

QUEENSLAND DEPARTMENT OF PRIMARY INDUSTRIES

DIVISION OF PLANT INDUSTRY BULLETIN No. 378

STUDIES OF QUEENSLAND TETRANYCHIDAE.
1. OLIGONYCHUS DIGITATUS SP.N. (ACARINA:
TETRANYCHIDAE), A SPIDER MITE FROM GRASSES

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SUMMARY

Oligonychus digitatus sp.n., a spider mite found on grasses, is described and figured. It is distinguished from related species on the shape of the aedeagus.

Introduction

Many spider mites (Tetranychidae) are serious pests on a wide range of crop plants in Queensland. In recent years several important species not previously known to exist here have been found. A detailed knowledge of the taxonomy of the group is therefore an essential part of sound economic studies, and a survey of the family Tetranychidae is in progress. A species causing damage to grasses has been determined as new and is described below.

Oligonychus digitatus sp.n.

Holotype: Male; *Allotype*: Female; and *Paratypes*:

QUEENSLAND: Ipswich—on Queensland blue couch (*Digitaria didactyla* Willd.), mites numerous in a ring-shaped infestation in the lawn, the grass in the outer part of the ring yellowed, that in the centre brown and dried out, 27.x.1964 (J. H. Barrett).

Holotype and allotype on separate slides in Hoyer's medium in Queensland Museum, Nos. W2496 and W2497 respectively. Paratypes, 11 males, 26 females on slides in Hoyer's medium, and other specimens of males, females and immature stages preserved in alcohol, in collection of Queensland Department of Primary Industries.

Male.—Dimensions of mounted holotype 360 μ (to tip of palpi) x 180 μ ; 10 paratypes (315 μ –360 μ) x (180 μ –195 μ); palpus with terminal sensillum about twice as long as wide (Figure 1A); peritreme ending in a simple bulb; empodium I with proximoventral spurs larger than dorso-median claw (Figure 1B); four tactile and one or two sensory setae proximal to duplex setae on tarsus I; nine or 10 tactile and two to four sensory setae on tibia I; seven tactile setae on tibia II, empodium II with three pairs of proximoventral hairs; six tactile setae on tibia III, seven on tibia IV; adeagus bent dorsad, the dorsally directed part at a slightly acute angle to the main shaft, and abruptly narrowed by a sharp inturning of the posterior margin to form a short, bluntly pointed tip (Figure 1C).

Female.—Dimensions of mounted allotype 525 μ (to tip of palpi) x 285 μ ; 10 paratypes (435 μ –510 μ) x (230 μ –370 μ); dorsal setae finely tapering, pubescent, dorso-centrals about half as long again as intervals between adjacent setae; stylophore evenly rounded in front; most dorsal striae transverse, but longitudinal between inner sacral setae; lobes on dorsal striae mostly semi-circular, a few tending to be more pointed, others broader, more flattened at the tip, approaching an oblong shape; lobes separated at the base, and each with a dense basal spot (Figure 1D); ventral hysterosomal striae with semi-circular lobes smaller than those on the dorsal striae and with the basal spot not always so obvious; the ventral lobes become irregular just forward of the first pair of ventral hysterosomal setae and the ventral propodosomal striae are without defined lobes; peritreme ending in a simple bulb, only very slightly expanded (Figure 1E); terminal sensillum of palpus almost one-and-one-half times as long as wide (Figure 1F); empodium with long slender sickle-shaped claw and three pairs of proximoventral hairs (Figure 1G); four tactile setae and one sensory seta proximal to duplex setae on tarsus I; nine or 10 tactile and one or two sensory setae on tibia I; seven tactile setae on tibia II, six on tibia III, seven on tibia IV.

The mites are pale yellow colored in life and may produce dense webbing on the host plant.

Diagnosis.—*O. digitatus* resembles other species in the *Pratensis* species group (Pritchard and Baker 1955). The dorsally directed part of the adeagus most closely resembles that of *O. indicus* (Hirst) (*O. mexicanus* McGregor and Ortega) and *O. iseilemae* (Hirst), but in comparison with the figure of the adeagus of each of these species shown by Hirst 1923 and 1924 respectively, that of *O. digitatus*, with its abrupt narrowing to a short, finger-like, antero-dorsally directed, bluntly pointed tip, is quite distinctive. *O. iseilemae* differs also in having a hooked peritreme.

