

Notes on Staphylinidae, Chiefly From New Zealand

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INTRODUCTION

DURING the course of work on a revision of the Staphylinidae of New Zealand, critical examinations have shown that various species are wrongly located in the genera to which they were originally ascribed, belonging in most cases to new genera. As the description of these new genera will necessitate some comparison with existing genera not necessarily occurring in New Zealand, it has been decided to deal with them in a series of separate papers rather than in the main revision. The first of these papers appears below and others will follow as work progresses.

(1) TWO NEW PISTINE GENERA FROM AUSTRALIA AND NEW ZEALAND

A comparison of the New Zealand *Siagonium hudsoni* Cam. with *S. quadricorne* Kby., the genotype, showed that the two species could not be considered as belonging to the same genus. The other species of *Siagonium* (except *S. indicum* Fvl.) were then examined and one other species, *S. mjobergi* Bernh. from Australia was also found to represent another genus. There is a possibility that *S. indicum* Fvl. will also be generically distinct, as it occurs well out of the normal range of *Siagonium*. However, no specimens of this have yet become available, so that the matter must be left in abeyance for the time being.

With the removal of the Australian and New Zealand elements, the remaining species of *Siagonium* form a homogenous group, all agreeing in essential characters and showing more or less the same modifications of the head and mandibles in the male sex.

A redescription of *Siagonium* is given below, based on an examination of all the species, together with descriptions of the two new genera erected to accommodate the Australian and New Zealand species.

I am greatly indebted to Dr H. Scott for permission to examine material in the British Museum collection and for the loan of specimens, to Dr R. Malaise of the Naturhistoriska Riksmuseum, Stockholm, for specimens of *S. mjobergi* Bernh., to Dr R. E. Blackwelder of the Smithsonian Institution, U.S. National Museum, for specimens of *S. punctatum* Lec. and *S. americanum* Melsh., and to Dr G. C. Hale Carpenter (Oxford University Museum), Dr D. Miller and Mr E. S. Gourlay (Cawthron Institute) and Dr J. T. Salmon (Wellington Museum) for specimens of *S. hudsoni* Cam.

Genus *Siagonium* Kirby

Siagonium Kirby, in Kirby and Spence, *Introduct. Ent.*, 1, 1815.

Prognatha Latr., in Cuvier, *Regn. Anim.*, 4, 1829, 439.

