

Morphological studies on *Oligotoma Japonica*:

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Morphology of *Oligotoma japonica*

Oligotoma japonica is a small insect ; a female is a little bigger than a male. There are two types of males, that is, a winged male and a wingless male. Judging from the fact that there has been no report of winged females, it seems that the females are all winged. Females have a brown body, while males a dark brown body with metal lusture. A male's head is a little flat and round, and on the back half of a female's head sometimes there can be found a light colored segment. The antenna long and lean, has 17 segments. The compound eyes are black and females have very small ones. The maxillary palpus has 5 segments the labial 3 segments and the prothorax is smaller than the mesothorax or the metathorax. The legs are big and short, the femur being especially big; the tarsus consists of three segments and the first tarsal segment of the foreleg is particularly swollen. The wings are thin and frail, brownish and transparent, the nervure being simple. At the end part of the abdomen there are two typical cercuses each of which has two segments. The cercus of a male is quite symmetric.

[Specimen] Body length 10 mm, antenna length 2 mm, abdomen length 5 mm. This winged male resembles a wingless female in shape and structure of the body. This has a brown body, a spherical but flat head, oval eyes, tortulous antennae which are $\frac{1}{5}$ as long as the body. The mouth parts resemble those of a female. The thorax is long and the prothorax is trapezoid. The legs are almost as same as those of a female. The abdomen is bigger than that of a winged male adult and a little longer than half of the body length and wide. The cercus is symmetrical in length and shape. The wings are $\frac{1}{3}$ as thick as those of an adult.

(vid. Fig. 1)

