

Seals*, might easily and naturally produce a large number of small separate teeth, united to each other in embryonic stages but separate in after life. The different laminae of the elephant's molars, produced, as we know, simply by hypsodontism, are perfectly separate from one another until just before eruption, and might easily come up as separate teeth did the needs of the animal require it. And in the Cetacea the gradual lengthening of the separate cusps, combined with firstly the later and later development, and finally the total disappearance, of the connecting "crown," would be a *modus operandi* so simple and so much in accord with what is now going on in many instances, that I think the balance of probability is rather in its favour as compared to the theory of multiplication based on spasmodic fission †. It is, however, difficult to see how the relative claims of the two suggestions can be adjusted, for Dr. Kükenthal's observations are equally consistent with either, and direct palæontological evidence on the subject we can hardly hope to obtain.

Dr. Kükenthal's suggestion of the converse of the fission process, *i. e.* the fusion of separate teeth, as a means whereby the comparatively few and compound teeth of Mammals might have sprung from the many simple teeth of Reptiles, strikes me, on the other hand, as being by no means so happy. Not only is its *modus operandi* almost inconceivable, and quite unlike anything that is now going on, so far as we can see, but it is also quite uncalled for, as the number of teeth in the primitive Mammalia, commonly from 14 to 16 on each side of each jaw, so far from being much less, is actually more than that found in many of the Anomodontia ‡, certainly the

* *E. g.* *Opnochinus*.

† Indeed this process is by no means necessarily very gradual or slow, for within the single genus *Procarina* we have both brachyodont and hypsodont species, while the closely allied genera *Gerbillus*, *Meriones*, and *Rhombomys* present us, in the order named, with a complete transition from brachyodont *Mus*-like teeth to perfectly hypsodont, rootless, ever-growing teeth, with the laminae entirely distinct from one another throughout. The close alliance of these genera in other respects shows in how short a period of geological time such great dental changes may take place.

‡ The striking fact observed by Dr. Kükenthal of the identity in number of the cusps of the young compound teeth with the total number of the adult simple teeth is decidedly in favour of the method now suggested, but, on the other hand, the appearances presented by the teeth of the early Cetaceans, such as *Synalodon*, seem to be on the whole more suggestive of fission than development by hypsodontism.

§ Of the Dicynodontia there are either no marginal teeth at all or only a single pair, while of the Theriodontia *Cynosuchus* has 11 or 12, *Elurosaurus* 8 to 10, and *Lycosaurus* 9 or 10, while *Empetias* has 14 to 16 and *Titanosuchus* 16 or 17 on each side of each jaw. See Lydekker, Cat. Foss. Rept. B. M. iv. pp. 71-101 (1890).

most Mammalian of all the Reptilia. This fact is alone sufficient to discredit Dr. Kükenthal's theory.

Dr. Kükenthal seems to credit the advocates of primitive monophyodontism with supposing that the present single dentition of the Cetacea is an unmodified survival of the earliest monophyodont condition; but this is not the case, that view having never been taken, so far as I know, by any one but Baume, and by him on the basis of a wholly different theory. I myself* have supposed the ancestors of the Cetacea to have passed through a more or less diphyodont stage, and to have afterwards lost one of their two sets of teeth.

Dr. Kükenthal is to be congratulated on the brilliant results that have attended his investigations, and I trust that he will continue his efforts to find out the true homologies of the different teeth, and thereby facilitate the work of those who for systematic purposes need to have correct names under which these important organs can be compared and described.

XLIX.—On some undescribed Cicadidæ, with *Synonymical Notes*. By W. L. DISTANT.

I HAVE had submitted to me for identification a number of species belonging to this family contained in the collections of the South-African Museum at Cape Town and the Australian Museum at Sydney. The new species from these sources and others which I have recently received are here described, with a few synonymical notes and corrections resulting from some perfunctory and hasty work in other quarters. The legacy of bewilderment left to students of the Cicadidæ by the late Mr. Francis Walker is already so sufficing that it is earnestly to be hoped that such difficulties be not increased by other writers unfamiliar with the family. Like all other zoological groups Cicadidæ require study, but have, unfortunately perhaps, been as much obscured in printed matter as has proved to be the fate of most families of the Rhynchocha.

CICADINÆ.

Pæciopsaltria Trimeni, sp. n.

