

A. NOTE ON SEXUAL DIMORPHISM IN *SITOPHILUS*
WEEVILS.

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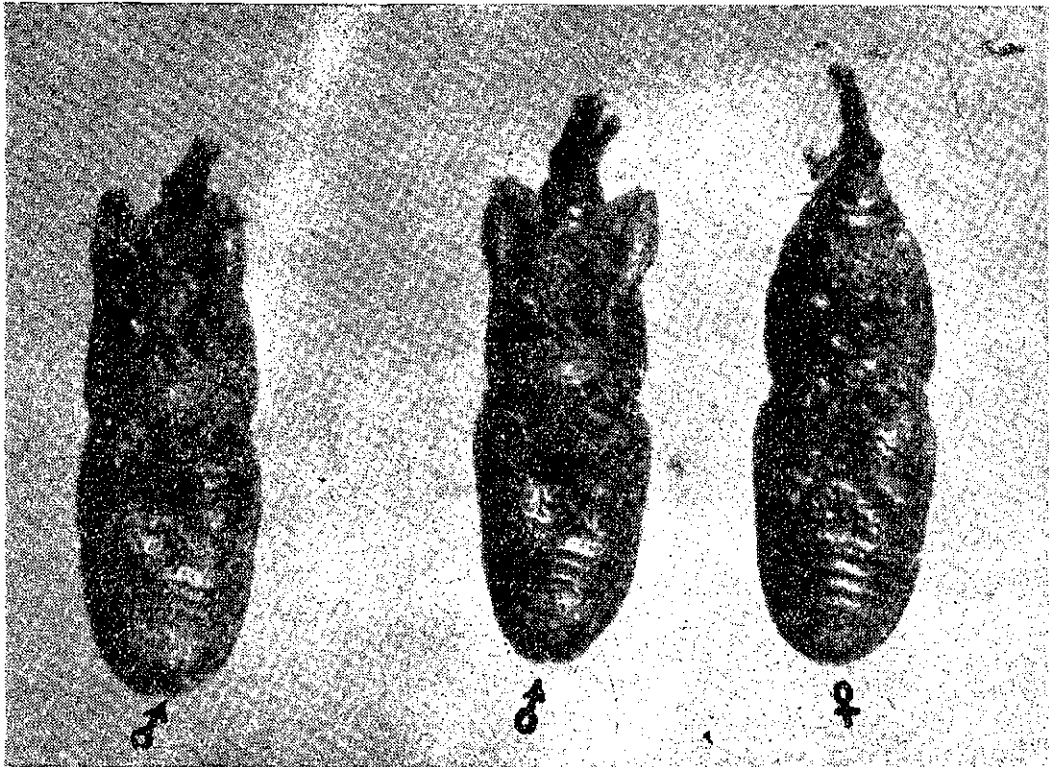
The advantages of being able to determine the sex of insects by means of external characters are obvious, particularly when as with the *Sitophilus* weevils, they have been favoured as experimental material by many workers. In *Sitophilus oryza* L., the sex may apparently readily be determined by reference to the relative length of and type of puncturing of the rostrum (Richards, 1947). There has seemed, however, to have been some doubt about a similar reliable method of determining sex in *Sitophilus granarius* L. Richards (1947) stated that there was no certain way of determining the sex of *S. granarius* without risking injury to the female. In a later paper (1948) he implied, in a footnote, that a specimen could be sexed by reference to the length and slenderness of the rostrum. This had been given as a method of sexing these insects by Back and Cotton (1926).

In a series of recent observations, in which many scores of weevils were examined externally and later checked by dissection, we have found another means of sexing *S. granarius*. We have also found that this method and the rostrum method are valid for only one of the two strains of weevils available to us, namely the GG strain (Musgrave and Miller, 1958).

In the GG strain, males have a slight, roughly triangular depression on the ventral surface of the abdomen, postero-medially to the last pair of coxae, whereas the similar area of the female abdomen is flat or slightly raised. Figure 1 is a photograph of two males and one female.

It has not been possible to sex members of our other strain (MW) with the same reliability by these or other external methods.

(1) *Sitophilus granarius* and *S. oryza* are used here for the granary and rice weevil respectively, in accordance with common North American usage, instead of *Calandra granaria* and *C. oryzae* as employed by many authors elsewhere. A complex situation is analyzed by Vaurie (1951).



This interesting state of affairs may explain why some investigators have had more difficulty than others in sexing *S. granarius* L., for the weevil occurs in many strains. Here, too, is yet another difference between the microbiologically different strains GG and MW.

We take this opportunity to thank Dr. W. E. Heming, Head, Department of Entomology and Zoology, in whose department this work was performed and Dr. M. V. Smith, Department of Agriculture for help with photography.

Literatur:

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Hülâsa:

BUĞDAY BİTLERİNDE (C A L A N D R A) CİNSİYETİN TAYİNİ HUSUSUNDA BİR NOT:

Yazarlar *C. Granaria* ve *C. Oryza* türlerinde erkek ve dişilerin haricen tetkik sureti ile teşhisi hususunda yapılan çalışmalara işaret ettikten sonra mevcutlarında olan iki ırk *C. Granaria*' dan biri olan (GG) ırkında tespit ettikleri bir husustan bahsetmektedirler.

Bu ırkın erkeklerinde karının alt yüzeyinde son çift coxa'nın yanında (fotoğraflara bak) üçgen şeklinde bir çukurluğun mevcut olduğu dişilerde böyle bir çukurluğun mevcut olmadığı, burasının hafif kabarık veya düz bulunduğu belirtilmektedir.

Erkek ve dişi arasındaki bu harici farklılık diğer ırk olan (MW) ırkında bariz olmadığından bir anahtar vazifesi görememektedir.