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Microsculpture and Male Genitalia for Some Species of Rove Beetles Family (*Staphylinidae*) in Diyala Province

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Authors' contributions

This work was carried out in collaboration between both authors. Author SII designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Author KAH managed the analyses of the study. Authors SII & KAH managed the literature searches.

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Short Research Article

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ABSTRACT

The research study description Microsculipture of elytron pit and male Genitalia for Five Species of rove beetles statement and the differences between them and reinforced studies pictures and illustrations qualities. Back to subfamilies Tachyporinae, staphylininae.

Keywords: Staphylinidae; coleoptear; fauna; Iraq; microsculpture; male genital; rove beetles.

1. INTRODUCTION

Called order Staphylinidae (rove beetles) has the ability to move the upper part of the abdomen in away to intimidate their enemies and bring female. The family is small elytra than most abdominal cut leaves naked. the average length of species is up to 7 mm [1], multiple colors [2] may be several colors [3] in the same insect , and are studied by [4]. The insects found in different environmental plases [5], are characterized by some species of medical family because of its importance as skin irritation [6].

2. MATERIALS AND METHODS

Species collected during research :

1- *Sepedophilus immaculatus* stephens(7) samples

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2- *Gabrius Splendidulus* Gravenhorres (290) samples
3- *Philonthus decorus* Gravenhorrest (4) samples
4- *Quedius laterels* Gravenhorrest (13) samples
5- *Ocypus olens* Muller (5) samples

From Iraq diyala province.

Used in the collection of insect light traps and networks corethra. After killing insects by ethyl alcohol proved especially staples and then are marked and stored compound containing the lens Microscope (ocular micrometer). Were filmed and male genitalia using (Dino lite) microscope technology. And it has use of several keys to the diagnosis insects, [7,8,9] .

3. RESULTS AND DISCUSSION

The exact recipe is considered an important Microsculpture and Male genitalia in the classification of species of this family that has been selected as a member of species, *S. immaculatus* belonging to subfamily Tachyporinae other species goes back to subfamily staphylininae.

3.1 *Sepedophilus immaculatus* Stephens (Fig.1)

Has been seen through the study of the Microsculpture for this kind that there is an offer pit emergence of fluff that emerged from them. And it is filled with the cuticle. The fluff wide and short.

The male genitalia is characterized by the end of the aedeagus base and the apex is almost viewed.

3.2 *Gabrius splendidulus* Gravenhorst (Fig2)

The Microsculpture shows the small pit and a few cuticle with the fluff long and thin. The male ginetalia characterized by the end of the aedeagus. A base view from the Apex.

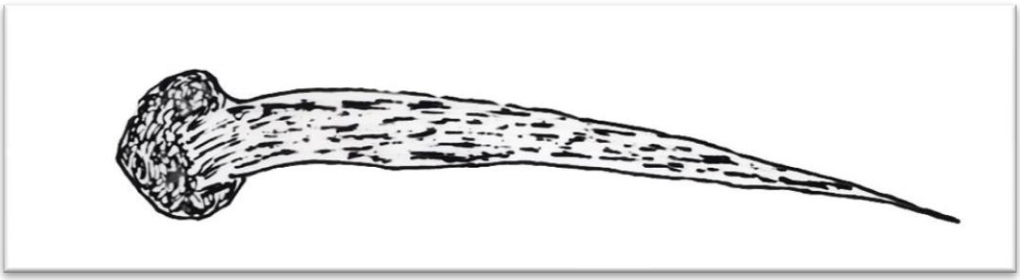


Fig. 1-**A (Microsculpture**)

Fig. 1-**B (Dino- lite**)

Fig. 2A. (Microsculpture)

Fig. 2B. (Dino- lite)