Head and pronotum fulvous and moderately pilose, meso-

* *T. c.* p. 458.

notum and abdomen black. Head with a rectangular hollow fascia on front, anterior margins of vertex angularly enlarged at junction with front, a transverse fascia between the eyes and the area of the ocelli, black. Pronotum with a central longitudinal fascia transversely extended anteriorly and posteriorly, the incisures and lateral margins black. Mesonotum with two obconical fasciæ on anterior margin, the basal cruciform elevation, a sinuated fascia connecting same with the obconical spots, and lateral and posterior margins ochraceous. Abdomen above moderately pilose, anterior margins of the tympana ochraceous, segmental margins clothed with ochraceous hairs. Body beneath and legs ochraceous; head, sternum, and opercula greyish; anterior margin of head, lateral margins (excluding extreme edge) of sternum, a basal spot to face, spots and streaks to femora and tibia, and some small central spots to abdomen, black.

Tegmina fulvous, mottled with dark fuscous, the venation ochraceous at base and subsequently piceous towards apex; costal membrane ochraceous, its base and the basal cell largely black. Wings black, the base irregularly ochraceous to about centre, the outer margins broadly pale hyaline and with a creamy white spot at the apex of the black coloration. Rostrum reaching the posterior coxæ, opercula moderately overlapping at centre.

Long. ♂ 26 millim.; exp. tegm. 80 millim.

Hab. S. Africa, Bushman Land (*Warden*). Cape Town Mus. and Coll. Dist.

The peculiar coloration of the wings will render this species easily recognizable.

Pecilotipsaltria Peringueyi, sp. n.

Closely allied to *P. Trimeni*, but differing in the following characters:—The head is more conical and less truncate in front, the lateral margins of the pronotum are more acutely angular in dilatation, the face is broader, the abdomen beneath with black fasciæ on the segments, and the wings without the ochraceous basal area, being wholly black, with the exception of the creamy white spot near apex and the broad pale hyaline outer margins.

Long. ♂ 24–26 millim.; exp. tegm. 68–78 millim.

Hab. S. Africa, Damara Land (*G. Tatton*). Cape Town Mus. and Coll. Dist.

Thopha sessiliba, sp. n.

Body above dark ochraceous. Head with the margin of

front and a broad fascia between the eyes pale castaneous. Pronotum with the incisures pale castaneous, the lateral and posterior margins stramineous. Mesonotum with four obconical castaneous spots, the central pair smallest. Abdomen above castaneous, the base ochraceous, the apical segment thickly greyishly pilose. Body beneath ochraceous; the face, fascia between face and eyes, legs, abdomen, and inflated tympana castaneous; anterior margins of tympana beneath ochraceous.

Tegmina and wings pale hyaline, the venation ochraceous, becoming darker towards apices. Tegmina with the costal membrane and the basal cell ochraceous; anterior margin of basal cell and anterior margin of claval area dark castaneous; claval area pale sanguineous.

Long., excl. tegm., ♂ 42 millim.; exp. tegm. 126 millim.

Hab. Australia, Sydney.

This species differs from *Thopha saccata*, A. & S., the only other described species of the genus, by the much more strongly sessile eyes, a character alone which will instantly separate the species. Besides this structural feature, the colour is much paler, the body almost glabrous above, and not pilose as in *T. saccata*; the head, sternum, and opercula beneath ochraceous and not very dark castaneous, and the abdomen is narrower and more attenuated.

Tribenixæ.

Graptotettix thoracica, sp. n.

Head, pronotum, and mesonotum bright pale ochraceous, abdomen pale sanguineous. Eyes fuscous. Pronotum with the posterior, lateral, and anterior (as far as behind eyes only) margins castaneous, and with two jet-black central, discal, curved fasciæ. Mesonotum with four pale castaneous obconical fasciæ, the central pair smallest. Abdomen above ochraceous near base. Body beneath and legs sanguineous; head beneath, anterior coxæ, and lateral margins of sternum ochraceous; spots on coxæ black. (In the specimen described the apex of one posterior femur and its tibia is almost black, the other posterior leg is uniformly sanguineous.) Tegmina and wings pale hyaline, more or less completely tinged with castaneous (in the specimen described more so on one tegmina and wing than on the other), the venation ochraceous or castaneous.

