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EXTERNAL MALE GENITALIA OF TWO SPECIES OF GENUS *PARAGUS* LATREILLE (DIPTERA : SYRPHIDAE)

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A study of the external male genitalia of two species of the genus *Paragus* Latreille, *viz. P. serratus* Fabricius and *P. rufiventris* Brunetti has been made.

INTRODUCTION

On account of authentic role of external genitalia in systematics, it has drawn the attention of systematists all over the world. So far very insignificant contribution has been made on the external genitalia of Syrphidae from Indian subcontinent as well as from other parts of the world. Bean (1949), Zumpet & Heinz (1949), Fluke (1951), Nayar (1965) and Vockeroth (1969) worked on the external genitalia of the family. Metcalf (1921) studied external male genitalia of three species of *Paragus, viz P. bicolor, P. tibialis* and *P. quadrifasciatus*. In the present investigation external male genitalia of *P. serratus* and *P. rufiventris* has been worked out.

The flies collected from the wild were boiled in 10% KOH, washed in water, neutralized in acetic acid and dissected in glycerine so as to mount the dehydrated genitalia in Euparal.

EXTERNAL MALE GENITALIA

Paragus serratus Fabricius (Figs. 1-6)

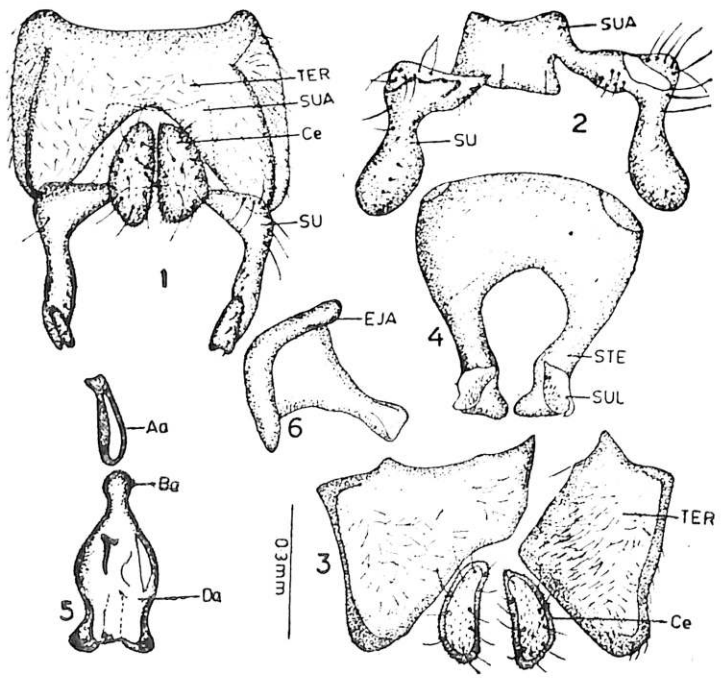
Periphalic organs : Ninth tergite (TER) pubescent, anterior margin bare, lower margin truncate, densely chitinized postero-laterally, cercal notch almost V-shaped; cerci (Ce) almost bean-shaped, densely chitinized on the periphery,

pubescent with few scattered bristles; surstyli (SU) resembling a human foot, with minute setae at the ankle, a group of large setae at the toe and bristles at the heel; surstylar apodemes (SUA) fused to form a squarish plate and cerci articulate apicolaterally with surstyli.

