

NOTA / NOTE

Two physical abnormalities in Coleoptera (Cerambycidae, Lucanidae) from Rhode Island, U.S.A.

Raul Nascimento Ferreira

6 Fairview Dr., Pawcatuck CT 06379-1223, USA. e-mail: insectcatcher@comcast.net

Abstract: A case of brachelitry in *Tylonotus masoni* (Knull, 1928) (Coleoptera: Cerambycidae) and a case of meiomely in *Lucanus capreolus* (Linnaeus, 1758) (Coleoptera: Lucanidae), both from Rhode Island, U.S.A., are reported.

Key words: Coleoptera, Cerambycidae, Lucanidae, Teratology, Faunistics.

Resumen: Dos anomalías físicas en Coleoptera (Cerambycidae, Lucanidae) de Rhode Island, U.S.A. Se da cuenta de un caso de braquielitria en *Tylonotus masoni* (Knull, 1928) (Coleoptera: Cerambycidae) y de un caso de meiomelia en *Lucanus capreolus* (Linnaeus, 1758) (Coleoptera: Lucanidae), capturados ambos en Rhode Island, U.S.A.

Palabras clave: Coleoptera, Cerambycidae, Lucanidae, Teratología, Faunística.

Recibido: 21 de marzo de 2014

Publicado on-line: 14 de abril de 2014

Aceptado: 8 de abril de 2014

Introduction

Brachelitry (elytra reduction) and meiomely (reduction or loss of appendages) are some of the more common morphological abnormalities encountered among insects. Though not rare in the spectrum of abnormalities as classified by Balazuc (1947), they are of interest to entomologists working with developmental deviations.

The teratologies here reported come from two specimens in the author's collection (RNFC).

Material and results

1.- Brachelitry in *Tylonotus masoni* (Knull, 1928) (Cerambycidae)

Specimen studied: U.S.A., Rhode Island, Washington Co., Westerly, 20-VIII-1984 (RNFC).

This specimen presents the elytra and legs uniformly brownish, pronotal calli poorly defined, and head very short. The pronotal shape and short head are distinctive of the species. It is a non common species. They have a small white patch between the eyes and the antenna. Size 8-10 mm. The walking ability of the insect was not impaired but flight was hampered.

The brachelitry is unilateral with the left elytron reduced by 1/3 in length (Figure 1). The right elytron appears normal.

This type of abnormality is sometimes associated with other deformities and can appear in other coleopteran families with more frequency in the Carabidae and the cause, as mentioned by Ferreira (1967), can be purely mechanic.

2.- Meiomely in *Lucanus capreolus* (Linnaeus, 1758) (Lucanidae)

Specimen studied: U.S.A., Rhode Island, Washington Co., 23-VII-1990 (RNFC).

The generic placement of *L. capreolus* (Linnaeus, 1758) has varied between *Pseudolucanus* Hope, 1845 to *Lucanus* Scopoli, 1763 (Benesh, 1960; Krajcik, 2001). In spite of the relative abundance of this species, its life history appears not to have been studied and remains unknown (Ratcliffe, 1991).

This handsome stag beetle is readily attracted to light which causes a problem for its existence and should be a concern, as its frequency and range in this area have declined.

Although at first glance the specimen appears normal, closer examination reveals that the left metathoracic leg has a reduced number of tarsomeres (Figure 2a) as compared to the right leg. From the normal condition of five equally sized tarsomeres (Figure 2b), two tarsomeres are missing and the remaining three are reduced in size (Figure 2a). The tibia is 1/3 shorter in length than the right tibia. According to Balazuc (1947), this meiomely is common and the most frequent cause is a mechanic pressure inflicted during the ninfal stage, but we cannot disregard the possibility of a toxic influence of the environment as stated by Ferreira (1966).

Acknowledgements

I appreciate the assistance of Dr. Raymond Pupedis (Yale University, Peabody Museum of Natural History) for helping to improve the first draft of the manuscript and Dr. Jane O'Donnell (University of Connecticut, Storrs) for his final review.

Literature Cited

BALAZUC, J. 1947. La tératologie des coléoptères et expériences de transplantation chez *Tenebrio molitor* L. *Mémoires du Muséum National d'Histoire Naturelle*, Paris (Nouvelle série), **35**: 1-293.

BENESH, B. 1960. *Coleopterorum Catalogus Supplementa*, Pars 8. Lucanidea. Gravenhage, Netherlands: W. Junk. 178 pp.

FERREIRA, R.N. 1966. Casos Teratológicos. Atrofia do tarso posterior de um *Oryctes nasicornis* L. (Coleoptera). *Graellsia*, **22**: 25-27.

FERREIRA, R.N. 1967. III- Casos teratológicos: Hemibraquelitria em *Pterostichus (Poecilus) cupreus* L. *Instituto Don Ernesto Sena de Oliveira*, pp. 34-35.

KRAJCIK, M. 2001. *Lucanidae of the world, catalogue-part 1, checklist of the stag beetles of the world (Coleoptera: Lucanidae)*. Czech Republic. 108 pp.

RATCLIFFE, B.C. 1991. The Lucanidae and Passalidae (Insecta: Coleoptera) of Nebraska. *Great Plains Research*, **1**(2): 249-282.

Fig. 1. - *Tylonotus masoni* (Knull, 1928), abnormal elytra.

Fig. 2. - *Lucanus capreolus* (L.). **a.** - Reduced abnormal leg. **b.** - Normal leg.