Body moderately long, depressed or lightly convex. *Head* moderate,

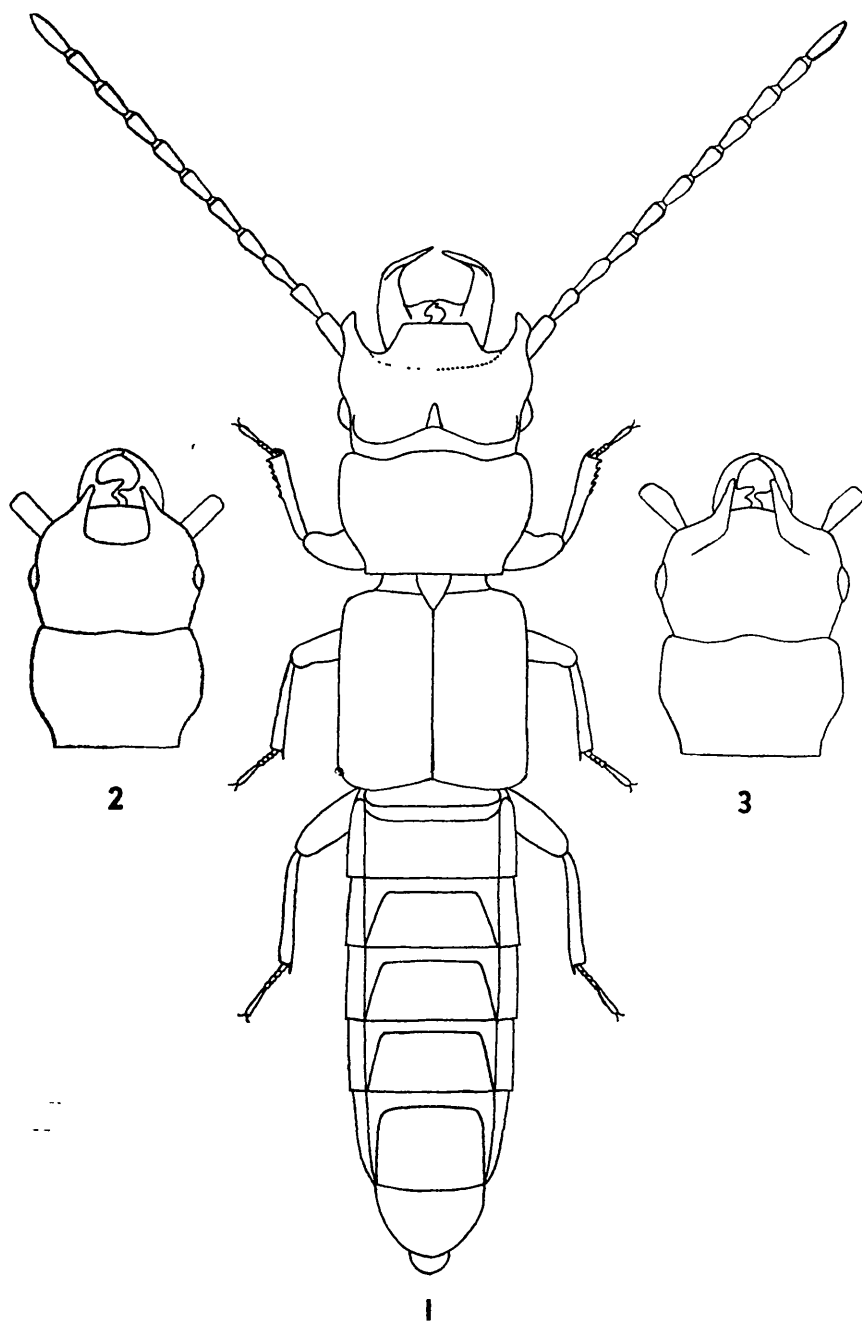


FIG. 1—*Siagonium quadricorne* Kby.
FIG. 2—*Siagonium americanum* Melsh.
FIG. 3—*Siagonium vittatum* Fvl.

transverse, with rather small and somewhat prominent eyes, slightly narrowed behind. In males normally with each anterior angle produced into a stout, forwardly (and sometimes inwardly*) directed horn; in some species, at least, small male forms occur which have the anterior angles rounded and simple; there are also intermediates between these and the normal form. Head of female as in small male forms. *Gular sutures* converging at base and diverging in front, becoming very approximate in middle. *Antennae* long or very long, not thickened apically, longer in large males than in small males, slightly longer in small males than in females; the first segment distinctly stouter than the following. *Labrum* short, transverse, the front margin broadly emarginate; chitinized except towards anterior angles; the chitinized portion bearing a few setae, the membranous portion fringed internally with close-set, short, fine hairs. *Mandibles* stout and pointed apically, the left with a small tooth internally about middle, the right unarmed internally. In the males, each mandible bears externally near apex a long curved, forwardly and slightly upwardly directed horn which in large specimens is longer than the mandible itself; mandibles of females unarmed externally. *Inner lobe of maxilla* (lacinia) narrow, with a few lightly curved spinules and a bunch of ciliae at apex internally, the *outer* (galea) rather narrow, densely ciliate apically, the ciliae being lightly curved at the tips and arranged in rows (Fig. 8).