Fig. 1

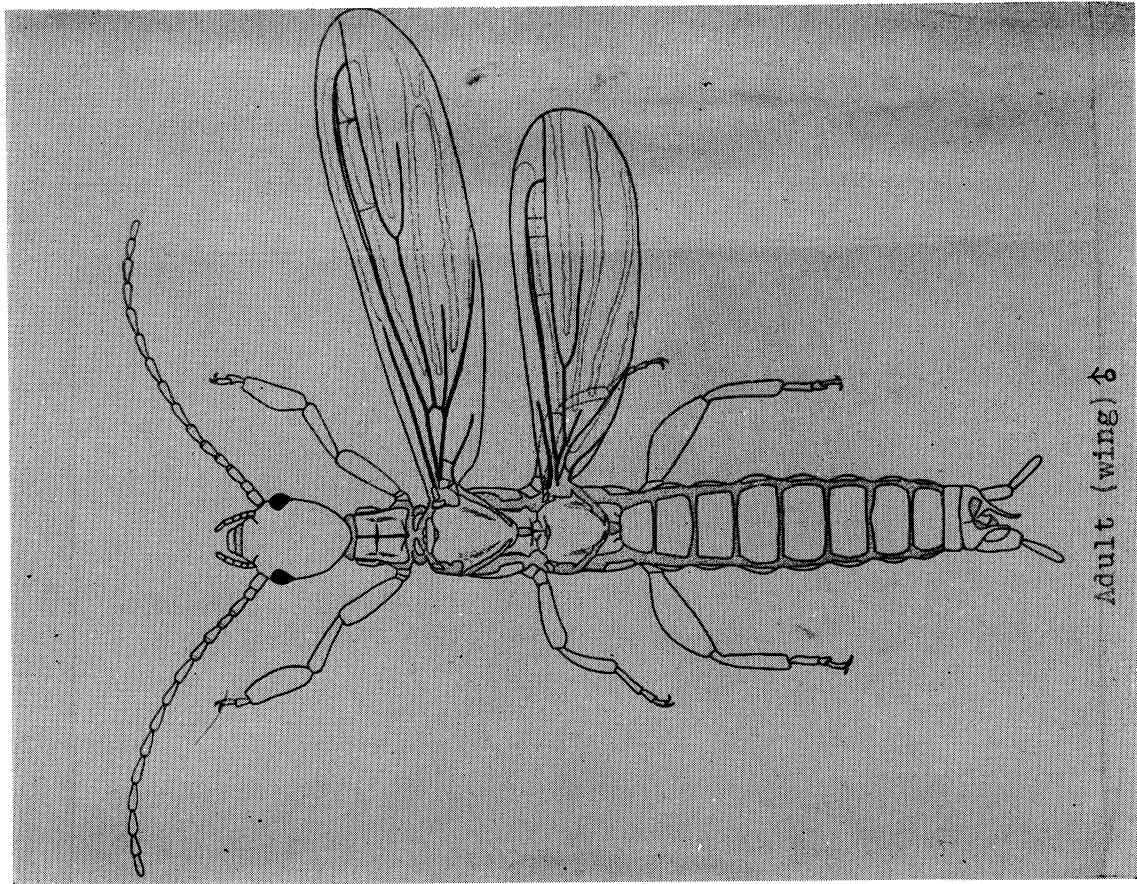


Fig. 2

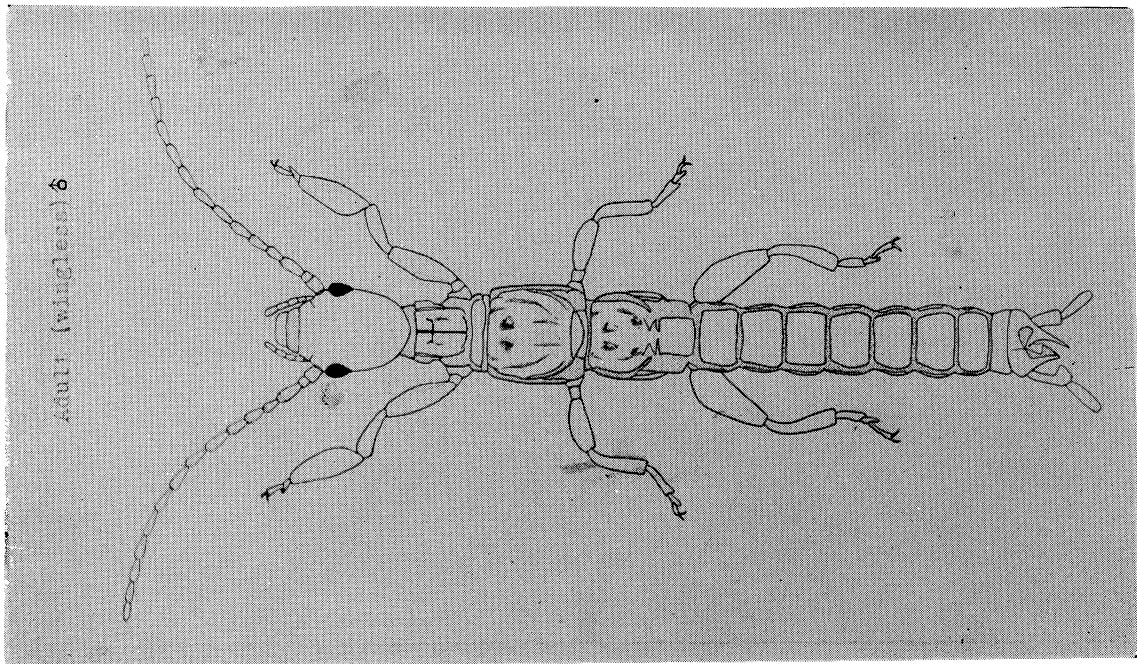
