

A REVIEW OF TERATOLOGY IN STAPHYLINIDAE,  
WITH DESCRIPTION OF A TERATOLOGICAL  
SPECIMEN OF *TACHINUS AXILLARIS* ERICHSON  
(COLEOPTERA, STAPHYLINIDAE, TACHYPORINAE)  
FROM FLORIDA<sup>1</sup>

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ABSTRACT

One of 51 adult *Tachinus axillaris* Erichson, from a single collection in northern Florida, has a bifurcate left profemur with a supernumerary appendage. Only 3 other teratological specimens of Staphylinidae with this type of aberration (schistomely) have been reported in the literature, all from Europe and none belonging to the subfamily Tachyporinae.

RESUMEN

En una colección de 51 individuos del norte de la Florida, solo un adulto tuvo el profemur izquierdo bifurcado, con una apéndice supernumaria. Solamente otros 3 ejemplares teratológicos de Staphylinidae con este tipo de aberración (esquistomelia) han sido citados en la literatura, todos de Europa y ninguno de la subfamilia Tachyporinae.

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A monograph on teratology in Coleoptera by Balazuc (1948, 1969) provided a classification and terminology for many of the aberrations discovered. He considered anomalies of the appendages to be divisible into 2 major groups: presence of supernumerary appendages (polymely), and fusion or loss of appendages (meiomely [= oligomely *auct.*]). One type of polymely is exhibited by the occurrence of bifurcations or trifurcations of normally-situated appendages (schistomely). Examples of schistomely in adult Staphylinidae are a bifurcate antenna in an *Ocypus similis* (Fabricius) (Stannius 1835), a reduplication of the tibia and tarsus borne on a posterior femur of a *Philonthus fimetarius* (Gravenhorst) (Cockayne 1937), and a bifurcation of each posterior femur with the bifurcation bearing a normal tibia and tarsus as well as a rudimentary appendage in a *Paederus ruficollis* (Fabricius) (Balazuc 1969). A frequent type of meiomely involves the loss (ectromely) or reduction (atrophy) of appendages or parts of appendages. In adult Staphylinidae, ectromely is exhibited by a *Stenus impressus* Germar in which the right mesotarsus is attached directly to the femur (Allen 1958), and atrophy is shown by a *Philonthus pullus* Nordmann whose antennae, palpi, tarsi, and elytra are reduced (Balazuc 1969).

Among anomalies of segmentation is a condition (helicomery) where a hemisclerite of one side of a body segment is fused with the hemisclerite of the other side of the body segment following. Helicomery is reported to occur in the abdomen of an adult *Rugilus erichsoni* (Fauvel) (Balazuc 1969).

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Diverse malformations of the thorax have been found in several adult *Atheta divisa* (Märkel) with asymmetrical pronotum (Strand 1959), and in adult *Philonthus quisquiliarius* (Gyllenhal) and *Paederus 'sanguinicollis' Stephens* [= *P. rubrothoracicus* (Goeze) or possibly *P. ruficollis* (Fabricius)] with symmetrical deformations of the pronotum (Fauvel 1901). An abnormal ventral nervous system in an *Ocypus olens* (Müller) has been reported (Green 1952).

Malformations of the aedeagus sometimes take the form of atrophy (which may be associated with gynandromorphism) and sometimes of an arrested state of development. An atrophied aedeagus in *Stenus junco* (Paykull) (Renkonen 1939), and malformed aedeagi in *Ocypus ater* (Gravenhorst) (Kevan 1961) and *Philonthus decorus* (Gravenhorst) (Coiffait 1965, Frank 1981) have been reported.

Some malformations, especially those associated with the aedeagus which provides important diagnostic characteristics in many Staphylinidae, have raised questions about the specific identities of the teratological specimens. Kevan (1961) was initially uncertain whether the specimen he examined was *Ocypus ater* or an undetermined allied species. Coiffait (1965) ascribed a teratological specimen of *Philonthus decorus* to a new genus and species (Frank 1981), and Wollaston (1867) described a teratological specimen of *Philonthus quisquiliarius* as a new species, *P. sinuatus* (Fauvel 1901).