Maxillary palpi with the first segment very small, transverse, the second about twice as long as first, about as long as broad, widened apically, the third about three-quarters as long as second, slightly widened apically, the fourth more than twice as long as third, bluntly pointed. *Mentum* transverse trapezoidal. *Glossae* and *paraglossae* fused, forming two divergent lobes which are ciliate internally, the ciliae being distinctly curved. Between these lobes is a longitudinal, chitinized strip and on each side of this a small subquadrate chitinized sclerite and, anteriorly, a strong seta (Fig. 11). *Lobes of the hypopharynx* well developed, densely ciliate internally and extending to the apex of the ligula. *Labial palpi* short, the first segment short, transverse, the second shorter and slightly narrower than first, the third about two and a-half times as long as and slightly narrower than second, bluntly pointed. *Pronotum* transverse, sinuate before the well-marked posterior angles, the *epipleura* narrow. *Epimera* triangular, fused with the epipleura and projecting inwards to about the middle of each coxal cavity. *Prosternum* rather large, the prosternal suture well marked, basisternum not keeled, furcasternum deflexed inwards (towards the dorsal) from the plane of the basisternum and furnished with a well-marked longitudinal median keel which projects between the anterior coxae. *Mesosternum* short, with an indistinct median longitudinal keel, process narrow and pointed, slightly overlapping the metasternal process in some species, e.g. *S. quadricorne* Kby (Fig. 14) or extending only as far as the middle of the coxal cavity in others, e.g. *S. vittatum* Fvl. (Fig. 15). *Meta-*

* In some species, e.g. *S. vittatum* Fvl. (Fig. 3) and *S. americanum* Melsh. (Fig. 2), the horns appear to originate from the front of the head between the anterior angles, but, on closer examination, can easily be traced to these angles.

