and ventral, 12 round caudal peduncle. Olive-brown above (in spirit), the scales edged with darker, yellowish beneath; fins greenish yellow.

Total length 225 millim.

A single specimen from the Kassam River at Awhorra Mullka, Shoa, altitude about 4000 feet.

Very closely allied to *B. bynni*, Forsk. Distinguished by a less prominent snout, less developed lips, longer barbels, and a less deep body.

*Barbus brevibarbis.*

Depth of body  $3\frac{1}{2}$  to  $3\frac{3}{4}$  times in total length, length of head  $3\frac{1}{3}$  to  $3\frac{1}{2}$  times. Snout rounded, 3 times in length of head; diameter of eye 4 (young) to  $6\frac{1}{2}$  times in length of head, interorbital width  $3\frac{1}{4}$  to  $3\frac{3}{4}$  times; mouth inferior, its width  $4\frac{1}{2}$  times in length of head; lips much developed, the lower forming a short rounded lobe in the middle; barbels two on each side, the anterior  $\frac{2}{3}$  to  $\frac{3}{4}$  diameter of eye, the posterior as long as eye and as long as or a little longer than its distance from the anterior. Dorsal IV 9, last simple ray very strong, bony, not serrated, straight or very slightly curved,  $\frac{2}{3}$  to  $\frac{3}{4}$  length of head; free edge of the fin emarginate; its distance from the occiput equal to or a little less than its distance from the caudal. Anal III 5, longest ray  $\frac{3}{4}$  length of head. Pectoral about  $\frac{2}{3}$  length of head, not reaching

ventral; latter below or slightly posterior to origin of dorsal. Caudal peduncle  $1\frac{2}{3}$  as long as deep. Scales 31-33  $\frac{5\frac{1}{2}}{4\frac{1}{2}}$ ,  $2\frac{1}{2}$  or 3 between lateral line and ventral, 12 round caudal peduncle. Bluish olive above, yellowish beneath; fins dark slate-colour; iris deep yellow.

Four specimens, measuring 350, 250, 150, and 130 millim. respectively, were obtained in Lake Tsana, the largest at Zegi, May 31, 1902, the three others at Bahardar, June 4, 1902.

This species is near *B. nedgia*, Rüpp., from which it is distinguished by the lesser development of the lips and the shorter barbels.

*Barbus leptosoma.*

Depth of body  $3\frac{3}{4}$  to  $4\frac{1}{2}$  times in total length, length of head 4 to  $4\frac{1}{4}$  times. Snout rounded,  $3\frac{1}{5}$  to  $3\frac{1}{2}$  times in length of head; diameter of eye 4 to  $4\frac{2}{3}$  times in length of head, interorbital width  $3\frac{1}{5}$  to  $3\frac{1}{3}$  times; mouth inferior, its width  $4\frac{1}{2}$  to 5 times in length of head; lips moderately developed, continuous across the chin; barbels two on each side, subequal; as long as the eye or a little shorter, longer than the distance between them. Dorsal III 8-9, last simple ray very strong, bony, not serrated, straight or slightly curved, as long as or slightly shorter than the head; free edge of the fin emarginate; its distance from the occiput less than its distance from the caudal. Anal III 5, longest ray  $\frac{2}{3}$  length of head. Pectoral  $\frac{4}{5}$  to  $\frac{7}{8}$  length of head, not reaching ventral; latter below anterior rays of dorsal. Caudal peduncle twice or nearly twice as long as deep. Scales 30-35  $\frac{5\frac{1}{2}-6\frac{1}{2}}{5\frac{1}{2}}$ , 3 between lateral line and ventral, 12 round caudal peduncle. Silvery in life, tinged with a vivid blue; the belly and fins whitish, tinged with carneous.

Three specimens, two measuring 225 millim., the third 160, from Zegi, Lake Tsana, May 18 and 19, 1902.

Distinguished from *B. brevibarbis* by the more elongate form, the shorter head, the thinner lips, and the longer spine of the dorsal fin.

