

A REVISION OF THE CULICINE MOSQUITOES OF INDIA.

Part XXII.

THE INDIAN SPECIES OF THE GENUS *TÆNIORHYNCHUS*
(INCLUDING *MANSONIOIDES*), WITH A DESCRIPTION
OF ONE NEW SPECIES.

BY

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Genus *TÆNIORHYNCHUS*, Arrib.

Arribalzaga, 1891, *Rev. Mus. La Plata*, Vol. II, p. 147.

THIS genus, as at present arranged, is divided into three subgenera of which *Tæniorhynchus*, used in the restricted sense, is confined to South America, and is the only subgenus found there. The other two subgenera, *Coquillettidia*, Dyar, and *Mansonioides*, Theo., are represented by a few species in India, and include forms described by earlier writers under the genera *Panoplites* (Theobald, 1900, *Rept. on Coll. Mosq. Brit. Mus.*, p. 5), *Mansonia* (Blanchard, 1901, *Comp. Rend. Soc. Biol.*, Vol. LIII, p. 1046, n. nov. for *Panoplites*, Theo.), and *Chrysoconops* (Goeldi, 1905, *Os Mosq., no Para*, p. 114).

As regards the Indian species the two subgenera may be distinguished by the characters set forth below.

Subgenus *COQUILLETIDIA*, Dyar, 1905, *Proc. Ent. Soc. Wash.*,
Vol. VII, p. 47.

Yellowish mosquitoes of moderate size resembling some species of *Ædimorphus* in the form of the male palpi, which are slightly longer than the proboscis, the last two segments subequal in length, turned downwards and bearing hair tufts. There are usually 5 to 7 proepimeral bristles, 4 or 5 on the lower part of the sternopleura, 3 or 4 on the upper part, about 12 upper mesepimeral, and

usually one lower mesepimeral bristle in the female of *T. (C.) crassipes*. (I have not been able to examine females of other species in the subgenus at present.) Wing scales narrow and lanceolate. Tarsal claws of the fore and mid legs of the males unequal in size, the larger with a tooth, those of the female (*crassipes*) equal and simple (in *Aëdimorphus* both claws of the fore and mid legs of the male and female are usually toothed). Hypopygium of the male: a large basal lobe on the anal surface of the side-piece bearing two rod-like processes, one heavily chitinised, the other thin and transparent, clasper large and of different shape in each species, with a small terminal appendage, phallosome with chitinised lateral plates joined by thin chitinisation dorsally, the lateral plates with very small teeth at the sides and at the apices, parameral plate, and basal apodeme, moderately developed, anal segment largely composed of membrane but with heavily chitinised teeth at the crown and a small number of minute hairs. In *T. (C.) crassipes* the 8th sternite is greatly developed and is much larger than the tergite (Plate XXI, fig. 3), but this is not the case in the other two species examined. I have assumed that the 8th segment rotates with the hypopygium as is the case in several other genera which have been investigated. Hypopygium of the female: 8th tergite without teeth (*vide* remarks on the characters of the subgenus *Mansonioides* given below).

Subgenus *MANSONIODES*, Theobald, 1907, *Mon. Cul.*, Vol. IV, p. 498.

The Indian species belonging to this subgenus are different in appearance, and in certain points of structure, from those belonging to the subgenus *Coquillettidia*. They are brownish or blackish mosquitoes with pale markings on the femora and tibiæ and well marked white rings on the tarsi. In two species there are round white spots on the mesonotum. Wings speckled, the scales very broad and asymmetrical. Palpi of the males much longer than the proboscis and turned upwards, the terminal segments minute, no distinct hair tufts. Pleural bristles numerous in the females, from 9 to 15 proepimeral, 10 to 20 post-spiracular, 12 to 18 upper mesepimeral, and from 4 to 9 towards the lower part of the mesepimeron. Hypopygium of the male: the two species examined differ considerably in the shape of the clasper and of the processes on the basal lobe of the side-piece (*vide* descriptions and figures). The phallosome is scoop-shaped, thinly chitinised, and without distinct lateral plates, a few minute teeth at the apex. Hypopygium of the female: 8th tergite armed with a number of strong thorn-like spines.

Mansonioides

Tæniorhynchus (Coquillettidia) crassipes (van der Wulp).

Culex crassipes, van der Wulp in Snelleman, 1892, *Bijd. der Fauna van Midden Sumatra, Dipt.*, p. 9.