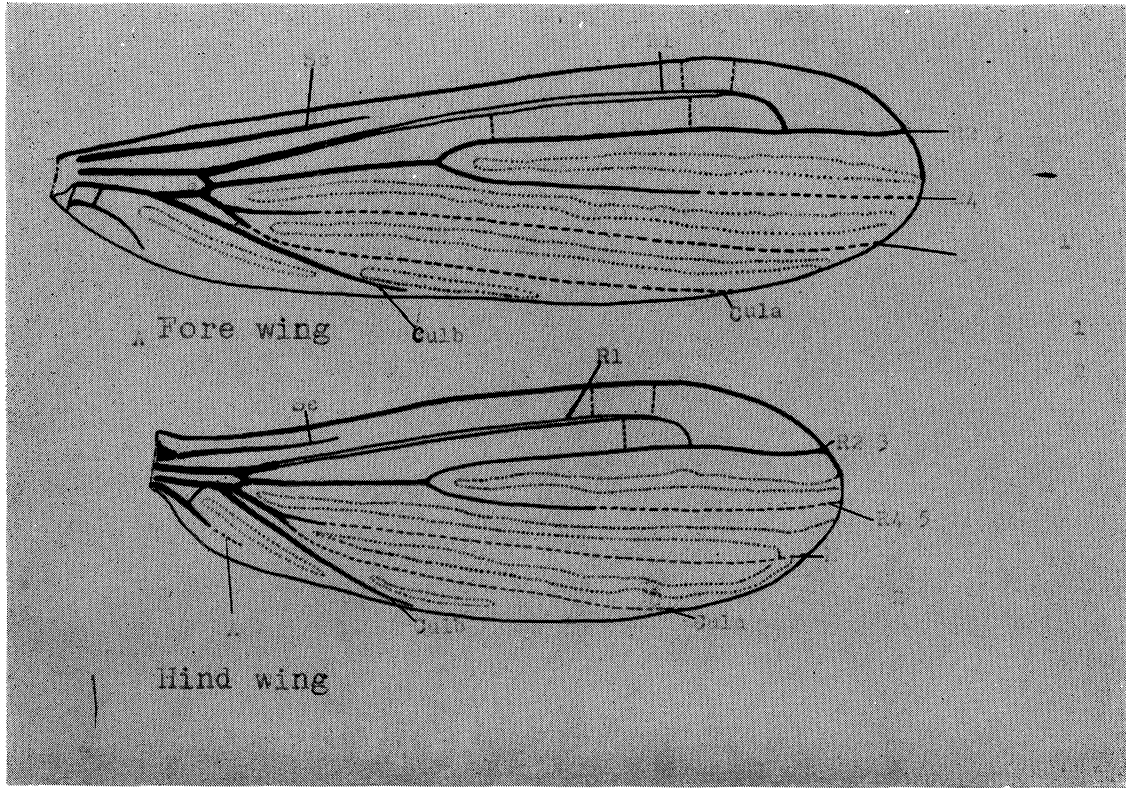
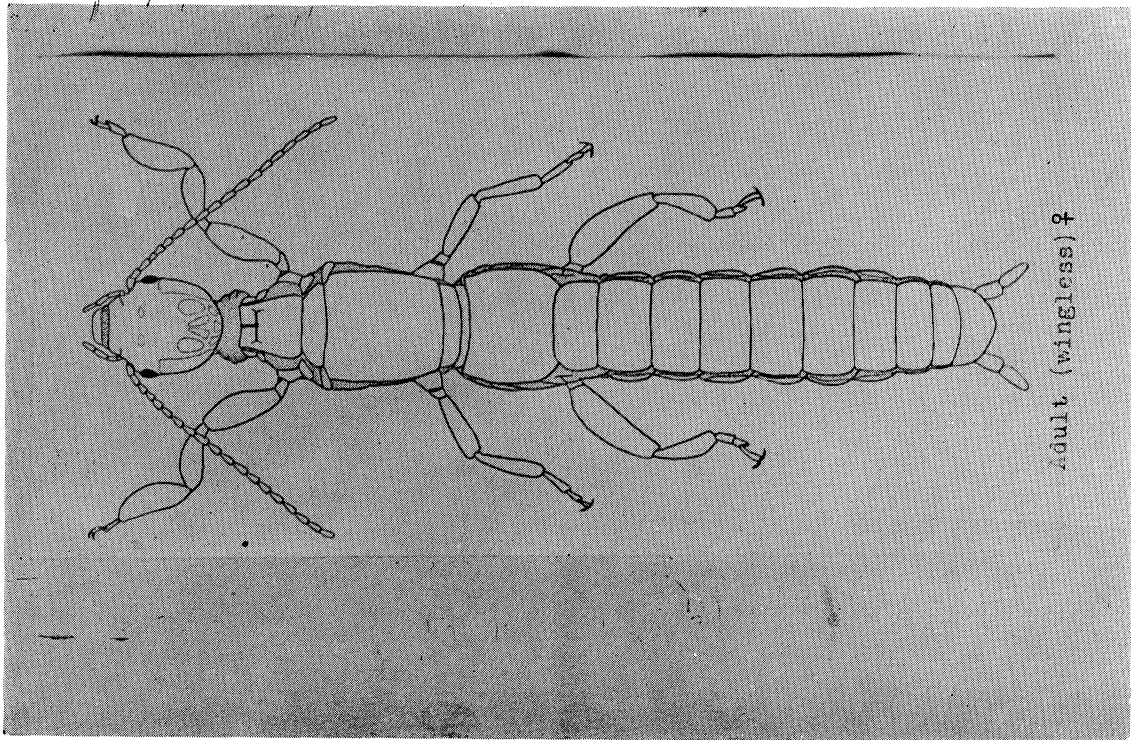