*Barbus oreas.*

Depth of body equal to length of head, 4 times in total length. Snout rounded, 3 times in length of head; diameter of eye  $4\frac{1}{2}$  to 5 times in length of head, interorbital width 3 times; mouth inferior, its width 4 times in length of head; lips much developed, the lower forming a short rounded median lobe; barbels two on each side, anterior slightly longer than eye, posterior  $1\frac{1}{4}$  to  $1\frac{1}{3}$  as long as eye, the distance between

them  $\frac{3}{4}$  diameter of eye. Dorsal IV 9, last simple ray strong, bony, not serrated, straight,  $\frac{3}{4}$  or  $\frac{2}{3}$  length of head; free edge of the fin emarginate; its distance from the occiput less than its distance from the caudal. Anal III 5, longest ray  $\frac{3}{4}$  length of head. Pectoral  $\frac{3}{4}$  or  $\frac{2}{3}$  length of head, not reaching ventral; latter below anterior rays of dorsal. Caudal peduncle  $1\frac{3}{4}$  or twice as long as deep. Scales  $33\frac{5\frac{1}{2}}{4\frac{1}{2}-5\frac{1}{2}}$ ,  $2\frac{1}{2}$  between lateral line and ventral, 12 or 14 round caudal peduncle. Olive above, silvery on the sides and below; dorsal and caudal fins greyish.

Total length 170 millim.

Two specimens from the Jerrer, near Harrar (ca. 6000 feet), Jan. 13, 1902.

Very nearly related to *B. gananensis*, Vincig., from the Ganana and Auata Rivers, Somaliland; distinguished by the smaller eye, the narrower interorbital space, the shorter spine of the dorsal, and the longer caudal peduncle.

### *Barbus Duchesnii.*

Depth of body  $3\frac{1}{3}$  to  $3\frac{1}{2}$  times in total length, length of head 4 to  $4\frac{1}{4}$  times. Snout rounded, 3 to  $3\frac{1}{3}$  times in length of head, interorbital width 3 times; mouth inferior, its width 4 times in length of head; lips moderately developed, the lower continuous; barbels two on each side, subequal,  $1\frac{3}{4}$  to  $1\frac{3}{4}$  diameters of eye. Dorsal IV 9, last simple ray very strong, bony, not serrated, straight or very slightly curved,  $\frac{3}{4}$  to  $\frac{4}{5}$  length of head; free edge of the fin strongly emarginate; its distance from the occiput a little less than its distance from the caudal. Anal III 5, longest ray  $\frac{5}{6}$  length of head, reaching or nearly reaching root of caudal. Pectoral nearly as long as head, narrowly separated from ventral; latter below anterior rays of dorsal. Caudal peduncle  $1\frac{1}{2}$  as long as deep. Scales  $30-33\frac{5\frac{1}{2}}{4\frac{1}{2}}$ ,  $2\frac{1}{2}$  between lateral line and ventral, 12 round caudal peduncle. Colour iridescent green and blue in life; all the fins dark slate-colour; iris dark, with a fine yellow circle round the pupil.

Total length 300 millim.

Two specimens: the larger from Bahardar, Lake Tsana, June 2, 1902; the other (250 millim. long) from the Moger River, a tributary of the Blue Nile, in Shoa, altitude about 4000 feet, April 17, 1902.

Named after M. J. Duchesne-Fournet, the chief of the French Scientific Mission of that name, who most kindly assisted Mr. Degen with advice during his stay on Lake Tsana.

*B. Duchesnii* is related to *B. affinis*, Rüpp., but differs chiefly in the longer barbels and the broader interorbital region.