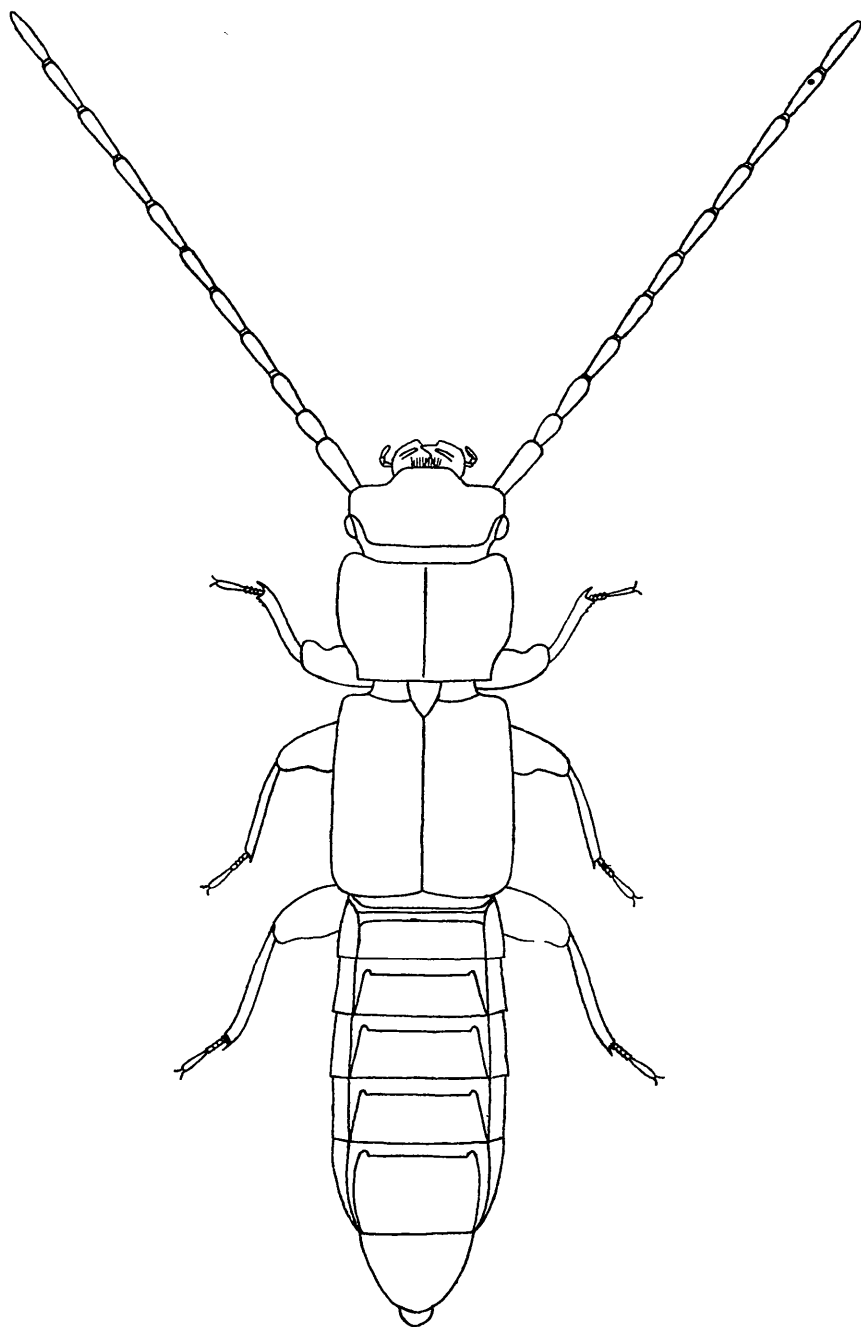


FIG. 4—*Parasiagonum hudsoni* (Cam.)

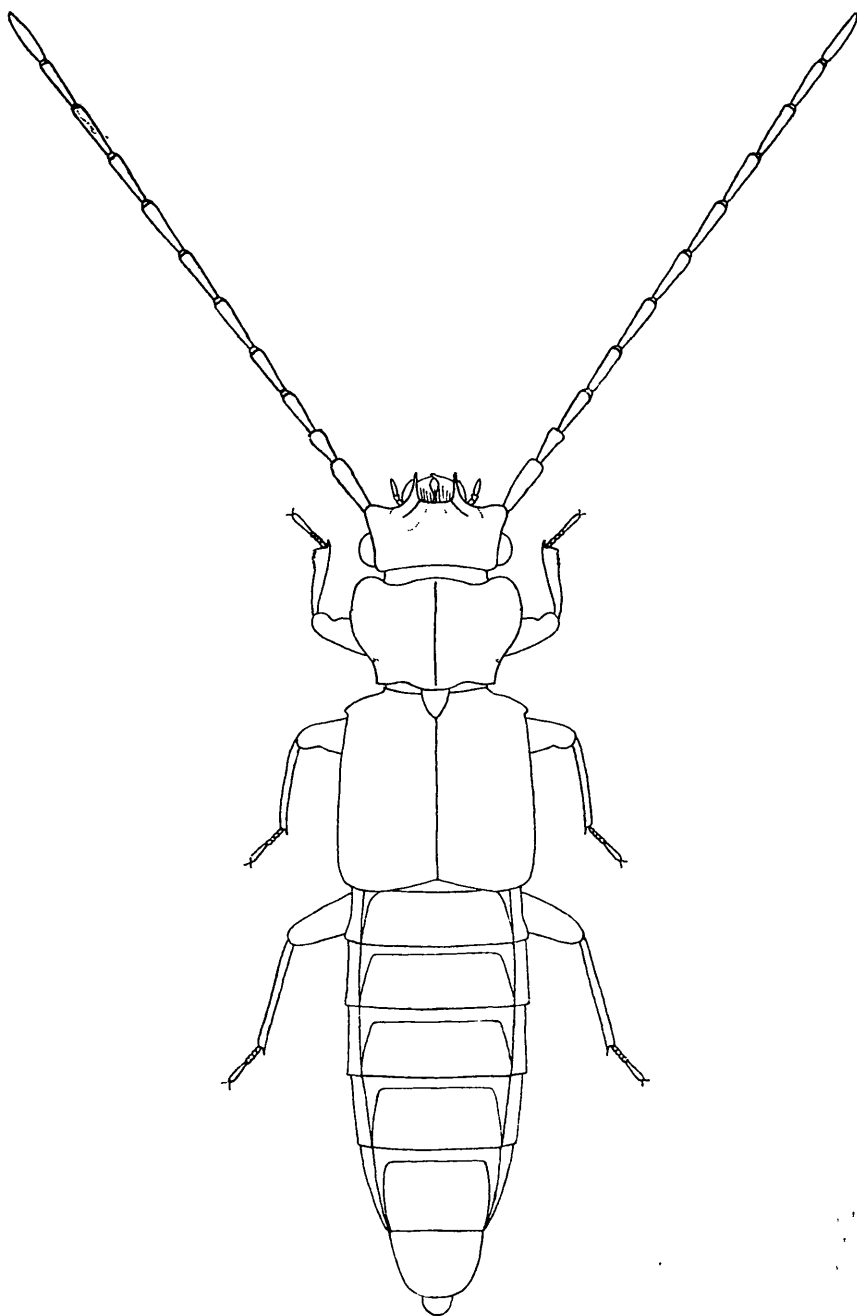


FIG. 5—*Prognathoides mjobergi* (Bnh)