Long., excl. tegm., ♂ 28 millim.; exp. tegm. 75 millim.

Hab. Burma, Momei.

This is a Burmese representative of the genus, hitherto only represented by a single Himalayan and Chinese species, *G. guttatus*, Stål. From this species it is differentiated by its totally different colour and markings of pronotum; the front of the head is also more angulated and the face more angularly tumid.

Mogannia effecta, sp. n.
Mogannia effecta, Walk., MS.

Body and legs very dark bluish black; tegmina with the basal half bluish black, this colour broadly margined at base, costal area, claval area, and just before its extremity with sanguineous.

Var. *a*.—The black area of tegmina streaked with pale fuscous and the sanguineous margin to same very dull on costal area and almost absent on claval area.

Var. *b*.—The venation in black area of tegmina sanguineous and concolorous with the surrounding margin.

Long., excl. tegm., 17–19 millim.; exp. tegm. 42–48 millim.

Hab. North-east India, Sumatra.

This is a common North-Indian species and of a very distinctive pattern and coloration of tegmina.

Baturia bicolorata, sp. n.

Head, pronotum, and mesonotum pale greenish; abdomen warm ochraceous, its apex green. Eyes pale fuscous. Head beneath, sternum, and legs pale greenish, abdomen beneath ochraceous. Tarsi ochraceous.

Tegmina and wings pale hyaline, the venation greenish or ochraceous; costal membrane of tegmina and the extreme bases of tegmina and wings pale greenish.

Rostrum reaching posterior coxæ, with its apex black; anterior femora with three distinct spines.

Long., excl. tegm., ♀ 23 millim.; exp. tegm. 65 millim.

Hab. New Guinea, Fly River. Austr. Mus., Sydney, and Coll. Dist.

A *Baturia* of striking bicoloration, of which at present I have only seen two female examples.

Tibicen (Quintilia) Wealei, sp. n.

Body above and beneath with the legs black; body beneath with a broad, lateral, pale ochraceous fascia on each side

extending from eyes, to apex of abdomen. Head with the eyes brownish ochraceous and a small ochraceous spot at base. Pronotum with a central, elongate, ochraceous spot and with the incisures brownish. Cruciform elevation at base of mesonotum ochraceous, black at centre and near its apices. Apices of femora and base of tibiæ narrowly ochraceous. Tympana, opercula, and three indistinct longitudinal series of very small spots to abdomen (one central, the other two lateral) dull greyish.

Tegmina and wings hyaline, the tegmina slightly infuscate, the venation black dotted with ochraceous; transverse veins at the bases of apical areas broadly and darkly infuscated, and a series of dark blackish marginal spots at the apices of longitudinal veins to apical areas; wings with an angulated blackish fascia situate on the transverse veins at the bases of the apical areas; wings and tegmina narrowly ochraceous at base.

The rostrum just passes the intermediate coxæ, the anterior femora have two large and robust spines and a third, small and indistinct, near apex; the head is broad and between the eyes is moderately truncate.

Long., excl. tegm., ♂ 19 millim.; exp. tegm. 45 millim.

Hab. S. Africa (*Mansel Weale*).

This species is allied to *T. (Quintilia) vitripennis*, Karsch, from which it is distinguished by the dark central fascia to the wings; in general appearance it somewhat resembles the Indian species *T. subvittata*, Walk.

MASUPHA, gen. nov.

Allied to *Cicadatra*. This genus is to be recognized principally by the tegmina, in which the basal cell is large, broader at base than at apex, and not twice longer than its extreme breadth; the costal margin of the radial area is more or less curved and gibbous, and the inner ulnar area is distinctly broader at base than at apex.

Masupha ampliata, sp. n.

Body above blackish or very dark castaneous; head and thorax moderately pilose, more thickly so beneath than above. Head with a large ochraceous spot on the anterior margins of vertex adjoining front; eyes pale fuscous. Pronotum with the margins and a central longitudinal fascia ochraceous, the incisures brownish. Mesonotum with two central, linear, ochraceous fasciæ, which are thickened posteriorly, the lateral

margins very narrowly ochraceous and the cruciform elevation ochraceous, with its anterior margin blackish. Abdomen with almost the posterior halves of the segments ochraceous. Legs, rostrum (excluding apex), opercula, and central area of abdomen beneath ochraceous; streaks and spots to legs, outer basal angles of opercula, and the face castaneous.