*Barbus mento.*

Depth of body equal to length of head,  $3\frac{3}{4}$  times in total length. Snout rounded, 3 times in length of head; diameter of eye 6 times in length of head, interorbital width 3 times; mouth inferior, its width 4 times in length of head; lips very strongly developed, the lower produced into a subtriangular median lobe which is as long as the eye; anterior barbel  $1\frac{1}{2}$ , posterior  $1\frac{2}{3}$  diameters of eye, the space between them a little greater than diameter of eye. Dorsal IV 8, last simple ray very strong, bony, not serrated, slightly curved,  $\frac{1}{2}$  length of head; free edge of the fin emarginate; its distance from the occiput a little less than its distance from the caudal. Anal III 5, longest ray  $\frac{3}{4}$  length of head, reaching root of caudal. Pectoral  $\frac{3}{4}$  length of head, not reaching ventral; latter below anterior rays of dorsal. Caudal peduncle  $1\frac{2}{3}$  as long as deep. Scales  $35\frac{5}{8}$ , 3 between lateral line and ventral, 12 round caudal peduncle. Olive above, yellowish beneath; fins greyish.

Total length 300 millim.

A single specimen obtained at Marmasa (alt. nearly 5000 feet) in the Gota River, flowing northwards from the Jebel-Amhar Mountains, Jan. 21, 1902.

*Barbus mento* may be compared with *B. nedgia*, Rüpp., from which it differs in the broader head, the broader interorbital region, and the lesser development of the lips. It differs from *B. Duchesnii* in the less elevated body and the longer mental lobe.

*Barbus hursensis.*

Depth of body equal to length of head,  $3\frac{3}{4}$  or 4 times in total length. Snout obtusely conical, 3 times in length of head; diameter of eye 5 times in length of head, interorbital width  $3\frac{1}{4}$  times; mouth inferior, its width 4 times in length of head; lips strongly developed, the lower forming a rounded median lobe; anterior barbel  $1\frac{1}{2}$ , posterior twice as long as eye, the distance between them a little less than diameter of eye. Dorsal III 8-9, last simple ray strong, bony, not serrated, curved,  $\frac{3}{5}$  or  $\frac{2}{3}$  length of head; free edge of the fin emarginate; its distance from the occiput a little less than its distance from the caudal. Anal II 5, longest ray  $\frac{2}{3}$  length of head, reaching root of caudal. Pectoral  $\frac{4}{5}$  or  $\frac{5}{6}$  length of

head, not reaching ventral; latter somewhat posterior to origin of dorsal. Caudal peduncle  $1\frac{1}{3}$  or  $1\frac{1}{2}$  as long as deep. Scales 32-34  $\frac{5\frac{1}{2}-6\frac{1}{2}}{\frac{3}{2}}$ , 3 between lateral line and ventral, 12 or 14 round caudal peduncle. Olive above, golden on the sides; fins yellowish green; iris golden yellow.

Total length 210 millim.

Two specimens from the Hurso River, Upper Adal country, altitude about 7000 feet, Jan. 17, 1902. A third badly preserved specimen from the Gota River probably belongs to the same species.

The longer barbels and the broader interorbital space distinguish this species from Rüppell's *B. affinis*, to which it is most nearly related.

### *Barbus Degeni.*

Depth of body  $3\frac{2}{3}$  to  $4\frac{1}{3}$  times in total length, length of head  $3\frac{1}{2}$  to  $3\frac{2}{3}$  times. Snout pointed,  $2\frac{2}{3}$  to 3 times in length of head; diameter of eye 5 to  $8\frac{1}{2}$  times in length of head, interorbital width  $3\frac{1}{2}$  times; snout produced into a triangular dermal flap overhanging the lip; mouth inferior, its width  $4\frac{1}{2}$  to  $5\frac{1}{2}$  times in length of head; lips very strongly developed, the lower produced into a rounded median lobe which measures  $\frac{1}{2}$  to  $\frac{2}{3}$  the diameter of the eye; anterior barbel 1 to  $1\frac{1}{3}$ , posterior  $1\frac{1}{3}$  to  $1\frac{1}{2}$  diameters of eye, the space between them equal to or a little less than diameter of eye. Dorsal IV 9, last simple ray very strong, bony, not serrated, straight or slightly curved,  $\frac{1}{3}$  to  $\frac{2}{3}$  length of head; free edge of the fin emarginate; its distance from the occiput a little less than its distance from the caudal. Anal III 5, longest ray  $\frac{1}{2}$  to  $\frac{2}{3}$  length of head, reaching or nearly reaching root of caudal. Pectoral  $\frac{2}{3}$  to  $\frac{3}{4}$  length of head, not reaching ventral; latter below anterior rays of dorsal. Caudal peduncle  $1\frac{1}{2}$  to  $1\frac{2}{3}$  as long as deep. Scales 31-35  $\frac{5\frac{1}{2}-6\frac{1}{2}}{\frac{3}{2}}$ ,  $2\frac{1}{2}$  or 3 between lateral line and ventral, 12 round caudal peduncle. Head and upper part of body dark slate-colour, sides dark green, belly yellowish green in life; caudal green, other fins steel-grey; iris dark bronzy.