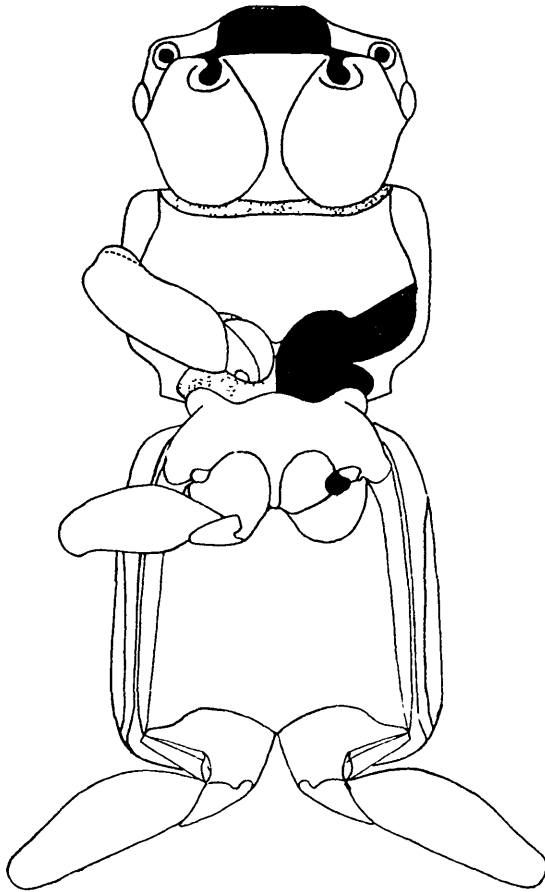


FIG. 6—*Parasiagonum hudsoni* (Cam.). Underside of head and thorax

sternum long, with a short, pointed, anterior process which projects between the intermediate coxae. *Scutellum* well marked. *Wings* well developed. *Elytra* rather long, parallel sided, with well-marked epipleural folds. Tergite of second *abdominal segment* short, lightly chitinized. Third to sixth (first to third visible) segments about equal in width, the abdomen narrowed thence to apex. Seventh segment distinctly longer than the sixth. Paratergites present on segments three to seven. Sternite of third segment with a well-marked median longitudinal keel. *Legs* rather short, the coxae rather small, the anterior globose, somewhat exserted, with a semi-circular sulcus before apex, the intermediate oval, the posterior expanded laterally above (dorsal to) and with a small lateral expansion below (ventral to) the level of the femora; all the coxae contiguous. *Femora* moderate, the anterior slightly widened at apex internally above and below the level of the tibiae. Anterior and intermediate *tibiae* with a few spines externally, the anterior with a well-marked curved spur at the antero-internal angle, the posterior with a few setae externally and three or