Tegmina and wings pale hyaline and talc-like, their bases narrowly ochraceous, marked with fuscous; tegmina with the venation ochraceous or pale fuscous, the costal membrane and inner margin of claval area ochraceous, the transverse veins at the bases of second, third, and fourth apical areas infuscated, and some irregular fuscous spots or shadings on the longitudinal veins of the third, fourth, fifth, and seventh apical areas. Wings with the venation ochraceous and with some submarginal fuscous spots or shadings on the longitudinal veins to the third, fourth, fifth, and sixth apical areas.

Long., excl. tegm., ♂ 21 millim.; exp. tegm. 63 millim.
Hab. S. Africa, Ookiep. Cape Town Mus. and Coll. Dist.

A striking and uncommonly marked species; the pale wings and tegmina with their submarginal maculation, the ochraceously fasciated abdomen, and the gibbous costal margin to the radial tegminal area render it easily recognizable.

Masopha delicata, sp. n.

Very closely allied to the preceding species *M. amplata*, but differing by its larger size and much less gibbously produced costal margin to the radial area of the tegmina; the abdomen above is more ochraceous, with a large black basal spot, the front of the head is pale castaneous, with two central darker lines, the body is much more uniformly ochraceous beneath, and the submarginal spots to tegmina and wings are paler and more obscure.

Long., excl. tegm., ♂ 23-27 millim.; exp. tegm. 65-72 millim.

Hab. S. Africa, Ookiep and Bushman Land. Cape Town Mus. and Coll. Dist.

The two species above described are structurally distinct by the length and shape of the tegmina.

Callipsaltria bicolorata, sp. n.

♂. Body black; apical margins of vertex of head, pro-
notal margins, two very obscure obconical spots to meso-

notum, apices of cruciform elevation, apical margins of abdominal segments (some effaced), lateral margins of sternum, a spot at base of face, rostrum (excluding apex), and apex of abdomen beneath dull ochraceous; the rudimentary opercula greenish grey; legs black, spotted with ochraceous.

Tegmina and wings pale hyaline, the venation brownish or fuscous; costal membrane to tegmina ochraceous.

♀ (var.?). Transverse veins at the bases of second and third apical areas infuscated.

Long., excl. tegm., ♂ 20, ♀ 18 millim.; exp. tegm., ♂ 46, ♀ 45 millim.

Hab. S. Africa, V. Wyks Vley (*Alston*). Cape Town Mus. and Coll. Dist.

The largest of the species of *Callipsaltria* yet described.

Ptilotympa infuscata, sp. n.

Head and thorax above black; abdomen reddish, with the base and a central longitudinal fascia black; apical margins of front and apex of head, posterior and lateral margins of pronotum, two curved central fasciæ to mesonotum, connected with the cruciform elevation and posterior margins of abdominal segments, ochraceous. Body beneath and legs pale ochraceous and moderately pilose; sulcation and striations of face, streaks to femora and tibiæ, and some small coxal spots, blackish.

Tegmina and wings pale smoky hyaline, tegmina with the veins fuscous and with slight marginal infuscations; wings paler.

Long., excl. tegm., ♂ 17 millim.; exp. tegm. 38 millim.

Hab. S. Africa, Hex River Valley. Cape Town Mus. and Coll. Dist.

This species is allied to *P. fusiformis*, Walk., from which it can at once be separated by the infuscated tegmina.

Fidicina Mülleri, sp. n.

Head, pronotum, and mesonotum dark olivaceous, sometimes almost black; abdomen above blackish; body beneath and legs dark olivaceous or blackish and strongly pilose; apices of the femora and bases of the tibiæ narrowly pale ochraceous; posterior tibiæ pale olivaceous, with the apices pitchy; rostrum (excluding apex) pale olivaceous. Eyes olivaceous; body above sparingly pilose, lateral margins of the abdomen prominently greyishly pilose.

Tegmina and wings pale hyaline, the venation ochraceous

or fuscous; tegmina with the basal cell, costal membrane, postcostal area and base of claval area blackish; the transverse veins at the bases of the apical areas all darkly infuscated, and a submarginal series of small fuscous spots on the apices of the longitudinal veins to apical areas; wings with the base and half of anal area blackish, containing three ochraceous spots, the lowermost of which is somewhat bifid.