Four specimens, measuring 225 to 450 millim., from Lake Tsana. The largest was obtained at Zegi, May 27, 1902, the others at Bahardar, June 1 and 4, 1902.

This fine *Barbus* is closely allied to *B. nedgia*, differing in the less developed mental lobe and the absence of an upper labial lobe, which is replaced by a similar appendage formed by the skin of the snout above the lip.

*Barbus pleurogramma.*

Depth of body equal to length of head, 4 times in total length. Snout rounded,  $4\frac{1}{2}$  times in length of head; diameter of eye 3 to  $3\frac{1}{2}$  times in length of head, interorbital width 3 times; mouth terminal, its width  $4\frac{1}{2}$  times in length of head; lips feebly developed; barbels two on each side, the anterior barely  $\frac{1}{2}$  diameter of eye and longer than its distance from the posterior, which measures nearly  $\frac{3}{4}$  diameter of eye. Dorsal III 7, last simple ray bony, strongly serrated behind,  $\frac{3}{4}$  length of head; free edge of the fin not emarginate; its distance from the occiput a little less than its distance from the caudal. Anal III 5, longest ray  $\frac{3}{5}$  length of head. Pectoral  $\frac{2}{3}$  length of head, not reaching ventral; latter below anterior rays of dorsal. Caudal peduncle twice as long as deep. Scales  $35\frac{6\frac{1}{2}}{5\frac{1}{3}}$ , 3 between lateral line and ventral, 16 round caudal peduncle. Silvery, brownish on the back; a black line along each side of the body; fins greyish.

Total length 40 millim.

Three specimens from Bahardar, Lake Tsana, June 4, 1902, and one from the Unfras River, Lake Tsana, May 9, 1902.

Near the East African *B. paludinosus*, Peters, in which, however, the dorsal fin originates behind the vertical of the base of the ventrals.

*Barbus humilis.*

Depth of body  $3\frac{1}{3}$  to  $3\frac{3}{4}$  times in total length, length of head  $3\frac{2}{3}$  to 4 times. Snout rounded, 4 times in length of head; diameter of eye 3 to  $3\frac{1}{2}$  times in length of head, interorbital width  $2\frac{1}{2}$  to  $2\frac{2}{3}$  times; mouth terminal, its width 4 times in length of head; lips feebly developed; barbels two on each side, the anterior about  $\frac{1}{2}$ , the posterior  $\frac{2}{3}$  diameter of eye, the space between them hardly  $\frac{1}{2}$  diameter of eye. Dorsal III 8, last simple ray not enlarged, flexible, as long as head; free edge of the fin emarginate; its distance from the occiput about  $\frac{2}{3}$  its distance from the caudal. Anal III 5, longest ray  $\frac{3}{5}$  length of head. Pectoral  $\frac{2}{3}$  to  $\frac{3}{4}$  length of head, not reaching ventral; latter below anterior rays of dorsal. Caudal peduncle twice as long as deep. Scales  $29-31\frac{4\frac{1}{2}}{4\frac{1}{2}}$ , 2 between lateral line and ventral, 12 or 14 round caudal peduncle. Silvery, brownish on the back; an indistinct darker lateral band; fins whitish.