Tæniorhynchus brevicellulus, Theobald, 1901, *Mon. Cul.*, Vol. II, p. 212.

Chrysoconops pygmaeus, Theobald, 1908, *Rec. Ind. Mus.*, Vol. II, p. 300.

Chrysoconops fuscopterum, Theobald, 1911, *Tyjd. v. Ent.*, Vol. LIV, p. 239.

A yellowish species; proboscis, hind tibiæ and tarsi dark brown with violet reflections, violet scales on the first four or five abdominal tergites.

Description of male and female (one hundred and twenty specimens examined).

Head: covered with narrow and upright forked yellow scales, bristles yellow. Antennal hairs brownish. Palpi and proboscis dark with violet reflections. Palpi of the male longer than the proboscis by about the length of the terminal segment, the latter about half the length of the penultimate segment, these two terminal segments moderately hairy and turned slightly downwards. Palpi of the female between one-quarter and one-third the length of the proboscis.

Thorax: integument yellowish, darker in some specimens, a rather sparse covering of narrow yellow scales and bristles. Scutellum devoid of scales in most specimens, a few hair-like yellow scales in others, bristles yellow. Two patches of silvery white flat scales on the pleuræ, one on the upper part of the mesepimeron, one on the lower part of the sternopleura, integument usually brownish or dark yellowish and without pronounced markings.

Wings: dark scaled, a few yellowish scales at the extreme base in some specimens, membrane with pronounced purple, blue, and green reflections. Wing length, male about 3.6 mm., female up to 4.9 mm. in the larger specimens.

Legs: femora yellowish at the base, purplish on the apical half, some silvery scales in the middle of the hind femur on the anterior surface, tibiæ and tarsi dark with purple reflections, those of the fore and mid legs yellowish when seen in certain positions, no distinct pale rings.

Abdomen: tergites of the first four or five segments covered with purple scales, those of the terminal segments usually yellow scaled, but there is a good deal of variation and in some specimens there are very few yellow scales on the dorsum, in others there are yellow scales at the base of the 2nd, 3rd, and 4th segments, and the 5th, 6th and 7th are entirely yellow.

Male hypopygium: the structure of the various parts are shown in Plate XXI, figs. 3 to 7. There is a tuft of long hairs on the 7th sternite.

Specimens from the following places have been examined either by Mr. F. W. Edwards or by me:—

Punjab:—Amritsar, September 1914 (*Col. C. A. Gill*); Rawalpindi, June and July 1917 (*Hodgart*).

Bombay:—Parel, December 1919 (*Christophers*).

Bengal:—Adra, Manblum district, October 1909 (*J. T. Jenkins*); Madhupur, October 1909 (*Paiva*); Katihar, Purneah district, May 1910 (*Paiva*); Diamond Harbour, December 1919 (*Christophers*); Chittagong and Rangamati, August 1922 (*Barraud*).

Orissa:—Balugaon, Puri district, July 1913 (*Annandale*).

Andaman Islands:—Port Blair, September 1911 (*Christophers*).

Assam:—Mangaldai, October 1910 (*Kemp*); Khuntai, January 1911 (*Christophers*); Dibrugarh, November 1911 (*Kemp*); Nongpoh and Dimapur, July 1922 (*Barraud*); Golaghat, November and December 1924, and April 1925 (*Barraud*); Gauhati, March 1925 (*Barraud*).

Burma:—Rangoon, January 1920 (*Christophers*); Myitkyuri (*Civil Surgeon*).

The type of *C. crassipes* is in the Leiden Museum, from Soeroelangoen, Sumatra; the types of *T. brevicellulus* are in the British Museum from Burma

and Malay; the type male and female of *C. pygmaeus* are in the Indian Museum, the former from Purneah, North Bengal (*Paiva*), the latter from Sylhet, Assam (*Major Hall*); and the type female of *C. fuscopteron* is in the Amsterdam Museum from New Guinea (*Dr. Koch*).

Mansonina

Tæniorhynchus- (Coquillettidia) novoctraceus sp. n.

A yellow species resembling *T. (C.) ochraceus* but differing in the following particulars:—integument of the mesonotum uniformly yellowish-brown except for a dark brown area in front of the wing root, integument of the pleuræ yellowish with two longitudinal brown stripes, tarsi with apical brown rings. It is evidently closely related to *T. (C.) giblini* Taylor, another Oriental species which has not at present been found in India, but differs from the description of that species (*Trans. Ent. Soc.*, 1914, p. 198) in the markings of the thoracic integument and legs, and in having the wings entirely yellow scaled in the male.