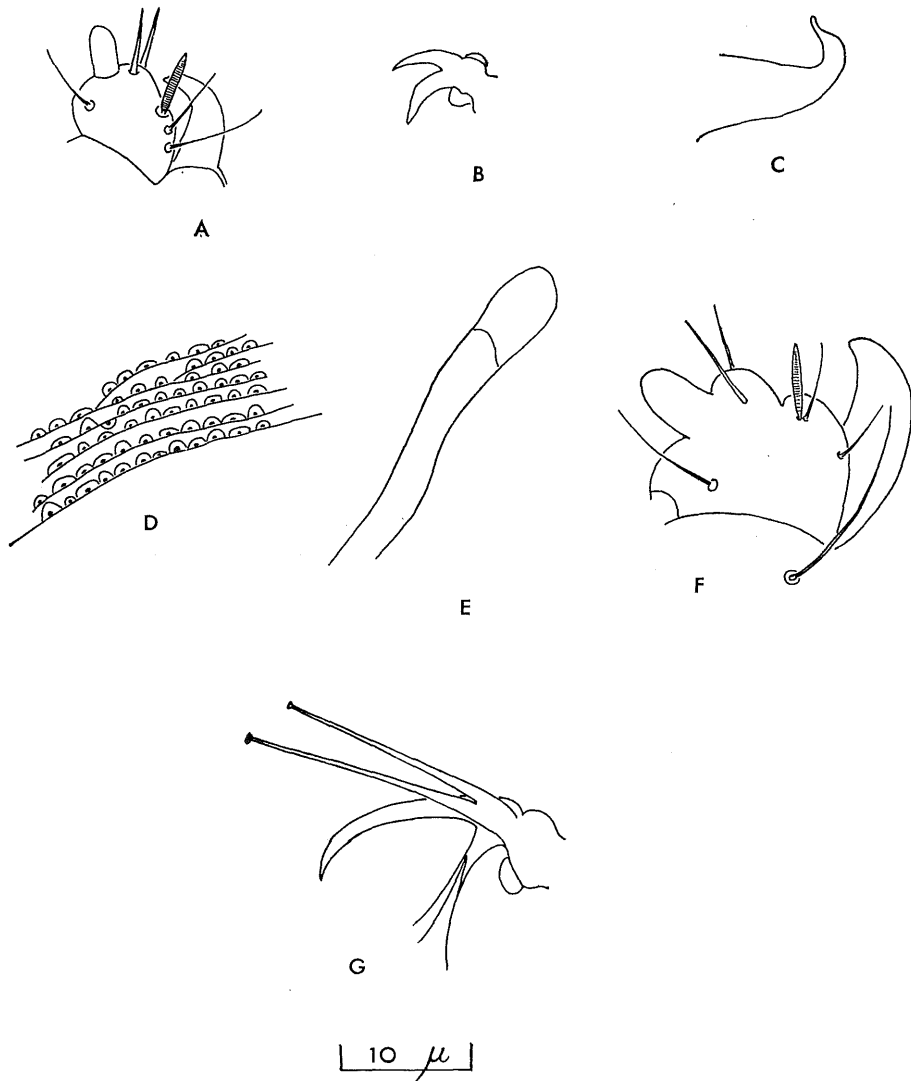


Fig. 1.—*Oligonychus digitatus* sp. n. A. Male, palpus, terminal segment. B. Male, empodium I. C. Male, adeagus. D. Female, dorsal cuticular lobes in region of third pair of dorso-central hysterosomal setae. E. Female, termination of peritreme. F. Female, palpus, terminal segment. G. Female, empodium I.

Other records.—QUEENSLAND: Peak Crossing, on pasture grass, 27.x.1964 (J. H. Barrett); Toowoomba, heavy infestation on kikuyu grass (*Pennisetum clandestinum* Hochst.), 2.iv.1965 (T. Passlow).

NEW SOUTH WALES: Narrabri, webbing kikuyu grass, 1.iv.1965 (F. A. Gibson); Quirindi, webbing kikuyu grass, 11.v.1965 (F. A. Gibson).

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