Fig. 4



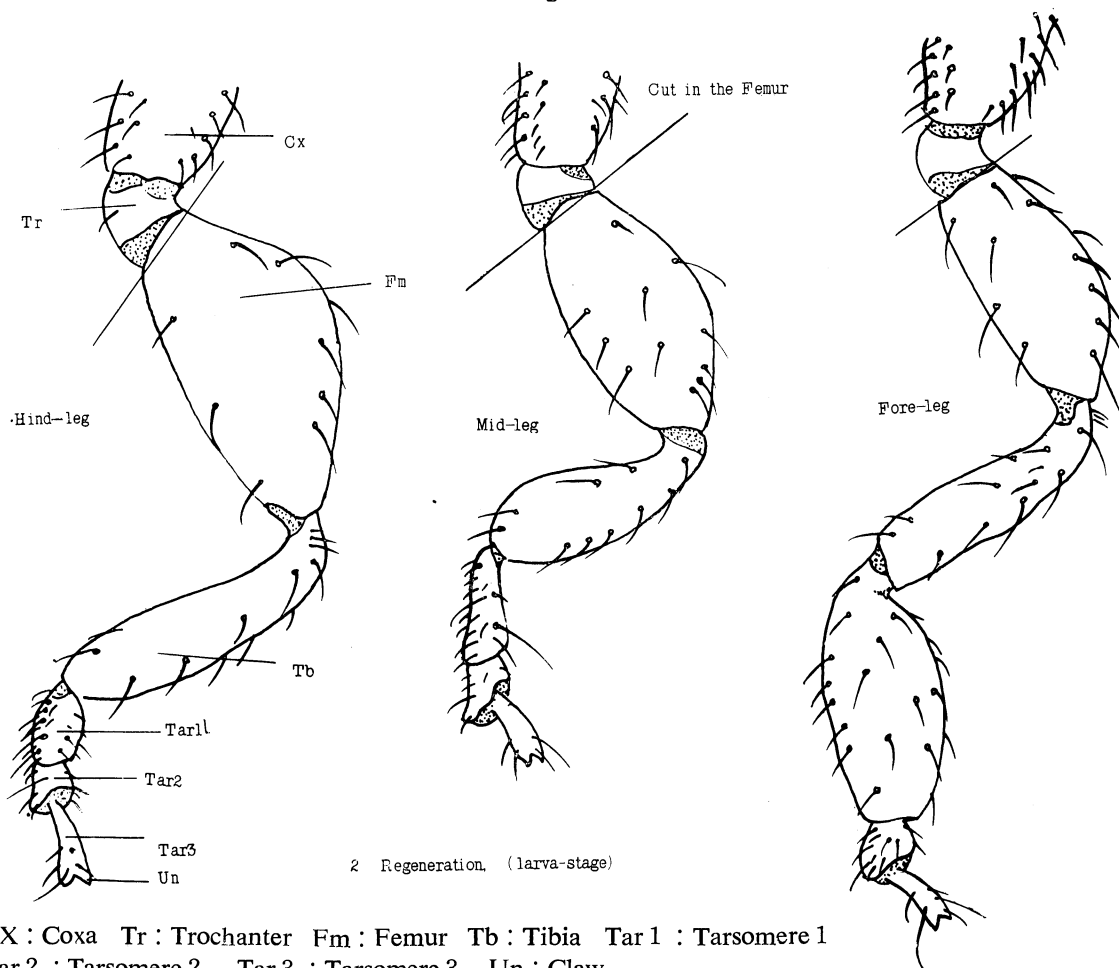
Sc : Subcosta R1 : Radius 1 R2,3 : Radius 2,3 R4,5 : Radius 4,5
 M : Media Culb : Cubitus 1a Culb : Cubitus 1b A : Analis