Description of male.

Head: covered with narrow and upright forked golden scales, a few pale border scales low down at each side but these are not apparently continued along the eye margins. Antennal shaft and plume hairs yellowish, the hairs brownish towards the tips when seen in certain positions, the flagellar segments distal to the plumes brown. Palpi longer than the proboscis by nearly the length of the apical segment, the last two segments about equal in length, the long segment yellow scaled, some brown scales and long yellow hairs at the tip, the last two segments with tufts of yellowish brown hairs, scales brown except for a yellow ring at the base of the penultimate segment. Proboscis yellow scaled, the tip dark brown.

Thorax: integument of the mesonotum yellowish brown, a short brown stripe in front of the wing root, a vestiture of narrow golden scales and bristles. Integument of the scutellum entirely pale (lateral lobes not black as in *T. (C.) giblini*), bristles yellow, a few hair-like narrow scales on the mid lobe. Pleuræ yellowish, a dark brown stripe from the posterior edge of the proepimeron to the posterior edge of the mesepimeron, another smaller dark area between the lower part of the mesepimeron and the coxæ of the mid and hind legs, a few lanceolate pale yellow scales on the sternopleura immediately below the longer brown stripe.

Wings: entirely yellow scaled, length 4 mm.

Legs: femora with a vestiture of golden scales, a more or less complete dark brown or black ring near the apex of each, the actual tip narrowly golden (Taylor does not mention dark rings on the femora in his description of *giblini*), scattered brown scales on the anterior surface of the mid femur, tibiæ of the fore and mid legs golden with numerous brown scales chiefly on the anterior and outer sides and especially towards the tips, tibia of the hind leg with a narrow dark brown ring at the base and a dorsal mark of similar colour at the tip; tarsi of the fore and mid legs golden yellow with narrow apical brown rings to all the segments, the first segment of the hind tarsi similarly marked, the following segments with much wider brown rings, the basal half or less of each segment yellow.

Abdomen: integument of the tergites dark brown, almost completely covered with golden scales, venter paler and also yellow scaled.

Male hypopygium: the basal parts and processes of the basal lobe are very similar to those of *T. (C.) crassipes*, but the clasper is of a different shape (compare Plate XXI, figs. 2 and 3).

The type male (unique) is in the Central Malaria Bureau collection, Kasauli, from Nongpoh, Assam, July 1922, caught in jungle (Barraud).

Tæniorhynchus (Coquillettidia) ochraceus Theo.

Tæniorhynchus ochraceus, Theobald, 1903, *Mon. Cul.*, Vol. III, p. 263.

Mansonia chrysogona, Knab, 1909, *Ent. News, Phil.*, Vol. XX, p. 368.

There is only one specimen of this species in the Central Malaria Bureau collection. It is a male and in poor condition and the legs are missing. I am informed that there are no specimens in the Indian Museum collection. Some notes on the species are given here, and further details will be published when more material has been collected. It resembles *T. (C.) novochraceus* described above in the general golden yellow colour but there are no brown markings on the integument of the mesonotum or pleuræ, these parts as well as the scutellum being uniformly pale. According to the original descriptions of *ochraceus* and *chrysogona* by Theobald and Knab, in the references given above, there are black rings on the hind legs at the apex of the femur, and base and apex of the tibia; the tarsi of all the legs are brownish except the basal half of the first segment of the hind leg.

The male genital clasper is more elbowed than that of *novochraceus* (compare Plate XXI, figs. 1 and 2).

The single specimen I have examined is from Gauhati, Assam, 9th May 1920 (*Bainbrigge Fletcher*). It has been recorded from Cherrapunji, Assam, October 1920 (*R. Senior-White*), and there is mention of one specimen in some manuscript notes kindly supplied to me by Mr. F. W. Edwards which was caught 'on board launch at light, Bossandhur, Khulna district, Ganges Delta, 21st August 1919 (*J. T. Jenkins*).'

The type female of *T. ochraceus* is in the British Museum, from Kuala Lumpur, Malay Peninsula (*Dr. Durham*). The types of *M. chrysogona* are in the United States National Museum from Parang, Mindanao, Philippine Islands.