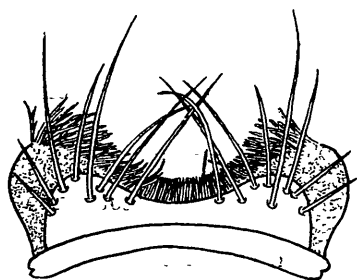


FIG. 7—*Parasiagonum hudsoni* (Cam.)
Labrum

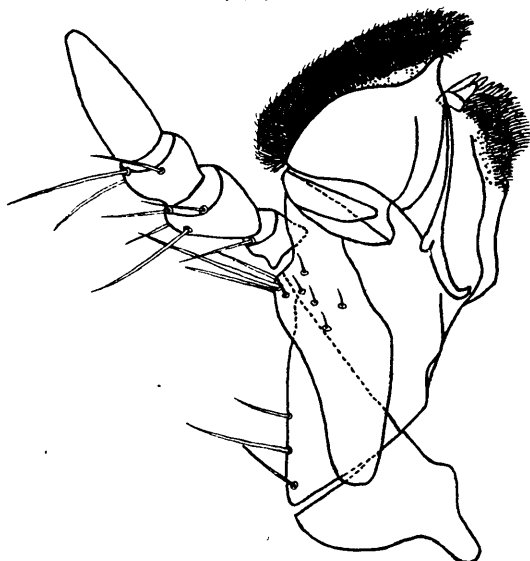


FIG. 9—*Parasiagonum hudsoni* (Cam.). Maxilla



FIG. 8—*Siagonium quadricorne* Kby. Maxilla

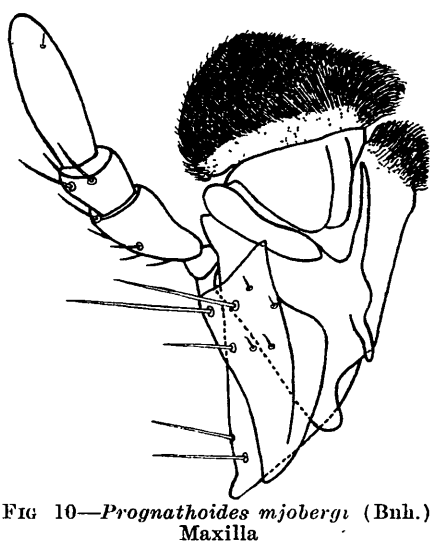


FIG. 10—*Prognathoides mjobergi* (Bnh.)
Maxilla

four spines at apex. Tarsi five-segmented, about half the length of the tibiae, the first four segments short and subequal in length, the fifth longer than the four preceding together.

Genotype: *Siagonium quadricorne* Kby. (monobasic). (Fig. 1.)

Range: Europe, Japan, North America, ? India.

The two European species, *S. quadricorne* Kby. and *S. humerale* Germ., show a marked degree of polymorphism in the development of the head in the male. It seems likely that this would also be true for

the other species, but, as it has yet only been possible to examine very small series of these, one cannot be absolutely certain. The large males with well-developed cephalic horns occur in all species.

The species occur under the bark of various trees.

(Genus PARASIAGONUM n.

Very similar structurally to *Siagonium* Kby., but with:

Head transverse, unarmed in both sexes, slightly narrowed behind the eyes which are small and rather prominent; the anterior angles rounded, the clypeus projecting forwards. *Gular sutures* less approximate in middle (Fig. 6). *Labrum* (Fig. 7) with the middle portion chitinized and bearing a few strong setae, a narrow anterior margin and the lateral portions membranous and fringed with close-set, short hairs, those towards the sides being branched. *Mandibles* stout and pointed apically, the left with a small tooth internally in front of middle, the right unarmed internally; each with a small external tooth not far from apex and a long curved tooth situated at about the middle of the dorsal surface and pointing upwards and inwards. *Outer lobe of maxilla* (galea) much broader, densely ciliate apically, the ciliae being curved and arranged in rows (Fig. 9). *Maxillary palpi* with the first segment very small, transverse, the second about two and a half times as long as first, widened apically, the third about two-thirds as long as second, widened apically, the fourth almost twice as long as third, bluntly pointed. Chitinized strip in middle of the lobes of the ligula somewhat wider anteriorly, the lateral chitinized sclerites much smaller (Fig. 12). *Labial palpi* with the first segment