Fig. 3



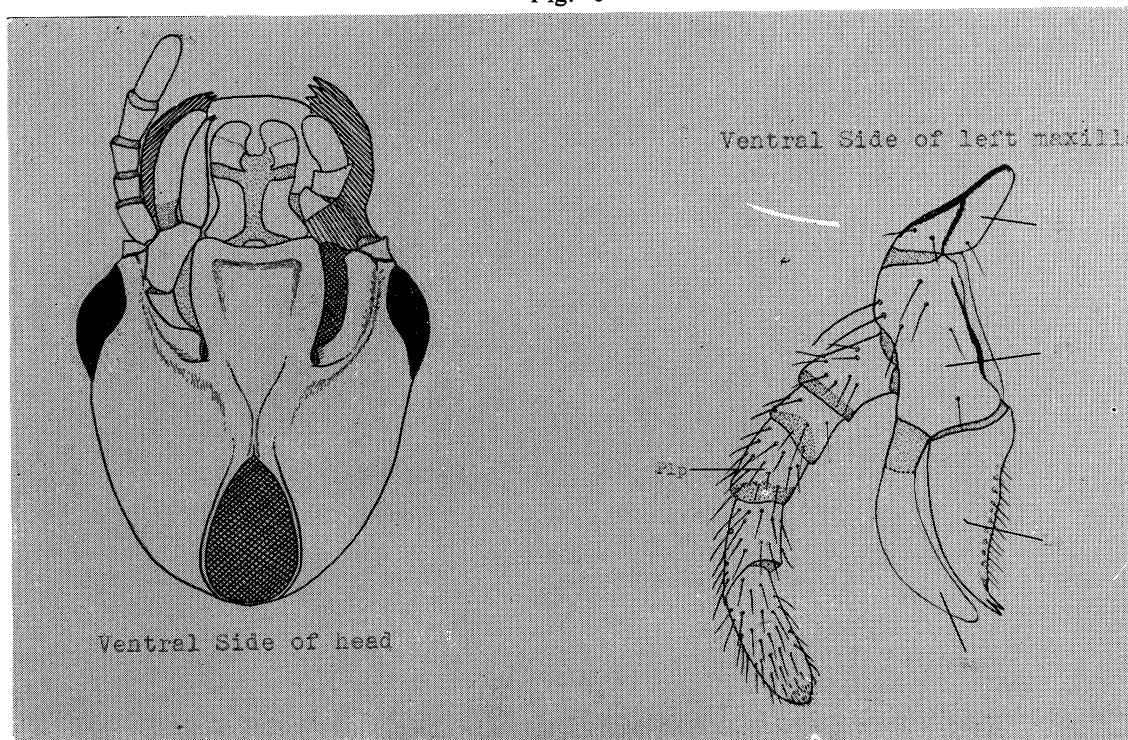
Adult (wingless) ♀

Fig. 5



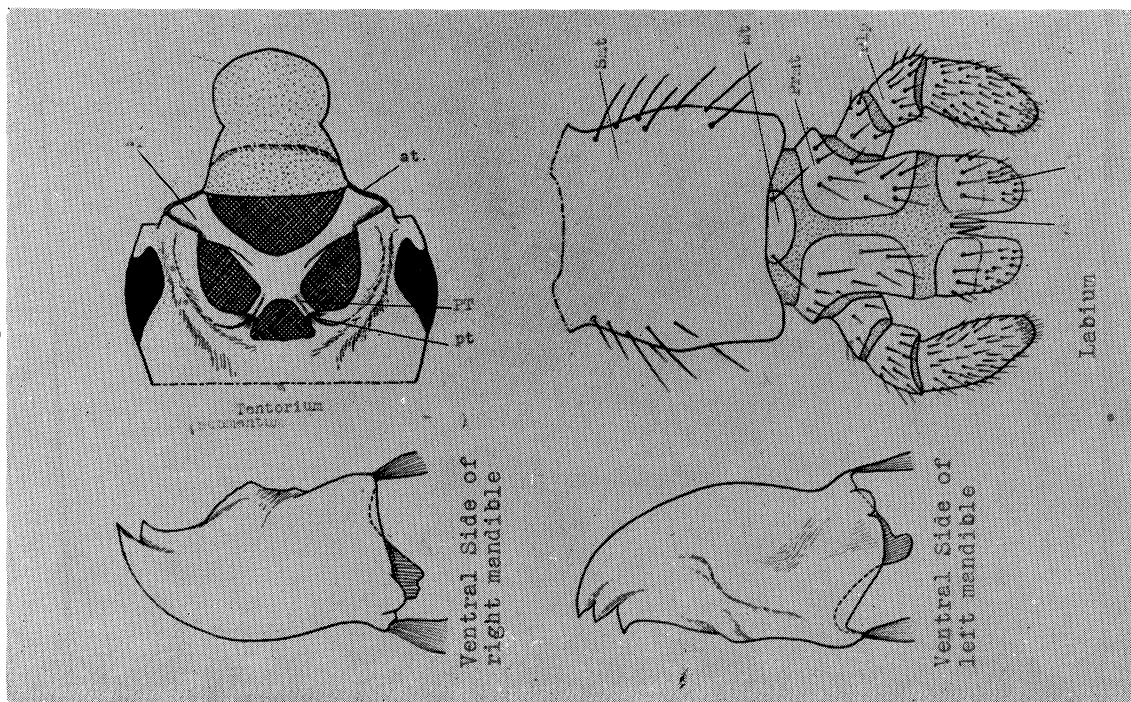
CX : Coxa Tr : Trochanter Fm : Femur Tb : Tibia Tar 1 : Tarsomere 1
 Tar 2 : Tarsomere 2 Tar 3 : Tarsomere 3 Un : Claw

Fig. 6



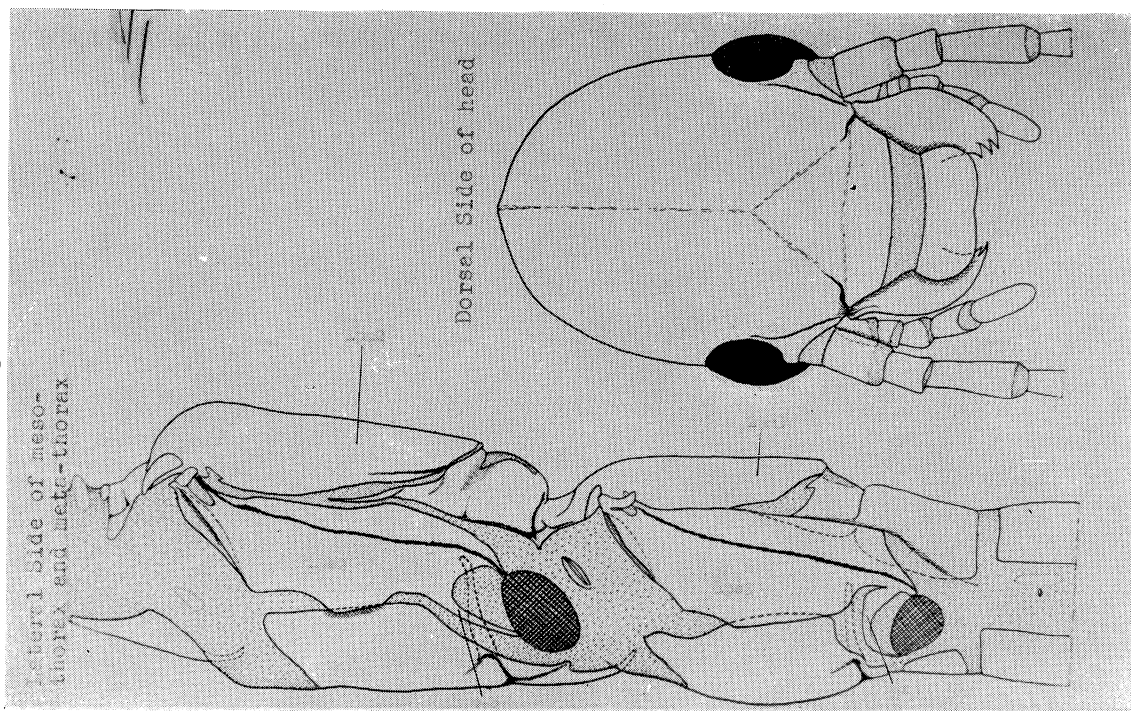
Plp : Maxillary palpus Cd : Cardio st : stipes Lc : Lacinia Ga : Galea

