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NEW SPECIES OF MITES OF THE FAMILY TYDEIDAE
(ACARINA : PROSTIGMATA) COLLECTED FROM
UNSPRAYED APPLE TREES IN IRELAND

BY F. M. MOMEN*

NEW SPECIES OF MITES OF THE FAMILY TYDEIDAE
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ABSTRACT: Three new species of the genus *Tydeus* (Acarina : Tydeidae) are described and illustrated. These species were named *Tydeus inflatus*, *Tydeus paratalarius* and *Tydeus parajiba*. All were found on twigs and bark of unsprayed apple trees at Belfield, Co. Dublin.

**INTRODUCTION**

Mites of the prostigmatic family Tydeidae are perhaps the most ubiquitous of the plant-inhabiting Acarina, as well as being very numerous in soils. The present paper deals with three new tydeid belonging to genus *Tydeus* Koch found on apple trees at Belfield, Co. Dublin. Like other members of the family Tydeidae, most of the species of *Tydeus* probably feed on fungi, honeydew, other mites and eggs.

The generic concepts and the terminology of the Tydeidae follow ANDRÉ (1980 & 1981a, b). The holotype and paratypes of the new species are deposited in the collection of the National Museum of Ireland.

**Genus *Tydeus* Koch 1835**

**Tydeus inflatus** sp. nov.

*Female*: Length 275 \( \mu \text{m} \); width 168 \( \mu \text{m} \).

Dorsum completely reticulated and with rosette-like areas marking muscle attachment as shown in Fig. 1, A. Sensory setae long, slender, other dorsal body setae stout. First and second pairs of propodosomal setae long and rodlike, third pair slightly enlarged distally, all are subequal in length, 18 \( \mu \text{m} \). All hysterosomal setae stout, broadly expanded and blunt distally (Fig. 1, A).

Ventrum with three pairs of ventral setae. Genital opening simple with six pairs of genital setae and four pairs of aggenitals (Fig. 1, B).

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FIG 1: *Tydeus inflatus* sp. nov.
Legs: All legs possess claws and empodia. Setal formula from trochanter to tarsus as follows: I: 1-3-3-4-8(1), II: 0-3-2-2-6(1), III: 1-2-1-2-5, IV: 0-1-1-2-5 (Fig. 1, C). Solenidion I $\omega$ 9 $\mu$m long. Gnathosoma partially visible dorsally, palp four segmented with simple setae. Formula from trochanter to tarsus is: 0-2-2-6(1) (Fig. 1, D). Movable digit of the chelicera shorter (17 $\mu$m) than the palp tarsus (25 $\mu$m).

**Male:** Length 252 $\mu$m, width 170 $\mu$m.

Other features similar to female except genital area (1, E). Anterior eugenital flap with three pairs of setae, posterior eugenital flap with a single pair of setae.

**Holotype:** One female was collected from twigs of unsprayed apple trees, Belfield, Dublin in July 1982.

**Allotype:** One male collected with the holotype.

**Paratypes:** Two females and two males were collected with the holotype.

*Note:* This new species is most closely related to *Tydeus teresa* Carmona 1970 in having the propodosomal setae long and rod like, and the hysterosomal setae stout, broadly expanded and blunt distally. It differs from *teresa* in having three rosette-like areas, in the form of the reticulation and the setae of tarsus I. The solenidia on tarsus I are not inflated distally as shown by Carmona for *T. teresa*.

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**Tydeus paratauricus** sp. nov.

**Female:** Length 350 $\mu$m, width 247 $\mu$m.

Dorsum completely reticulated and with four pairs of rosette-like areas (Fig. 2, A). All the setae are minutely serrate, sensilli long and whip-like. Lengths of setae: P1-P3 subequal 25 $\mu$m; L1, 29 $\mu$m, L4 and L5 subequal 25 $\mu$m; S, 62 $\mu$m; D1-D5, 25 $\mu$m; h2, 21 $\mu$m (Fig. 2, A).

Ventrum with three pairs of ventral setae. Genital opening simple with six pairs of genital setae and four pairs of aggenital setae (Fig. 2, B). Legs: All legs possess claws and empodia. Setal formula from trochanter to tarsus as follows: I: 1-3-3-4-8(1), II: 0-3-2-2-6(1), III: 1-2-1-2-5, IV: 0-1-1-2-5 (Fig. 2, C). Solenidion I $\omega$ 11 $\mu$m long. Gnathosoma partially visible dorsally, chelicera with movable digit shorter than palp tarsus. Palp chaetotaxy from trochanter to tarsus 0-2-2-6(1) as in Fig. 3, D.

**Male:** Unknown.
FIG 2: Tydeus parataurus sp. nov.
Fig 3: Tydeus parafibra sp. nov.
Holotype: One female was collected from the bark of unsprayed apple trees, Belfield, Dublin in June 1982.

Paratypes: Five females collected with the holotype.

Note: This new species is most closely related to Paralorryia fibra Kuznetzov 1975 in having a small reticulated area on the anterior portion of the propodosoma and a larger reticulated area on posterior hysterosoma. It differs from fibra in having smooth rather than slightly serrate dorsal setae and in the different form of the reticulation pattern of hysterosoma.

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