Long, excl. tegm., ♂ & ♀ 31 millim.; exp. tegm. 90 millim.
Hab. Brazil, Santa Catarina.

This species is allied to *F. pulcata*, Berg, but differs at once from the description of that species by the peculiar ochraceously-spotted black basal area of the wings.

The female now before me is much paler in coloration than the male.

Carineta tracta, sp. n.

♀. Head, pronotum, and mesonotum ochraceous; abdomen margins of vertex and the area of the ocelli black. Pronotum with a central subtriangular spot near base, with a small rounded spot on each side, black. Mesonotum with two central obconical spots, from which on each lateral margin a short line emerges, a central linear and two rounded spots in front of the cruciform elevation, a spot at the lateral margins, extreme basal margin, and a spot on anterior angles of basal cruciform elevation, black. Head beneath and sternum ochraceous, legs and abdomen beneath very dark castaneous; coxæ, apices of femora, bases of tibiae, and posterior tarsi (excluding apices) ochraceous; two central longitudinal fasciæ to face, a spot between face and eyes, base and apical half of rostrum, very dark castaneous.

Tegmina and wings pale hyaline, the venation ochraceous and fuscous; tegmina with the costal membrane ochraceous; wings with a rather large fuscous marginal spot at apex of anal area, and a short ochraceous and black marginal streak at basal margin of same.

Long, excl. tegm., ♀ 28 millim.; exp. tegm. 82 millim.
Hab. Ecuador.

A species somewhat allied to *C. postica*, Walk., by the markings of the wings, but differing from that species by the larger, more robust, and differently coloured and ornamented body, much wider pronotum, shorter and broader head, &c.

Carineta centralis, sp. n.

Body above castaneous and pilose; head with the eyes, a central spot to front, apical margins of vertex, and a spot at base greenish ochraceous. Pronotum with the margins, a central fascia bifurcate posteriorly, and with some ovate discal markings, greenish ochraceous. Mesonotum with two large obconical spots, beneath and bounding which is a large triangulated spot, the lateral margins and basal cruciform elevation, greenish ochraceous. Abdomen with three longitudinal greenish-ochraceous fasciæ, one central and two lateral. Head beneath, sternum, and legs ochraceous, body beneath dark castaneous; apices of rostrum and tarsi pitchy.

Tegmina and wings pale smoky hyaline; the venation brownish ochraceous; tegmina with two indistinct fuscous longitudinal streaks in each apical area, and a marginal series of fuscous linear spots. Wings with a central fuscous spot near end of radial area, the apical margin and inner basal margin of anal area infuscated, and an outer marginal series of fuscous linear spots.

Long, excl. tegm., ♂ 21 millim.; exp. tegm. 65 millim.
Hab. Ecuador.

Apart from other characters this species may be recognized by the central fuscous spot to the wings, which, with the fasciated abdomen, allies it to *C. brevitata*, Walk., from which, however, it differs by its larger size, absence of dark spots to tegmina, the more produced and conical frontal portion of head, uniformly narrow central sulcation to face, &c.

Carineta matara, sp. n.

♂. Body and legs warm dull ochraceous. Head with the basal margin and area of the ocelli black, the front with two marginal blackish streaks. Pronotum with a narrow, dark, central, longitudinal line, on each side of which is an obliquely curved and dentate black line, a short black streak near each lateral margin, and lateral and inner basal margins also black. Mesonotum with two central black-bordered obconical spots on anterior margin, on each side of which is a longer and more acute spot, a waved and pointed spot in front of the cruciform elevation, and a short black basal streak on each side of the same. Abdomen above and beneath with the lateral margins strongly and palely pilose. Beneath the anterior and intermediate coxæ are spotted with pale fuscous, and the abdomen is marked with a central longitudinal fascia of the same colour.

Rostrum with the apex fuscous and reaching the posterior coxæ.

Tegmina and wings pale hyaline, the venation dull ochraceous.

Long., excl. tegm., 15 millim.; exp. tegm. 46 millim.

Hab. Venezuela.

The most closely allied species to the one here described is *C. calidã*, Walk.

Melampusalta rosacea, sp. n.

