

ON SOME AFRICAN DELPHACIDAE (HOMOPTERA).

By F. MUIR.

Very little is known about the African DELPHACIDAE, especially the tropical forms. For this reason it is worth recording the few species represented in a small collection made by Mr. J. C. Bridwell at Oloke-Meji, Ibadan, Nigeria, in 1914. All the specimens were swept from grasses and reeds. It is to be hoped that larger collections will soon be available and that those who work at them will examine and give figures or adequate descriptions of the genitalia, especially of the aedeagus. Owing to the wide distribution of some species and the great difference in colour of some of the macropterous and brachypterous forms, and to the variation in colour of other species, and the paucity of good specific distinctions in the chroötic characters, it is almost impossible to identify many species of the *Delphacides* group without making use of the phallic characters.

The types of the new species are deposited in the collection of the Hawaiian Sugar Planters' Association, Honolulu, Hawaii. Measurements are from the apex of vertex to anus and from the base to apex of one tegmen.

***Tropidocephalus brunnipennis*, Sign.**

One male and one female from Oloke-Meji. The male genitalia of this specimen are identical with those of specimens from Australia (*T. eximius*, Kirk.)

***Perkinsiella* sp.**

One female, which is closely allied to *P. bakeri*, Muir, from the Philippine Islands, but I fully expect the male to be distinct. This genus in the Pacific is always attached to sugar-cane. It would be of interest to know if this is so in Africa, and to ascertain what parasites keep them in check.

***Delphacodes disonymos* (Kirk).**

Delphax disonymos, Kirkaldy (1907), Haw. Sugar Planters' Assn. Ent. Bull. iii, p. 151, line 10, p. 155, Pl. xviii, fig. 4.

Delphacodes disonymos (Kirk.), Muir (1917), Proc. Haw. Ent. Soc. iii, 4, p. 333.

Delphax matanitu, Kirkaldy (1907), *op. cit.* p. 151, line 13, p. 155, Pl. xvi, figs. 4, 5, Pl. xviii, fig. 15.

Delphacodes matanitu (Kirk.), Muir (1917), *op. cit.* p. 333; Muir (1918), *op. cit.* iii, p. 427, fig. 3.

I consider these two species of Kirkaldy's as being the long and short winged forms of the same species. His two figures of the pygofer are drawn from different positions and so appear slightly different; the aedeagi are the same. A similar case of difference in colour of the tegmina is found, I believe, in *D. erectus nigripennis* (Crawford), which I consider to be the brachypterous form of *D. erectus* (Crawford).

Delphacodes nigeriensis, sp. nov. (fig. 1).

♂. Macropterous; head slightly narrower than pronotum, vertex as long as base is wide, which is slightly broader than apex, base slightly behind the middle of eyes; first joint of antennae more than half the length of second (1 to 1.7); lateral carinae of pronotum slightly divergingly curved, not reaching to the hind margin; first joint of hind tarsus equal to the other two together.



Fig. 1. *Diceranotropis nigeriensis*, Muir, sp. n.;
a, aedeagus, lateral view; b, right genital style.

Face and clypeus between carinae black, carinae light brown; antennae, vertex, thorax and legs ochraceous tawny, abdomen dark brown. Tegmina hyaline, very light yellowish, veins darker, with sparse minute granules.

Pygofer similar in outline to that of *D. disonymus* (Kirk.), and the genital styles somewhat similar, aedeagus distinct, figured from the right side (figure 1, a); the left side with a row of small spines from a dorso-apical point to the middle; anal styles not so large as in *D. disonymus*, curved and slightly flattened, bases moderately wide apart.

Length, 1.8 mm.; tegmen, 2 mm.

NIGERIA: Oloke-Meji, Ibadan, 1914 (J. C. Bridwell).

Described from one male specimen. I consider this to come near to *D. disonymus* (Kirk.), and it is very probable that there is a short-winged form in which the tegmina are dark shiny black.