Fig. 7



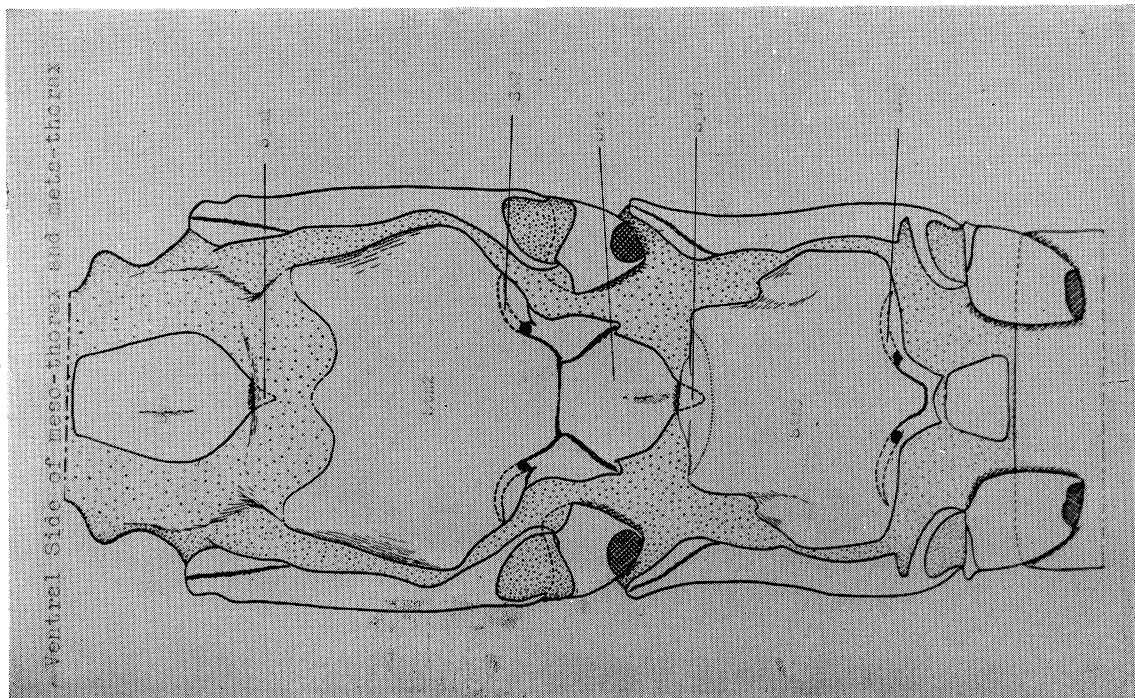
AT : Anterior tentorial arm PT : Posterior tentorial arm
 at : Anterior tentorial pit pt : Posterior tentorial pit Smt : Submentum
 Mt : Mentum Pmt : Prementum Gl : Glossa Plp : Labial palpus

Fig. 8



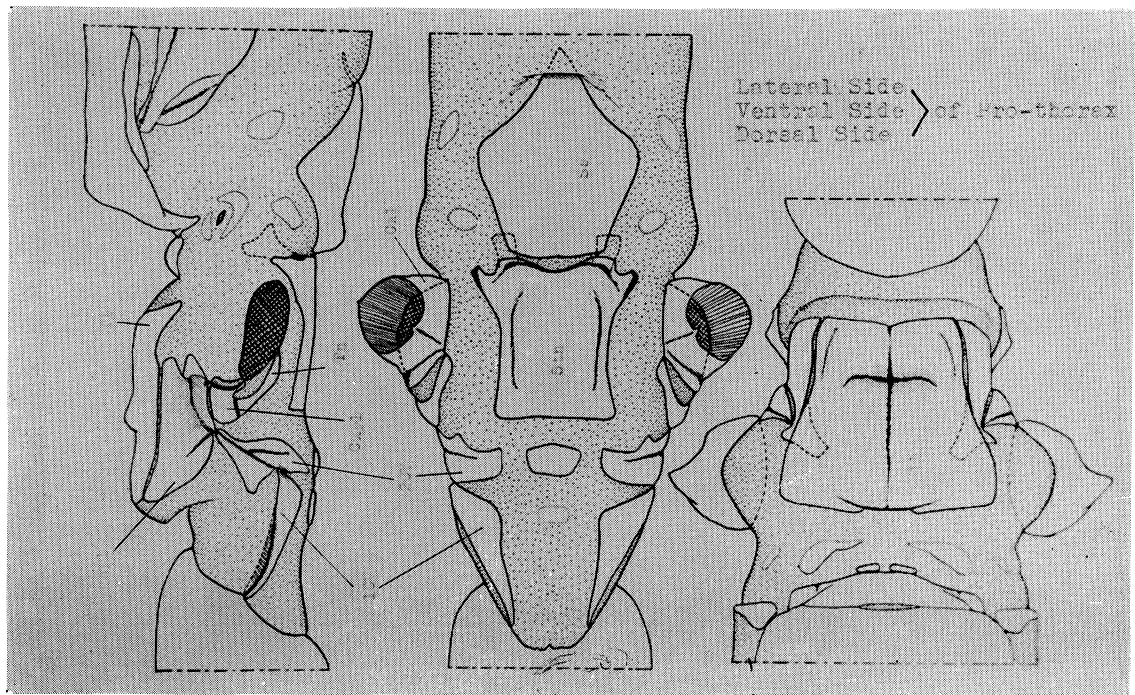
Epm : Epimeron Eps : Episternum Tn : Trochantin