Total length 65 millim.



Numerous specimens from Bahardar, Lake Tsana, June 4, 1902.

The nearest ally of this small Barbel appears to be *B. inermis*, Peters, the dorsal of which originates in front of the vertical of the base of the ventrals.

*Barbus trispilopleura.*

Depth of body equal to length of head,  $3\frac{1}{2}$  times in total length. Snout rounded, 4 times in length of head; diameter of eye 3 times in length of head, interorbital width  $2\frac{1}{2}$  times; mouth terminal, its width  $4\frac{1}{2}$  times in length of head; lips feebly developed; barbels two on each side, the anterior  $\frac{2}{3}$ , the posterior a little longer than diameter of eye. Dorsal III 7-8, last simple ray not enlarged, flexible, as long as head; free edge of the fin not emarginate; its distance from the occiput about  $\frac{2}{3}$  its distance from the caudal. Anal III 5, longest ray  $\frac{3}{8}$  to  $\frac{2}{3}$  length of head. Pectoral  $\frac{2}{3}$  length of head, not reaching ventral; latter below anterior rays of dorsal. Caudal peduncle  $1\frac{2}{3}$  as long as deep. Scales 27-28  $\frac{4\frac{1}{2}}{4\frac{1}{2}}$ , 2 between lateral line and ventral, 12 round caudal peduncle. Brownish above, silvery on the sides and below; three round black spots on each side of the body, the first and second above the lateral line, the third on the lateral line at the base of the caudal.

Total length 45 millim.

Three specimens from Bahardar, Lake Tsana, June 4, 1902.

Resembles *B. trimaculatus*, Peters, in general appearance, but the scales are fewer, the last unbranched dorsal ray is weaker, and the barbels are shorter.

*Nemachilus abyssinicus.*

Depth of body 7 times in total length, length of head 5 times. Head feebly compressed behind, twice as long as broad. Snout a little shorter than postorbital part of head, a little depressed; eye  $6\frac{1}{2}$  times in length of head,  $\frac{3}{5}$  interorbital width; longest barbels twice diameter of eye. Dorsal 10, a little nearer caudal than occiput, originating immediately behind vertical of root of ventral, middle rays longest, nearly  $\frac{3}{4}$  length of head. Anal 9. Caudal slightly emarginate. Caudal peduncle  $1\frac{1}{2}$  as long as deep. Yellowish brown, with irregular dark spots, and a series of 10 large transverse dark spots along the back; a small round black spot on the dorsal; caudal with dark spots.

Total length 40 millim.

A single specimen from Bahardar, Lake Tsana, June 4, 1902.

This is the first known African representative of the *Cobitidinae*. It belongs to a genus of wide distribution in Europe and Asia, and its nearest ally appears to be *N. Leontineæ*, Lortet, from the Lake of Galilee.

*Clarias tsanensis*.

Depth of body  $6\frac{1}{2}$  to  $7\frac{1}{2}$  times in total length, length of head  $3\frac{1}{5}$  to  $3\frac{4}{5}$  times. Head  $1\frac{1}{2}$  to  $1\frac{2}{3}$  as long as broad, perfectly smooth above; vertex very strongly flattened, almost concave in the adult; occipital process angular; frontal fontanelle knife-shaped, 3 to 4 times as long as broad, 4 to 5 times in length of head; occipital fontanelle indistinct; eye small,  $2\frac{1}{2}$  (young) to 4 times in length of snout, 4 (young) to 6 times in interorbital width; width of mouth equal to interorbital width,  $\frac{1}{2}$  length of head. Band of præmaxillary teeth 4 to  $5\frac{1}{2}$  times as long as broad; vomerine teeth granular, forming a crescentic band, which is as broad as the præmaxillary band. Nasal barbel  $\frac{1}{3}$  to  $\frac{1}{2}$  length of head ( $\frac{3}{4}$  in the very young); maxillary barbel  $\frac{3}{4}$  to 1 length of head (longer in the very young), reaching base or extremity of pectoral spine; outer mandibular barbels  $\frac{1}{2}$  to  $\frac{4}{5}$  length of head (as long as head in the very young). Gill-rakers fine and closely set, 60 to 70 on first arch (45 in young). Dorsal 78-85, its distance from the occipital process  $\frac{1}{5}$  to  $\frac{1}{4}$  length of head, its distance from the caudal hardly equal to the diameter of the eye. Anal 60-70, touching root of caudal. Pectoral not quite  $\frac{1}{2}$  length of head, the spine very slightly serrated on the outer border,  $\frac{2}{3}$  (young) to  $\frac{2}{3}$  the length of the fin. Ventral equally distant from end of snout and from caudal, or a little nearer the former. Caudal nearly  $\frac{1}{2}$  length of head. Dark olive-brown above, greyish beneath.