Tæniorhynchus (Mansoniodes) annuliferus (Theo.).

Panoplites annulifera, Theobald, 1901, *Mon. Cul.*, Vol. II, p. 183.

Mansonioides septemgutta, Theobald, 1907, *Mon. Cul.*, Vol. IV, p. 499.

Thoracic scales yellowish, four distinct round white spots on the disc and three other less distinct white spots at about the level of the wing roots. Distinguished from *T. (M.) annulipes* by the lighter colour and smaller size.

Description of male and female (sixty-five specimens examined).

Head: some white scales along the eye margins and at the sides, the vertex and nape covered with narrow yellow and numerous yellowish upright forked scales. Palpi of the male yellowish, with two white rings on the long segment, a white ring at the base of the penultimate, the short apical segment entirely white:

the terminal segments bend upwards and the palpi are one-and-a-half times the length of the proboscis, or in other words they are longer than the proboscis by nearly the length of the last two segments, the apical segment is very short and is only one-fifth the length of the penultimate. Palpi of the female yellowish at the base, broadly white at the tips, and nearly one-third the length of the proboscis. Proboscis in both sexes yellowish, the apical one-third darker.

Thorax: mesonotum covered with narrow yellow or golden scales. Two conspicuous round white spots near the front margin, another pair at about the middle of the thorax, and three others less distinct at about the level of the wing roots. Scutellar scales white, broad on the mid lobe, narrow on the lateral. Narrow white scales on the proepimeron and patches of broader white scales on the pleuræ.

Wings: scales very broad and asymmetrical, yellowish and dark brown fairly evenly mixed, giving the wing a speckled appearance. Wing length, male about 3.2 mm., female 4 mm.

Legs: yellowish marked with numerous snowy white rings, about five rings on each femur, the knees also white, fore tibia with four or five rings, the apex also white, tibiæ of the mid and hind legs similarly marked but less conspicuously white at the tips, a medial white ring on the first tarsal segment of all the legs, and a basal white ring to this segment on the mid and hind legs, similar basal rings on the 2nd and 3rd tarsal segments of the fore and mid legs and on the 2nd to the 5th segments of the hind legs.

Abdomen: clothed with yellowish or brownish and white scales, the white scales arranged chiefly in lateral patches.

Male hypopygium: the basal lobe of the side-piece carries three short spines, there are no specialised bristles on the dorsal border of the side-piece such as are present on this structure in *T. (M.) uniformis*; the clasper is divided into two arms a short distance from the base. The structure of the various parts are shown in Plate XXII, figs. 8 to 10.

It is possible that the species described by Laveran under the name *Mansonia sequini* (*C. R. Soc. Biol.*, Vol. LIII, p. 991, 1901) is the same as the one described here.

Specimens have been examined from the following places:—

Bengal:—Diamond Harbour, December 1919 (*Christophers*); Chittagong, August 1922 (*Barraud*).

Orissa:—Cuttack, January 1923 (*S. Sundar Rao*).

Nilgiri Hills:—Conoor, October 1915 (*Khazan Chand*).

Assam:—Nongpoh, November 1921 (*Christophers*); Golaghat, December 1924 (*Barraud*); Gauhati, March 1925 (*Barraud*).

Burma:—Rangoon, January 1920 (*Christophers*); Thayetmyo, August 1925 (*W. J. S. Ingram*).

The type specimens of *P. annulifera* and of *M. septemgutta* are in the British Museum, the former from Madras (*Goodrich*) and Quilon, Travancore (*James*), and the latter from Sarawak (*Dr. Barker*).

Tæniorhynchus (Mansonioides) annulipes (Walk.).

Culex annulipes, Walker, 1857, *Proc. Linn. Soc., London*, Vol. I, p. 5.

Culex longipalpis, van der Wulp in Snelleman, 1892, *Bijd. der Fauna van Midden Sumatra, Dipt.*, p. 9.

A larger and darker species than *T. (M.) annuliferus*, thoracic scales dark brown, three distinct round white spots on the disc of the mesonotum.

Description of female (fourteen specimens examined).

Head: narrow white scales along the eye margins, vertex and nape covered with narrow and upright forked scales of a dark brown colour. Palpi about one-third the length of the proboscis, dark brown with conspicuous white tips. Proboscis yellow for about one-third of the length in the middle, the basal and apical thirds dark brown with scattered yellow scales.