♂. Head greenish ochraceous. Pronotum and mesonotum pale greenish, the last with two obscure obconical spots at anterior margin, and with two dark greenish but obscure fasciæ on each side. Abdomen rosy castaneous. Head and thorax beneath greenish ochraceous; legs pale greenish, with the apices of the tibiæ and the tarsi pale fuscous. Abdomen beneath paler than above, with the segmental margins narrowly ochraceous. Opercula pale greenish, obliquely directed inwardly, concavely narrowed on each side near base, and with their apices rounded.

Rostrum greenish ochraceous, its apex pitchy and just passing the intermediate coxæ. Anterior femora armed beneath with three strong spines.

Tegmina and wings pale hyaline, the first with the basal portion of venation greenish, remainder and that of wings pale fuscous.

Long., excl. tegm., 23 millim.; exp. tegm. 59 millim.

Hab. New Caledonia and Ruk Island.

A female specimen from New Caledonia now before me has the abdomen as dark beneath as above, with an obscure, central, longitudinal, pale fuscous fasciæ.

Melampusalta convicta, sp. n.

Body above brownish ochraceous. Head with the frontal margins and the area of the ocelli black. Pronotum with three small and very obscure black spots near anterior margin, the incisures also somewhat darker. Mesonotum with four obconical black spots, the outermost two very long, and two rounded spots in front of the anterior angles of the basal cruciform elevation, black. Abdomen with transverse fasciæ at the anterior segmental margins and a series of lateral marginal spots, black. Body beneath brownish ochraceous; the disk of lateral striations to face, apex of rostrum, and a basal spot to abdomen black; femora pale castaneous.

Tegmina and wings pale hyaline, the venation ochraceous; tegmina with the postcostal area infuscated.

Anterior femora with three distinct and robust spines, the apical one smallest. Abdomen (♂) very much attenuated to apex, which is also elongate.

Long., excl. tegm., ♂ 19 millim.; exp. tegm. 56 millim.

Hab. Norfolk Island.

A species to be superficially recognized by the attenuated abdomen and the infuscated postcostal area to the tegmina.

Melampusalta abdominalis, sp. n.

Body above black. Head with a central spot to front, apical margins of vertex, a central spot near base, and the eyes ochraceous. Pronotum with a central discal elongated spot, beneath which are two small transverse spots, ochraceous. A spot on each side of the cruciform elevation and the metanotal margin ochraceous. Abdomen with two oblique reddish ochraceous macular fasciæ on the last three segments, and in the female two elongate sulphureous spots at the base of the anal appendage. Head beneath and sternum black; a spot at base and the margins of face, a marginal spot near insertion of antenna, coxal margins, legs and abdomen beneath reddish ochraceous; longitudinal fasciæ to legs, the anterior tibiæ, tarsal claws, central basal spots, and a series of marginal spots to abdomen black.

Tegmina and wings pale hyaline, the venation blackish; costal membrane and postcostal area of tegmina ochraceous.

Long., excl. tegm., ♂ & ♀ 20 millim.; exp. tegm. 58-60 millim.

Hab. Australia, Victoria (*Stephen Barton*). Austr. and Tasmania Mus., Syd., and Coll. Dist.

In one varietal female specimen now before me the lateral ochraceous, macular, abdominal fasciæ extend over the last four segments, with a central spot of the same colour on the preceding segment.

This species is allied to *M. Landboroughi*, Dist., but is especially to be distinguished by the abdominal markings.

Melampusalta extrema, sp. n.

Head, pronotum, and mesonotum black. Abdomen ochraceous, with the basal margin and the two apical segments black; a central longitudinal spot to the penultimate segment and the posterior margin of the apical segment ochraceous. Head with the front excluding two marginal spots, anterior

marginal angles of vertex, and the ocelli ochraceous; eyes pale brownish. Pronotum with the margins, and a central longitudinal fascia, on each side of which are discal curved and transverse streaks, ochraceous. Mesonotum with two central fasciæ thickened posteriorly, the lateral margins and basal cruciform elevation (excluding anterior angles and central margins) ochraceous. Body beneath and legs ochraceous, femora streaked with castaneous; a broad central fascia to face, head beyond face, coxal fasciæ, sternal spots and basal angles of abdomen black.