Five specimens, measuring 125 to 430 millim., from Zegi, Lake Tsana, May 12 and 22, 1902.

The smooth head, combined with the high number of gill-rakers and of dorsal rays, and the absence of a space between the anal and caudal fins, distinguish this species from its allies with granular vomerine teeth.

*Clarias Vinciguerræ*.

Depth of body 7 times in total length, length of head 3 times. Head  $1\frac{5}{7}$  as long as broad, its upper surface strongly granulated; occipital process angular; frontal fontanelle knife-shaped,  $3\frac{1}{2}$  times as long as broad,  $4\frac{1}{2}$  times in length of

head; occipital fontanelle small, in advance of occipital process; eye small, 3 times in length of snout,  $5\frac{1}{2}$  times in interorbital width; width of mouth a little less than interorbital width,  $\frac{2}{3}$  length of head. Band of præmaxillary teeth  $5\frac{1}{2}$  times as long as broad; vomerine teeth granular, forming a crescentic band which is as broad as the præmaxillary band. Nasal barbel  $\frac{2}{3}$  length of head; maxillary barbel slightly shorter than head, reaching base of pectoral fin; outer mandibular barbel  $\frac{2}{3}$  length of head, inner  $\frac{2}{3}$ . Gill-rakers fine and closely set, about 90 on first arch. Dorsal 67, its distance from the occipital process  $\frac{1}{3}$  length of head, its distance from the caudal 2 diameters of eye. Anal 53, narrowly separated from the caudal. Pectoral not quite  $\frac{1}{2}$  length of head, the spine finely serrated on the outer border,  $\frac{5}{7}$  the length of the fin. Ventral a little nearer end of snout than caudal. Latter nearly  $\frac{1}{2}$  length of head. Dark brown above, whitish beneath; anal and caudal with a fine light edge.

Total length 410 millim.

A single specimen from the Kassam River at Awhorra Mullka, Shoa, about 4000 feet, Feb. 7, 1902.

This species, named after Dr. D. Vinciguerra, is closely related to *C. Robecchii*, Vincig., from which it is distinguished, as well as from *C. lazera* and other species with granular vomerine teeth, by the narrower head and by the shorter interspace between the occiput and the origin of the dorsal fin; the gill-rakers are more numerous than in *C. Robecchii*, resembling those of *C. lazera*, in which the vomerine teeth form a wider band.

LX.—On new Species of South-African Curculionidæ of the Genus *Hipporrhinus*, Schön. By GUY A. K. MARSHALL, F.Z.S.

[Concluded from p. 417.]

*Hipporrhinus janus*, sp. n.

Long. (excl. apical spine) 19, lat.  $8\frac{1}{2}$  millim. Length of apical spines 1 millim.

*Head* convex, with scattered shallow punctures on vertex, much deeper and coarser on forehead, which is retuse and has a short central carina; antecular furrows deep and complete. *Rostrum* cut off from head by a deep dorsal incision, as long as prothorax only, deflected and scarcely curved, subparallel