Thorax: mesonotal scales dark brown, a pair of round white spots formed of broad scales on either side of the disc towards the front, another white spot formed of narrow scales in front of the ante-scutellar space, some narrow white scales on the front margin, which, in some specimens, form three small white patches, a few broad white scales on the margin of the mesonotum in front of the wing root. In some specimens there are also some narrow white scales on the disc along the suture. Mesonotal bristles numerous and stout, dark brown or black. Scutellar scales silvery white and narrow on all the lobes. Both narrow and broad white scales on the proepimeron, three other patches of broad white scales on the pleuræ.

Wings: the shape of the scales and the speckled appearance of the wing are very similar to those of *T. (M.) annuliferus*, but there are usually a few white scales at the extreme base of the costa. Wing length 4.5 mm.

Legs: dark brown with numerous white rings which have much the same arrangement as in *T. (M.) annuliferus*. The markings on the femora are not usually so distinct with the exception of one pre-apical white ring which is nearly always pronounced and passes completely round the leg.

Abdomen: dorsum dark brown or black, a few yellow scales at the base of the first and second tergites in the middle, small lateral patches of white and yellow scales on the 2nd, 3rd, 5th and 6th segments, a few white scales usually on the 4th tergite at the hind border, the 7th and 8th segments nearly always hidden.

I have not at present seen a male of this species.

It is possible that the species described by Theobald under the name *Mansonia septempunctata* (*Ann. Mus. Nat. Hung.*, Vol. III, p. 187, 1905) is the same as *T. (M.) annulipes*.

Specimens have been examined from the following places:—

Bengal:—Rangamati, August 1922 (*Barraud*).

Orissa:—Cuttack (*S. Sundar Rao*).

Assam:—Margherita, May 1920 (*Fletcher*); Nongpoh and Dimapur, July 1922 (*Barraud*).

Nilgiri Hills:—Coonor, October 1915 (*Khazan Chand*).

Burma:—Hanzay Basin, Tavoy (*R. B. S. Sewell*); Myitkyina, September 1914 (*Major Bennett*).

Also recorded from Gauhati and Burnihat, Assam, October 1920 (*R. Senior White*).

The type female of *C. annulipes* is, I believe, in the British Museum, from Singapore (*A. R. Wallace*); the type females of *C. longipalpis* are in the Leide Museum, from Alahan Pandjang and Soeroelangoen, Sumatra.

✓ ***Tæniorhynchus (Mansonioides) uniformis* (Theo.).**

Panoplitis uniformis, Theobald, 1901, *Mon. Cul.*, Vol. II, p. 180.

This resembles the other two species of the subgenus in the scaling of the wings and banding of the legs, but may be distinguished from them by the absence of white spots on the mesonotum.

Description of male and female (one hundred specimens examined).

Head: palpi of the male rather more than one-and-a-quarter times the length of the proboscis, the apical segment very short and only one-eighth to one-seventh the length of the penultimate; two pale rings on the long segment, one at the base of the penultimate, the apical segment entirely pale. Palpi of the female more than one-third the length of the proboscis (in dried specimens the palpi are often shrivelled and appear shorter), usually yellowish at the apex but not white tipped as in the other two species. Proboscis marked as in *T. (M.) annuliferus*.

Thorax: mesonotal scales brown, a pair of sublateral yellowish or greenish stripes from the front margin to the wing roots, a similar median stripe from the front to the scutellum; these stripes are not always very pronounced, especially in the male. Scutellar scales narrow and yellowish. Pleuræ usually pale brown with darker patches on the proepimeral and post-spiracular areas.

Wings: very similar in appearance to the other two species, length, male 3.8 mm., female 4.5 mm.

Legs: hind femur with four or five oblique pale markings on the anterior surface, similar but less definite markings on the fore and mid femora; pale tibial markings yellowish and indefinite; tarsal markings similar to those of *T. (M.) annuliferus*, but the pale rings are yellowish instead of pure white.

Abdomen: dorsum dark brown, yellowish apical bands in some specimens, lateral white and yellow patches.

Male hypopygium: a very large process on the basal lobe, a row of specialised bristles on the dorsal border of the side-piece, clasper large and without a terminal appendage. The structure of the various parts are shown in Plate XXII, figs. 11 to 14.