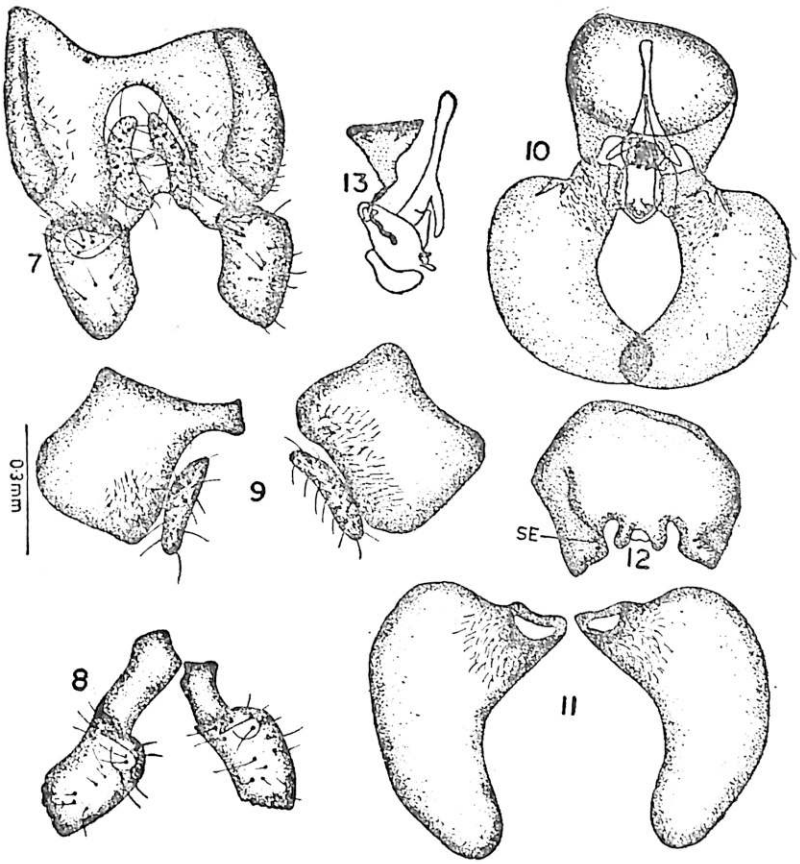
Phallic organs : Ninth sternite (STE) convex anteriorly, V-shaped posteri orly; superior lobes (SUL) pubescent, with an anteroir tubercle articulating with the sternite; aedeagal apodeme (Aa) ring-like, broadly grooved ventrally, narrowly articulates with basal aedeagus (Ba), distal aedeagus (Da) as long as broad, roughly oval, biramous, serrated apically and with a stout serrated branch arising medio-ventrally; ejaculatory apodeme (EJA) arrow-like, narrow basally and broad apically.

Paragus rufiventris Brunetti (Figs. 7–13)

Periphallic organs : Ninth tergite densely chitinized and pubescent posteroventrally, remaining part lightly chitinized and bare, cercal notch an elongated-V; cerci fusiform, pubescent with scattered bristles; surstyli alsost squarish, outer margin convex developing into a finger-like projection anteriorly, inner margin concave with a spinous projection anteriorly and serrated at the tip, the whole body covered with scattered bristles and with a tuft of small hairs anteriorly; surstylar apodemes with an open V-shaped notch posteriorely.



Figs. 1–6. Male external genitalia of *Paragus serratus*, 1. Periphallic organs, 2. Surstyli, 3. Cercus and tergite, 4. 9th sternite with superior lobes, 5. Aedeagus, 6 Ejaculatory apodeme.



Figs. 7–13. Male external genitalia of *Paragus rufiventris*, **7**. Periphallic organs, **8**. Surstyli, **9**. Cercus and tergite, **10**. Phallic organs, **11**. Superior lobes, **12**. 9th sternite, **13**. Ejaculatory apodeme (with aedeagus distorted).

Phallic organs : Ninth sterniete rounded anteriorly, posteriorly with a pair of processes each bearing three sensiliae (SE) ou its margin; superior lobes large, sac like, pubescent anteriorly; aedeagal apodeme U-shaped, grooved ventrally, not projecting beyond the anterior margin of the ninth sternite, basal aedeagus rounded with a pair of plates arising from it and lying on the sides of distal aedeagus, distal adeagus oval. apically pointed and bears a pair of pubescent plates; ejaculatory apodeme narrow basally and broad apically, ejaculatory duct entering at the base of the basal aedeagus.

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