Delphacodes bridwelli, sp. nov. (fig. 2).

♂. Macropterous; head nearly as broad as pronotum, width (including eyes) twice the length; vertex square, base about middle of eye; length of face slightly more than twice the width, slightly narrowed between eyes and at apex; antennae reaching slightly beyond the base of clypeus, first joint about half the length of

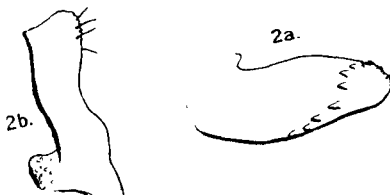


Fig. 2. *Delphacodes bridwelli*, Muir, sp. n.;
a, aedeagus, lateral view; b, right genital style.

second; lateral pronotal carinae divergingly curved, not reaching hind margin; hind tibiae equal in length to tarsi, first joint of tarsus equal to the other two together. Light brown; black or dark brown between carinae of face and clypeus and over thoracic pleura, coxae and abdomen. Tegmina hyaline, very light brown, veins darker; wings hyaline, veins brown.

Opening of pygofer about as broad as long, dorsal emargination large, anal angles well produced, slightly curved; genital styles straight, outer edge slightly sinuous, inner edge produced into a quadrate process near base, apex truncate; aedeagus flattened laterally, broad, apex rounded, an irregular row of spines from near apex on dorsal aspect across left side to near the medio-ventral area, a somewhat similar row on right side; anal spines large, curved, their bases near together.

Length, 2 mm.; *tegmen*, 2.2 mm.

NIGERIA: Oloke-Meji (*J. C. Bridwell*).

Described from one male.

***Dicranotropis bridwelli*, sp. nov. (fig. 3).**

♂. Macropterous; head as broad as prothorax; width twice the length, including eyes; vertex square; length of face nearly twice the width (1 to 1.8), narrowed between eyes and slightly at apex, median carina furcate about middle; length of the first joint of antennae slightly more than half the second, terete. Length of first joint of hind tarsus equal to the other two together; spur as long as first joint of tarsus, thin, concavo-convex, with many small teeth on hind margin.

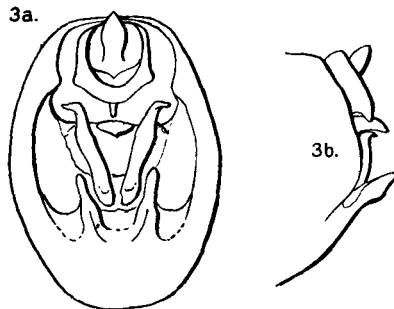


Fig. 3. *Dicranotropis bridwelli* Muir, sp. n.;
a, pygofer, back view; b, do., side view.

Dark chestnut-brown or black; antennae, carinae on head and thorax, rostrum and legs lighter brown; base of dorsum of abdomen and middle of apical tergite light. Tegmina hyaline, fuscous, a clearer hyaline area over subcostal, radial and median apical cells, veins of the same colour as membrane, granules small, bearing small black hairs; wings hyaline with brown veins.

Pygofer as figured (fig. 3).

Length, 2.9 mm.; *tegmen*, 3.8 mm.

NIGERIA: Oloke-Meji, Ibadan, 1914, on coarse grass (*J. C. Bridwell*).

Described from one male specimen. There are two female specimens in the collection which may be this species; they are much lighter, being nearly uniformly light brown.

***Dicranotropis ibadanensis*, sp. nov. (fig. 4).**

♂. Macropterous; head as wide as pronotum, width 2.2 times the length including eyes; vertex square or very slightly wider than long, base slightly behind middle of eye; length of face twice the width, sides slightly curved, narrowest

between eyes and at apex, furcation of median carina one-third from base ; antennae reaching to near middle of clypeus, first joint slightly shorter than second ; first joint of hind tarsus as long as the other two together, spur slightly shorter than first joint of tarsus, with many small teeth on hind margin.