Specimens have been examined from the following places:—

Bengal:—Chittagong, August 1922 (*Barraud*).

Orissa:—Cuttack (*S. Sundar Rao*).

Madras:—Guindy, March 1914 (*Patton*).

Nilgiri Hills:—Conoor, October 1915 (*Khazan Chand*).

Malabar Coast:—Pudupadi, October 1915 (*Khazan Chand*).

Cochin:—Ernakalam, November 1908 (*Annandale*).

Ceylon:—Colombo (*James*).

Assam:—Nongpoh, November 1921 (*Christophers*), July 1922 (*Barraud*); Dimapur, July 1922 (*Barraud*); Golaghat, December 1924, February, April, November and December 1925 (*Barraud*); Gauhati, October 1920 (*R. Senior-White*), March 1925 (*Barraud*).

Burma:—Rangoon, January 1920 (*Christophers*); Kawlin, July 1923 (*E. S. Feegrade*).

The following additional localities are given in some MSS notes kindly supplied to me by Mr. F. W. Edwards:—

Bengal:—Matla, November 1909 (*Jenkins*); Port Canning, December 1910 (*Graveley*); Katihar, Purneah district, May and August 1910 (*Paiva*); Bhogaon, Purneah district, October 1908 (*Paiva*).

Bihar:—Kierpur, Purneah district, October 1915 (*Paiva*).

Orissa:—Balugaon, Puri district, July 1913 (*Annandale*).

Burma:—Myitkyina, October 1914 (*Major Bennett*).

Bombay:—Parel, November 1909 (*Mus. collr.*).

The type females of *P. uniformis* are in the British Museum, from Quilon, Travancore (*James*), and Taiping, Perak (*Wray*).

There seems to be a probability that *T. (M.) africanus* (Theo.), which is very similar to *uniformis*, occurs in India. The former differs from *uniformis* in the absence of pale stripes on the mesonotum, the scales being uniformly dark brown. I have not at present seen any males which differ in hypopygial details from *uniformis*.

EXPLANATION OF PLATE XXI.

Camera lucida drawings illustrating the structure of the male hypopygia of the Indian species of *Taniorhynchus*, subgenus *Coquillettidia*. All the figures are drawn to the scale shown under Fig. 3.

- Fig. 1. *T. (C.) ochraceus*, clasper.
,, 2. *T. (C.) novochraceus*, „
,, 3. *T. (C.) crassipes*, dorsal view of the hypopygium.
 A 8 T. Apical border of the 8th tergite.
 8 S. 8th sternite (shaded).
 B 8 S. Border of the 8th sternite seen through the side-piece.
 A 8 S. Apical part of the 8th sternite.
 9 T. 9th tergite.
 A S. Anal segment.
 CR. Crown of ditto.
 C. Clasper.
,, 4. *T. (C.) crassipes*, ventral view of the basal parts of the hypopygium.
 S. Side-piece.
 BA. Basal apodeme.
 PP. Parameral plate.
 P. Phallosome (shaded).
 HF. Harpaginal fold.
,, 5. „ Basal apodeme (flat preparation).
,, 6. „ Phallosome, side view.
,, 7. „ One side of the anal segment, side view.

PLATE XXI.