Fig. 10



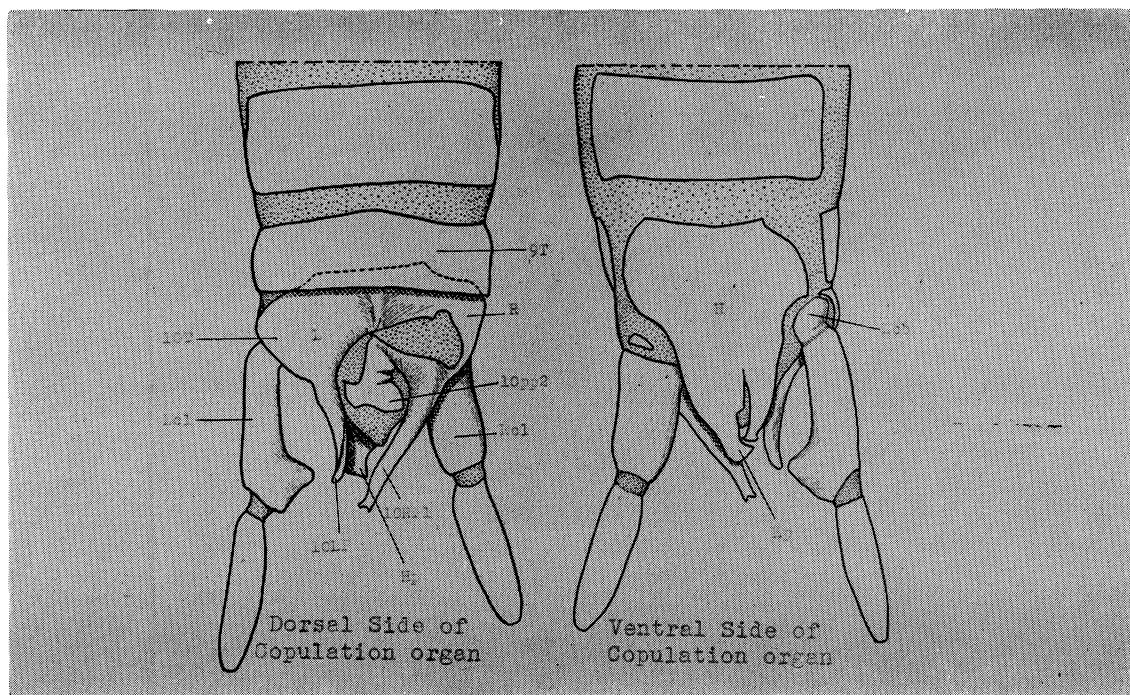
Ss : Spinasternum Stn : Eusternum
 Sa : Sternal apophysis Spn : Spina

Fig. 9



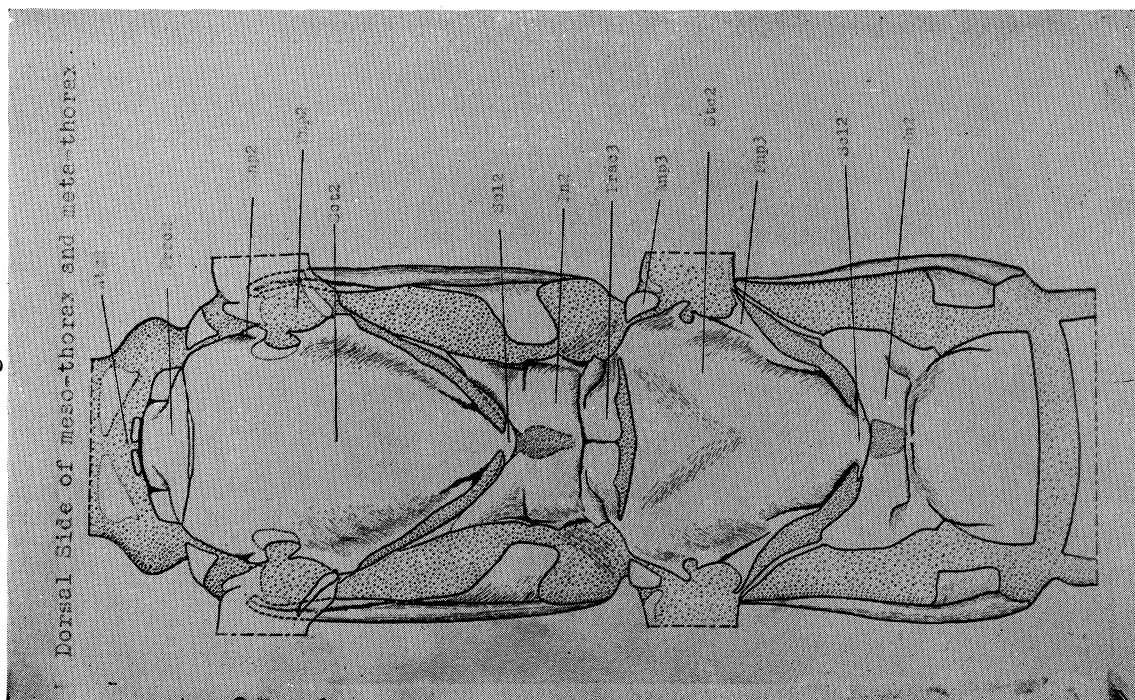
T : Tergum CV : Cervical sclerite Apl : Anapleurite
 Cxpl : Coxopleurite Tn : Trochantin Sth : Eusternum
 Ss : Spinasternum Cx : Coxa