Tegmina and wings pale hyaline, their bases very narrowly ochraceous, the venation generally fuscous; costal membrane to tegmina ochraceous, with its outer margin narrowly fuscous. Wings with the inner margin and outer apical angle of claval areas infuscated.

Female with the upper surface of the abdomen ornamented with transverse central segmental black spots, and the two terminal segments are not wholly black as in the male.

Long., excl. tegm., ♂ ♀ 18 millim.; exp. tegm. 47 millim.

Hab. N.W. Australia, Heebourne. Austr. Mus., Syd., and Coll. Dist.

A distinct species, to be primarily distinguished by the colour of the abdomen, the thoracic markings of the upper surface, and the fuscous markings on the claval area of the wings.

Macropsalta rotundata, sp. n.

♂. Body above black and moderately greyishly pilose. Head with the anterior angles of vertex, an indistinct central linear basal spot, and the ocelli ochraceous. Pronotum with the basal margin and some indistinct anterior and posterior marginal spots ochraceous. Mesonotum with two central linear and inwardly angulated fasciæ, the lateral margins and basal cruciform elevation ochraceous. Abdomen (excluding basal segment) with transverse ochraceous segmental fasciæ, and maculately marked with grey pilosity. Margins of face, legs, and abdomen beneath ochraceous; femoral streaks and bases of tibiae blackish.

Tegmina and wings pale hyaline, the venation ochraceous, becoming fuscous towards apex; tegmina wide, arched, and rounded.

Female.—From the specimen now before me generally paler in hue than the male.

Long., excl. tegm., ♂ ♀ 14–15 millim.; exp. tegm. 31 millim.

Hab. South Africa, Stellenbosch. Cape Town Mus. and Coll. Dist.

A very distinct South-African species, defined by the broad and rounded tegmina, approaching in this respect the peculiar facies of some Australian species.

SYNONYMICAL NOTES.

The following synonymy refers to two South-African species, of which I was able during the lifetime of my late friend Dr. Signoret to compare the types in his collection made by the late Dr. Stål, with those of Mr. Walker in the British Museum:—

Tibicen (Quintilia) primitiva.

Cicada primitiva, Walk. List Hom. i. p. 218. n. 171 (1850).

Tibicen primitiva, Stål, (Efv. Vet.-Ak. Förh. 1862, p. 485).

Tibicen (Quintilia) hematina, Stål, Hem. Afr. iv. p. 40. n. 18 (1866).

Quintilia hematina, Karsch, Berl. ent. Zeitschr. xxxv. p. 121. n. 52 (1860).

Tibicen (Quintilia) montifera.

Cicada montifera, Walk. List Hom. i. p. 219. n. 172 (1850).

Tibicen montifera, Stål, (Efv. Vet.-Ak. Förh. 1862, p. 485).

Tibicen (Quintilia) maculineris, Stål, Hem. Afr. iv. p. 33. n. 8 (1866).

In the 'Journal of the Linnean Society' (Zoology), vol. xxiv. pp. 128–131 (1891), Mr. Kirby has described as new four species of Cicadidæ from Ceylon. These descriptions may be interpreted as follows:—

Dundubia mixta, Kirby, *l. c.* p. 128, = *Cicada viridis*, Fabr. Syst. Rhyng. p. 39. n. 28 (1803), excl. syn.

Pomponia Greeni, Kirby, *l. c.* p. 129, = *Pomponia Ransonneti*, Dist. Ann. & Mag. Nat. Hist. ser. 6, vol. i. p. 372 (1888).

Pomponia elegans, Kirby, *l. c.* p. 130, = *Termosia* * *psecas*, Walk. List Hom. i. p. 65. n. 28 (1850).

Cicada apicalis, Kirby, *l. c.* p. 131, = *Tibicen nubifurca*, Walk. List Hom., Suppl. p. 28. (1858).

* *Termosia*, gen. nov. Closely allied to *Pomponia*, but with the tympana almost entirely uncovered, thus locating the genus in the subfam. Tibicininae. (More fully described and figured in my forthcoming part of the 'Monograph of Oriental Cicadidæ'.)

In the 'Transactions of the New Zealand Institute,' vol. xxiii. p. 49 (1890), Mr. G. V. Hudson has published a paper on "New Zealand Cicadæ" *.