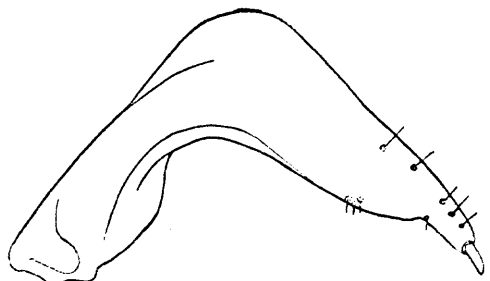


Fig. 1

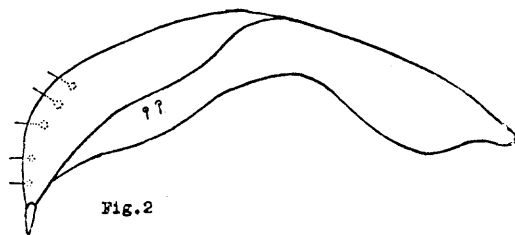


Fig. 2

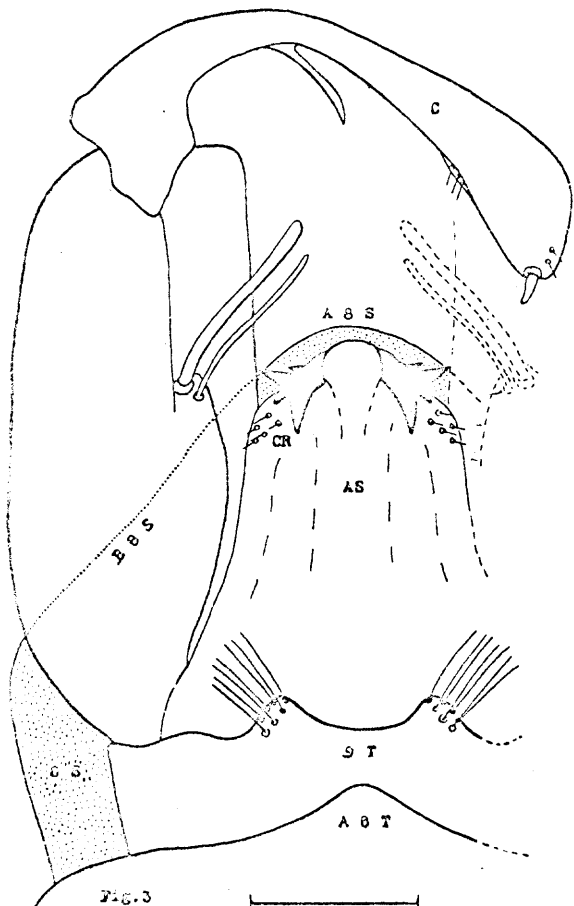


Fig. 3

0.1 mm.

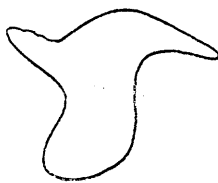


Fig. 5



Fig. 6

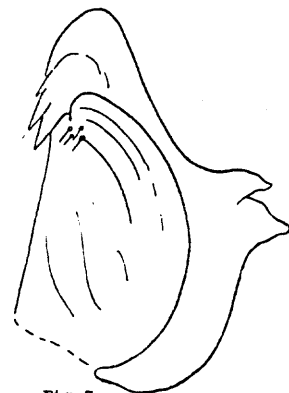


Fig. 7

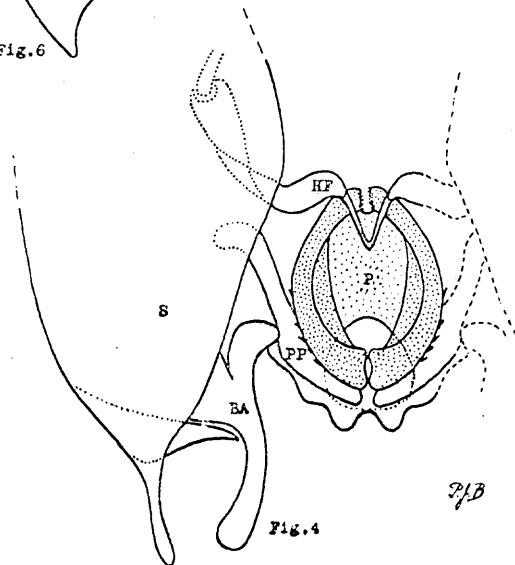


Fig. 4

2/B

PLATE XXII.