Fig. 12



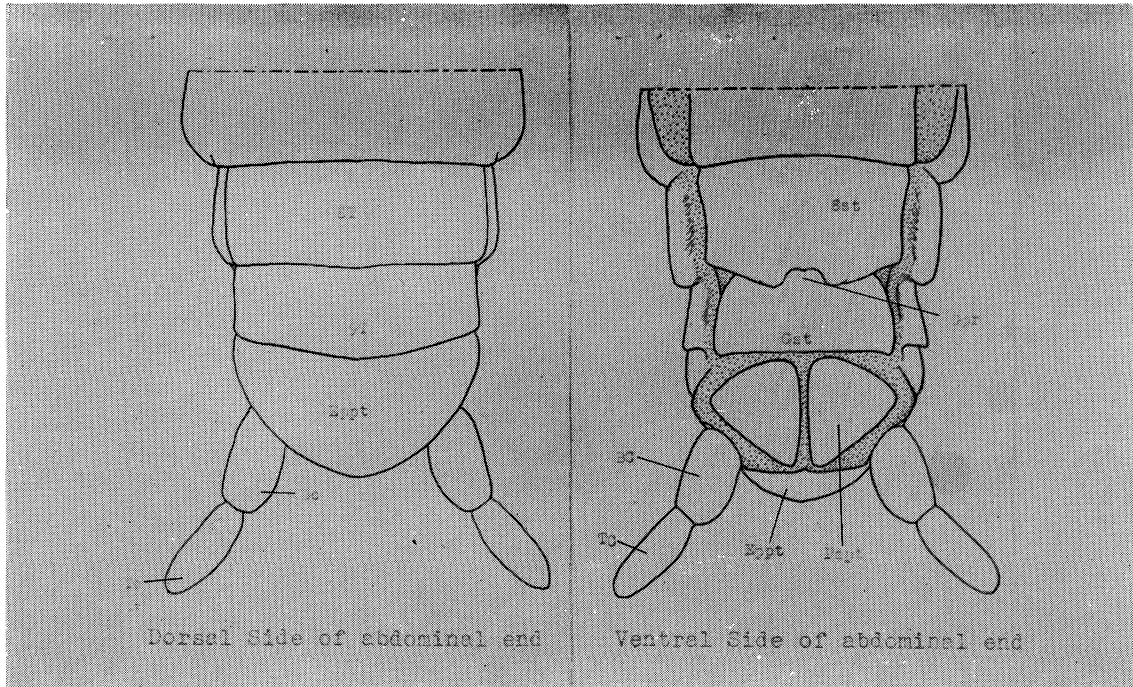
9T 9th abdominal tergum 10T : 10th abdominal tergum L : Left hemitergite R : Right hemitergite
 10Lp : Process of left hemitergite 10Rp : Process of right hemitergite H : Hypandrium
 Hp : Process of hyp and rium Lcb : Left cercus-basipodite Lcl : Basal segment of left cercus
 Rcl : Basal segment of right cercus

Fig. 11



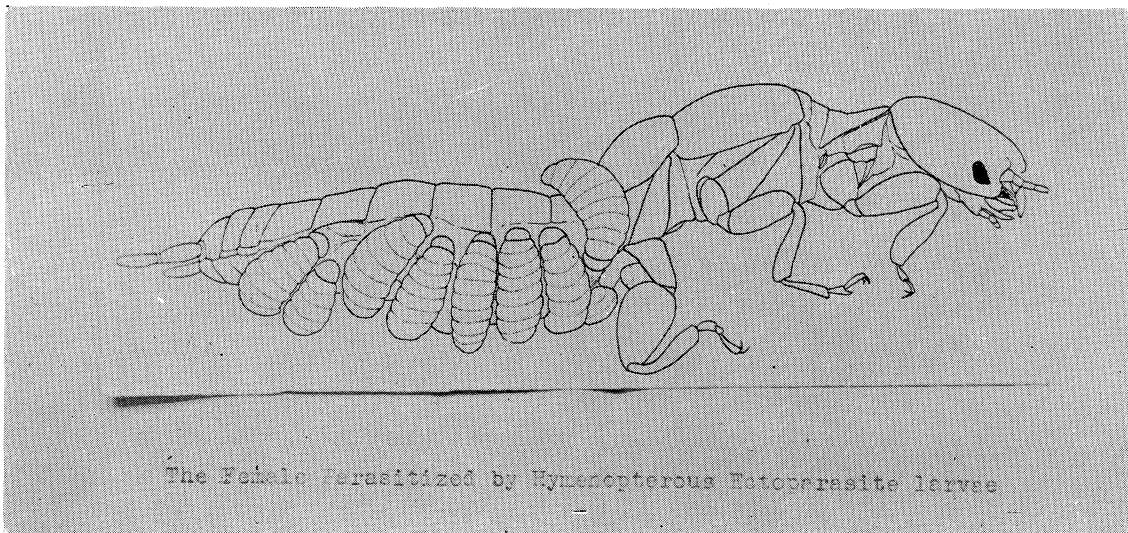
Atg : Acrotergite Prsc : Proscutum Sc : Scutum Scl : Scutellum
 Pn : Post notum Anp : Anterior notal wing process
 Pnp : Posterior notal wing process

Fig. 13



8T : 8th abdominal tergum 9T : 9th abdominal tergum 8st : 8th abdominal sternum
 9st : 9th abdominal sternum Gpr : GonoPore Papt : Paraproct Eppt : Epiproct
 Bc : Basal segment of cercus Tc : Terminal segment of cercus

Fig. 14



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