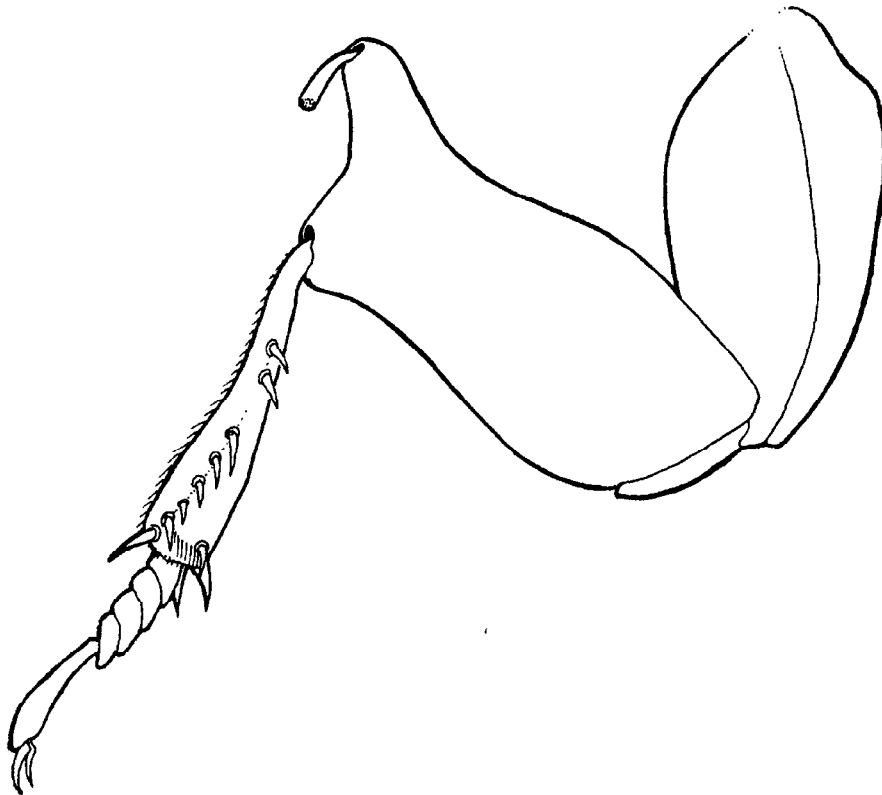


Fig. 1. Left front leg of *Tachinus axillaris* adult from Liberty Co., Florida, showing schistomely of left profemur with supernumerary appendage.

## MATERIAL AND DESCRIPTION

Paul M. Choate (Gainesville, FL) collected 51 adult specimens of *Tachinus axillaris* Erichson in pitfall traps baited with pig dung on 30-III-1979, at Torreya State Park, Liberty Co., Florida. The species is known from the southeastern United States, including northern Florida (Campbell 1973). The unusual structure of the left profemur (Fig. 1) of one of the specimens was apparent. The femur is partially bifurcate apically, and the lower branch of this bifurcation carries a normal tibia and tarsus. The upper branch bears at its apex a supernumerary appendage which resembles the last article of the tarsus, but has no claws. The specimen exhibits schistomely. The form of the aberration is not exactly as in any teratological specimen of Staphylinidae described in the literature (all known to me are mentioned in the introduction), but is closest to that of the *Paederus ruficollis* specimen illustrated by Balazuc (1969). The *T. axillaris* specimen has been deposited in the Florida State Collection of Arthropods.

## ACKNOWLEDGMENTS

I am grateful to Paul M. Choate (Gainesville) for his thoughtfulness in preserving and forwarding to me the staphylinids he collected at Torreya State Park, to Michael C. Thomas (Gainesville) for preparing Fig. 1, and to Jorge R. Rey (Vero Beach) for translating the abstract into Spanish.

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## SOME PHYTOSEIIDS OF NIGERIA (ACARINA: MESOSTIGMATA)<sup>1,2</sup>

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### ABSTRACT

Nine genera of phytoseiids were collected in Nigeria by the senior author. Six new species were found and described as follows: *Amblyseius aegyptiacus*, *A. solus*, *Euseius saltus*, *E. distinctus*, *Paraseiulus relenta*, and *P. parva*. Eleven other species are recorded here from Nigeria, and *Amblyseius sundi* Pritchard and Baker is redescribed. Males of *Typhlodromips rykei* (Pritchard and Baker) and *Euseius bwende* (Pritchard and Baker) are described.

### RESUMEN

Nueve géneros de ácaros fitoseiidos fueron colectados en Nigeria por el primer autor. Se encontraron y se describieron 6 nuevas especies: *Amblyseius aegyptiacus*, *A. solus*, *Euseius saltus*, *E. distinctus*, *Paraseiulus relenta* y *P. parva*. Se registran 11 especies adicionales de Nigeria.

*Amblyseius sundi* Pritchard & Baker se describe de nuevo. Se describen los machos de *Typhlodromips rykei* (Pritchard y Baker) y de *Euseius bwende* (Pritchard y Baker).

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The phytoseiids are poorly known in equatorial West Africa. Prior to this work, no phytoseiids had been identified from Nigeria. The only major report pertinent to Western Africa is that of Pritchard and Baker (1962). Van der Merwe (1968) reported extensively on African Phytoseiidae, but the collections included represent almost exclusively South Africa and Malawi.

Nine genera of phytoseiids were collected in Nigeria. Six new species were found and are described as follows: *Amblyseius aegyptiacus*, *A. solus*, *Euseius saltus*, *E. distinctus*, *Paraseiulus relenta*, and *P. parva*. Eleven other species are recorded here from Nigeria. The female of *Amblyseius sundi* Pritchard and Baker is redescribed and males of *Typhlodromips rykei* (Pritchard and Baker) and *Euseius bwende* (Pritchard and Baker) are described for the first time.

Collecting was done by the senior author in the vicinity of Ibadan, Nigeria as an adjunct to a survey of phytophagous mites of Nigeria during 1974 to

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