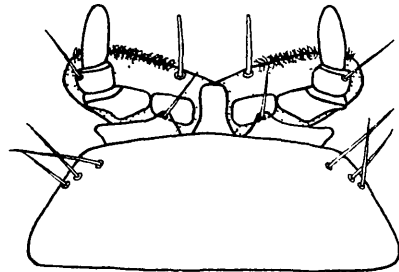


FIG. 11—*Siagonium quadricorne* Kby.
Labium

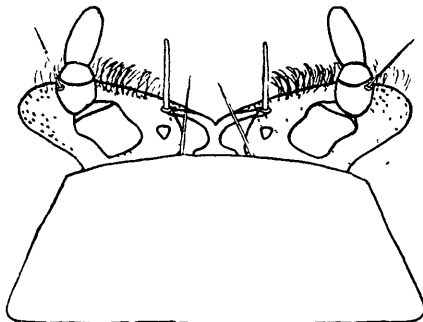


FIG. 12
Parasiagonum hudsoni (Cam.)
Labium

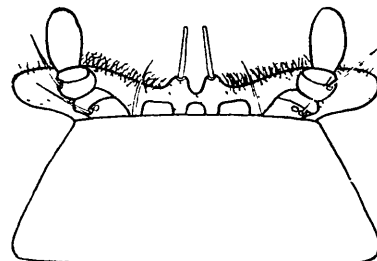


FIG. 13
Prognathoides mjobergi (Bnh.)
Labium

longer than broad, the second shorter than and about as wide as first, the third narrower, about twice as long as second, bluntly pointed. *Mesosternal process* (Fig. 16) broader, rounded at apex, where it meets the short, rounded metasternal process; mesosternum not keeled.

Genotype: *Siagonium hudsoni* Cam. (Fig. 4).

Range: New Zealand.

The genotype is the only species yet known in this genus and is found under Karaka bark.

Genus PROGNATHOIDES n.

Very similar structurally to *Siagonium* Kby., but with:

Head transverse, the eyes larger and more prominent; the anterior angles well marked, scarcely rounded. Front margin on each side of middle with a forwardly directed spine, these spines being much reduced in the females. *Gular sutures* less approximate in middle. *Labrum* similar to that of *Parasiagonum*. *Mandibles* stout and pointed apically, unarmed internally, each with a small external tooth just before apex and a short, narrow, dorsal tooth. *Outer lobe of maxilla* (galea) much broader, densely ciliate apically, the ciliae curved and arranged in rows (Fig. 10). *Maxillary palpi* with the first segment

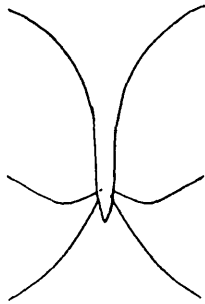


FIG. 14
Siagonium quadricorne
Kby.
Mesosternal process

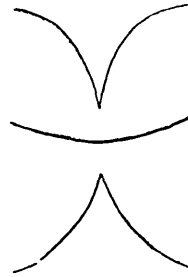


FIG. 15
Siagonium vittatum Fvl.
Mesosternal process

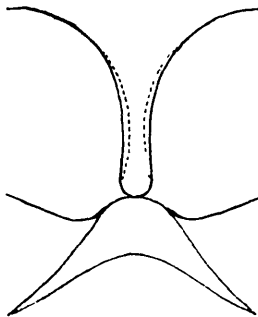


FIG. 16
Parasiagonum hudsoni
(Cam.)
Mesosternal process

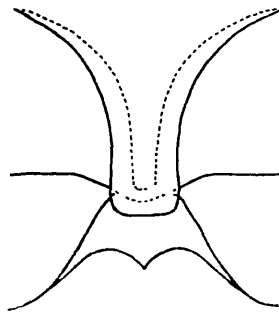


FIG. 17
Prognathoides mjobergi (Bnh.)
Mesosternal process

very small, transverse, the second about four times as long as first, widened apically, the third about three-fifths as long as second, widened apically, the fourth rather long, nearly three times as long as third, bluntly pointed. *Glossae* present as two very small lobes, each bearing a stout seta, *paraglossae* strongly divergent, with curved setae along the anterior margin (Fig. 13). *Labial palpi* with the first segment longer than broad, the second shorter than and about as wide as first, the third about twice as long as second, bluntly pointed. *Mesosternal process* (Fig. 17) rounded at tip, slightly overlapping the metasternal process, which is short and emarginate apically. Seventh *abdominal segment* only slightly longer than the sixth. Posterior *coxae* less expanded above (dorsal to) the level of the femora. Intermediate *tibiae* scarcely spinose externally. *Tarsi* with last segment longer in relation to the preceding four.

Genotype: *Siagonium mjobergi* Bernh. (Fig. 5).

Range: Australia.

Differs from *Parasiagonum* in the form of the head, mandibles, maxillae and maxillary palpi, labium and labial palpi, mesosternum and tarsi.

There is no record of the habits of the one species in the genus.