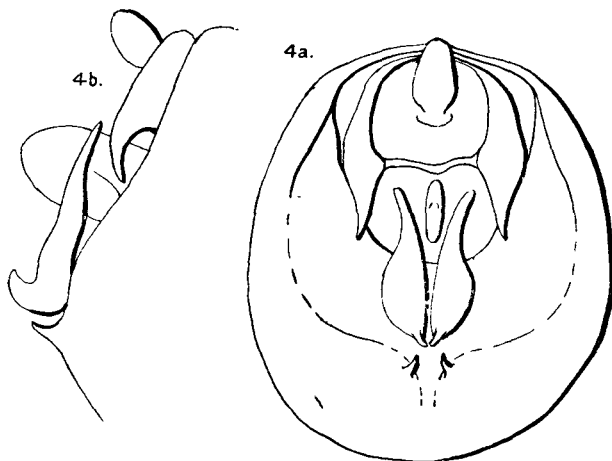


Fig. 4. *Diceranotropis ibadaensis*, Muir, sp. n. ;
a, pygofer, back view; b, do., side view.

Light brown, nearly black over clypeus, coxae and abdomen ; carinae of thorax lighter, traces of lighter spots on face. Tegmina hyaline, a curved, fuscous mark from cross-veins over cubitus extending along veins to the apex of media and cubitus, veins basad of cross-veins yellowish, distad of cross-veins darker, granules few and small ; wings hyaline with brown veins.

Pygofer as figured (fig. 4).

Length, 1.9 mm. ; tegmen, 2.8 mm.

NIGERIA : Oleke-Meji, Ibadan, 1914 (*J. C. Bridwell*).

Described from one male.

Genus **Megamelus**, Fieber.

There are a number of closely allied species of this genus having similar facies, with a wide distribution. Only a close comparison of series from various localities will enable one to decide where one species ends and another begins. I sank *M. kolophon* (Kirk.) into *M. furcifer* (Horv.), but I believe it will be better to retain the name as a variety until more material has been studied. I now recognise three varieties of this species, viz. :—

1. *M. furcifer* (Horv.) (fig. 5). The fork at apex of the genital styles small ; clavus with a small black mark at apex.



Fig. 5. *Megamelus furcifer*, Horv., genital style.

6. " *kolophon*, Kirk " "
7. " *nigeriensis*, Muir, var. n. " a, aedeagus ; b, genital style.

2. *M. kolophon* (Kirk.) (fig. 6). Fork at the apex of the genital styles much larger; no black mark at the apex of clavus; aedeagus slightly smaller, with smaller spines.

3. *M. nigeriensis*, var. nov. (figs 7 a, 7 b). Fork at apex of genital styles wider and the emargination between them shallower; a dark mark at the apex of clavus.

These forms come near to *Kelisia kirkaldyi*, Muir, and *Kelisia feberi*, Muir, and eventually will be placed together in the same genus. Until I can revise these genera I prefer to let them remain as they are for the present.

Megamelus furcifer, var. nigeriensis, nov. (figs. 7 a, 7 b).

♂. Macropterous; length of head, prothorax and mesothorax about 1·5 times the width of the head including eyes, vertex slightly longer than wide; length of face 2·5 times the width, narrowest between eyes, furcation of median carina at extreme base; antennae terete, reaching beyond the base of clypeus, second joint 1·4 times the length of first; first joint of hind tarsus as long as the other two together, spur longer than first joint of tarsus, large, with many small teeth on hind margin. Carinae of face and clypeus, vertex, middle and lateral portions of pronotum, middle of mesonotum, tegulae and base of abdomen yellow; face and clypeus between carinae, medio-lateral portions of pronotum, lateral portions of mesonotum and greater portion of abdomen black; front and middle legs dark brown, hind legs lighter brown. Tegmina hyaline, a dark mark at end of clavus and fuscous over apical veins.