Cicada muta, Huds. l. c. p. 51.—Mr. Hudson thus refers to the well-known *Melampsalta muta*, Fabr., and describes several varieties which apparently belong to two distinct species—*M. muta*, Fabr., and *M. angusta*, Walk. These varieties have also previously been described by Walker as distinct species, while Mr. Hudson again describes under the name of *Cicada aprilina* (l. c. p. 53) another form of the Fabrician species. The synonymy is as follows:—

Melampsalta muta.

- Tettigonia muta*, Fabr. Ent. Syst. 4, p. 23, n. 35 (1775); Syst. Rhyng. p. 43, n. 53 (1803).
Cicada muta, Oliv. Enc. Méth. v. p. 757, n. 48 (1790).
Cicada cutora, Walk. List Hom. i. p. 172, n. 116 (1850).
Cicada oclirina, Walk. List Hom., Suppl. p. 31 (1858).
Melampsalta muta, Stål, Cefv. Vet.-Ak. Förh. 1862, p. 484.
Cicada muta, Huds. (part.), Trans. N. Zealand Inst. xxiii. p. 51 (1890).
Cicada aprilina, Huds. *ibid.* p. 53 (1890).

Melampsalta angusta.

- Cicada angusta*, Walk. List Hom. i. p. 174, n. 121 (1850); Stål, Cefv. Vet.-Ak. Förh. 1862, p. 482.
Cicada rosea, Walk. List Hom. i. p. 220, n. 173 (1850).
Cicada bilinea, Walk. List Hom., Suppl. p. 31 (1858).
Melampsalta rosea, Stål, Cefv. Vet.-Ak. Förh. 1862, p. 484.
Cicada muta, Huds. (part.), Trans. N. Zealand Inst. xxiii. p. 51 (1890).

Cicada tristis, Huds. l. c. p. 52, = *Melampsalta scutellaris*, Walk. List Hom. i. p. 150, n. 88 (1850).

Cicada iolanthe, Huds. l. c. p. 53, belongs to the genus *Melampsalta*. In a book entitled 'An Elementary Manual of New Zealand Entomology,' bearing date 1892, Mr. Hudson gives a figure of a *Cicada iolanthe*, sp. n., without any description or reference to his previous description in the

* This family name should be more correctly spelt "Cicadidæ," especially as Mr. Buckton has even more erroneously used the term "Cicadæ" for nearly the whole of the British Homoptera ('Monog. of the British Cicadæ,' by G. Bowdler Buckton, 1890-91). "Philosophical entomologists" who condemn "systematic entomologists" must at least be protected by their weaker brethren from forming wrong conclusions on careless systematic work.

Trans. New Zeal. Instit. for 1890. This figure must be ignored, as the colour is unlike the species and the venation portrayed is also different from any known genus of Cicadidæ.

Cicada cassiope, Huds. l. c. p. 54, = *Melampsalta nervosa*, Walk. List Hom. i. p. 213, n. 166 (1850).

L.—Contributions towards a General History of the Marine Polyzoa, 1880-91.—Appendix. By the Rev. THOMAS HINCKS, B.A., F.R.S.

[Continued from vol. viii. p. 480.]

'Annals,' August 1881 (p. 65 sep.).

Mucronella teres, sp. n.

Syn. *Mucronella levis*, MacGillivray. Trans. Roy. Soc. Victoria, July 1882; Prodr. Zool. Vict. decade xii. p. 64, pl. cxvi. fig. 3.

There can be no doubt that MacGillivray's *M. levis* is identical with the present species, of which it must rank as a synonym. The only differences between the two as described are that in *M. levis* three spines are present in front of the oecium on each side, whilst in the specimens which I examined there were only two, and that the small nodular projection on the inner face of the mucro in *M. teres* is not noted by MacGillivray. These points are quite immaterial.

Ibid. (p. 65 sep.).

Mucronella spinosissima, sp. n.

This species is identified by Waters* with *Mucronella Peachii*, var. *octodentata*, Hincks, and Miss Jelly has taken the same view in her 'Catalogue,' but I am quite unable to accept their decision. *M. spinosissima* is, I have no doubt, identical with the fossil form from New Zealand described by Waters (*loc. cit.*); it agrees with his diagnosis even in

* "Tertiary Cheilostomata from New Zealand," Quart. Journ. Geol. Soc. for Feb. 1887, p. 56.