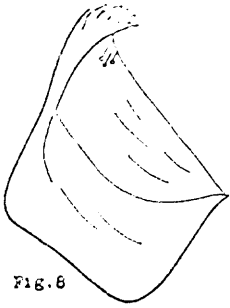


Fig. 8



Fig. 11

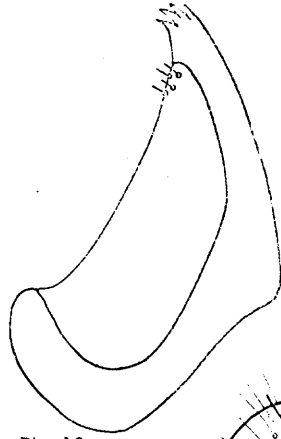


Fig. 12

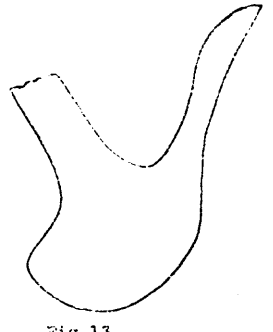


Fig. 13

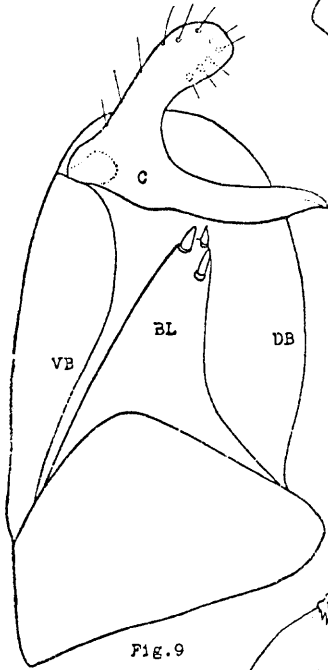


Fig. 9

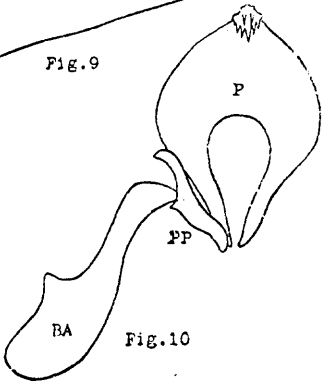


Fig. 10

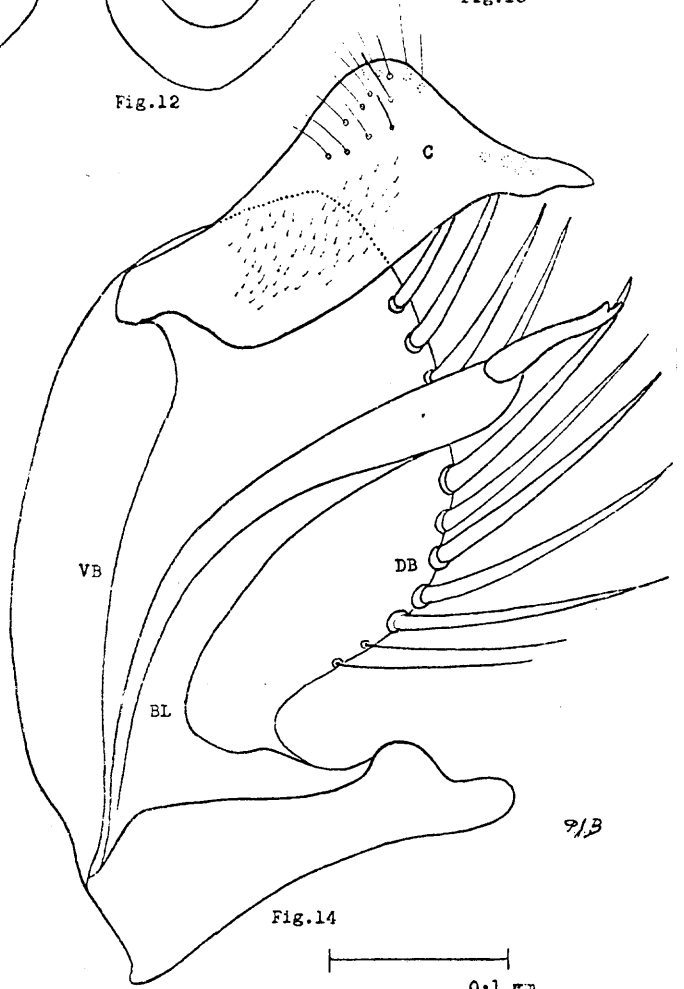


Fig. 14

0.1.M.M.

9/3

EXPLANATION OF PLATE XXII.

Camera lucida drawings illustrating the structure of the male hypopygia of the Indian species of *Teniorhynchus*, subgenus *Mansonioides*. All the figures are drawn to the scale shown under Fig. 14.

- Fig. 8. *T. (M.) annuliferus*, plates of the anal segment, side view.
" 9. " " inner view of the side-piece.
C. Clasper.
DB. Dorsal border of side-piece.
BL. Basal lobe.
VB. Ventral border of side-piece.
" 10. " " phallosome (P), parameral plate (PP), and basal apodeme (BA).
" 11. *T. (M.) uniformis*, phallosome, side view.
" 12. " " plates of anal segment, side view.
" 13. " " basal apodeme (flat preparation).
" 14. " " inner view of the side-piece, lettering as in Fig. 9.