The pygofer is similar to that of *M. kolophon*, Kirk.,* but the genital styles are wider at the apex and not so deeply indented, the aedeagus is slightly larger and the spines stronger.

Length, 2 mm.; tegmen, 2·3 mm.

NIGERIA: Oloke-Meji, Ibadan, 1914 (*J. C. Bridwell*).

Described from two males.

Megamelus flavolineatus, sp. nov. (fig. 8).

♂. Macropterous; width of head including eyes 1·6 times the length, nearly as wide as the pronotum; length of vertex 1·4 times the width; antennae reaching beyond the base of clypeus, first joint more than half the length of the second

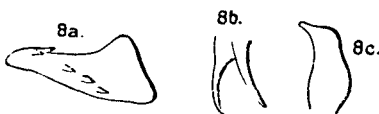


Fig. 8. *Megamelus flavolineatus*, Muir, sp. n.; a, aedeagus; b, anal spines; c, genital style.

(1 to 1·7); length of face 2·5 times the width, slightly narrowed between eyes, sides subparallel, median carina forked at middle of face; first joint of hind tarsus as long as the other two together, spur nearly as long as the first joint of tarsus, large, thin, with many small teeth on the hind margin.

* Haw. Sugar Planters Assn. Ent. Bull. iii, pl. xv, figs. 9-10.

Dark brown or black; vertex, carinae of head, middle and lateral margins of pronotum, middle of mesonotum, tegulae, antennae and legs yellow or light brown. Tegmina hyaline, veins yellow or light brown, a dark mark at apex of clavus, fuscous over apical portion of cubital veins.

Aedeagus short, deep at base where it is laterally compressed, a row of three or four spines on the right side and another somewhat similar row on the left; anal spines large, slightly curved and pointed; genital style as figured (fig. 8, c).

Length, 1.8 mm.; tegmen, 2.5 mm.

♀. Macropterous; similar in colour to the male.

Length, 2.0 mm.; tegmen, 3.0 mm.

NIGERIA: Oloke-Meji, Ibadan, 1914 (*J. C. Bridwell*).

Described from six males and eleven females. Some of the specimens are lighter in colour than the type, especially between the carinae of clypeus and genae.

***Phyllodinus badius*, sp. nov.**

♀. Macropterous; head as wide as pronotum, width 2.4 times the length; vertex wider than long; length of face double the width, narrowest between eyes and at apex, median carina furcate slightly distad of middle; antennae terete, reaching slightly beyond the base of clypeus, first joint slightly shorter than second; femora and tibiae of first and second legs and femora of hind legs flattened and expanded; lateral pronotal carinae divergingly curved, not reaching the hind margin. First joint of hind tarsus equal in length to the other two together; spur as long as first joint of tarsus, many small teeth on hind margin.

Dark chestnut or nearly black; carinae of head and thorax, second joint of antennae, middle and lateral margins of pronotum, middle of mesonotum, four or five pairs of small spots on face, middle and hind femora and hind tibiae lighter brown. Tegmina hyaline; before the cross-veins the veins are light narrowly bordered with brown, with small light granules; beyond the cross-veins the veins are of the same colour as the membrane, which is brown over the cubital area and over the radial apical veins. spreading into the membrane; wings hyaline. with brown veins.

Length 2.9 mm.; tegmen, 4.0 mm.

♂. Brachypterous; n colour similar to the macropterous form. As in most brachypterous Delphacids the reduction is mainly in the apical cells. The middle of the membrane between the veins is raised in longitudinal ridges, giving the tegmina the appearance of having numerous veins.

Length 2.7 mm.: tegmen. 2.00 mm.

NIGERIA: Oloke-Meji, Ibadan, 1914 (*J. C. Bridwell*).

Described from two macropterous and one brachypterous females, the type being one of the former. The second macropterous specimen is darker than the type.