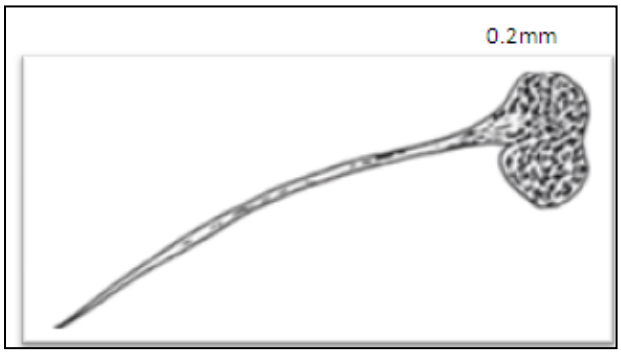


Fig. 3A. (Microsculpture) **B- (Dino- lite) xz,.,,,/**

3.3 *Philonthus decores* Gravenhorst (Fig.3)

The pit can be divided in to two pieces as if the largest of the species, from the middle of fluff long and thin. In the middle of pit cuticle in circles. The aedeagus of male genitalia is around the edge of the wide apex, the base of aedeagus is wide apex.

3.4 *Quedius laterel* Gravenhorst (Fig. 4)

The pit in this circular type with two branches, one of which is greater than the other inside cuticle in circles. Upper from the middle of pit fluff, broad. The length of the aedeagus length paramere. The aedeagus tapered end and the base width apex.

3.5 *Ocypus olens* Muller (Fig. 5)

Pit almost on the square – shaped sheath their edges thick there cuticle them in the form of small circles protrudes from the middle of pit fluff broad .

The length of the aedeagus almost the same paramere, the same width circular apex Black color.

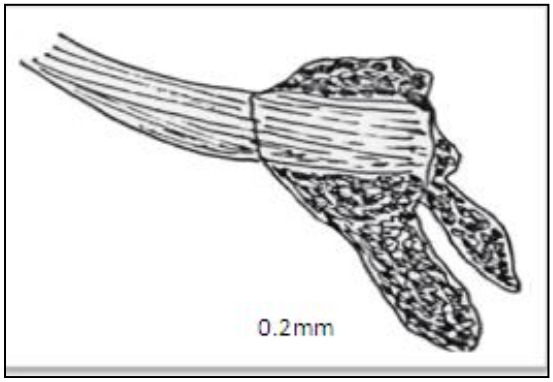


Fig. 4A. (Microsculpture)

B. (Dino- lite)

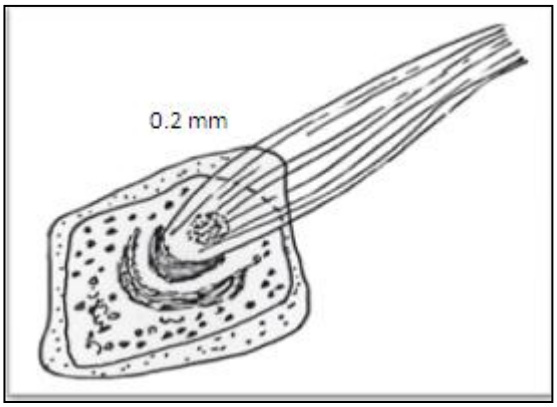
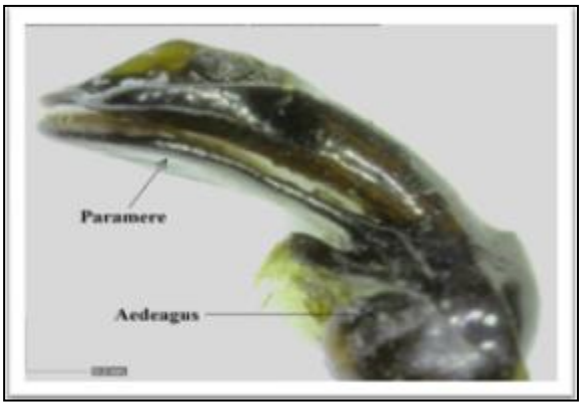


Fig. 5A. (Microsculpture)



B. (Dino- lite)

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4. CONCLUSIONS

Through the research it becomes clear the study of the microsculpture of elytron pits and in different areas of the elytron to show the characteristics that characterize the types of this studied family and they are not necessarily the same and distintive feature has been added to them species which is the male genitalia to clarify their structures and the lack of similarity of their parts between the species of this family.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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