

A new species of tydeid mite (Acari: Tydeidae) associated with rusty grain beetle on dried wheat¹⁾

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(With 7 figures)

A b s t r a c t

A new species of mite belonging to the genus **Proctotydeus** Berlese has been found very occasionally on culture of rusty grain beetle **Cryptolestes ferrugineus** (Stephens) infesting dried wheat. The female of **Proctotydeus sinhai** sp. n. is described and illustrated. Males and larvae are still unknown.

I n t r o d u c t i o n

Most of the known species of the genus **Proctotydeus** have been found associated with insects (gallery of bark beetle, bee-hive phoretic on Lepidoptera or Orthoptera). **Proctotydeus oblongus** (Kuznetsov, 1973) (found on a Greek nut tree) and **Proctotydeus rusticus** (Meyer & Rodrigues, 1965) (found on **Gossypium**) are exceptions.

The rusty grain beetle, **Cryptolestes ferrugineus** (Stephens) (Coleoptera: Cucujidae), is one of the most important insect pests of stored grain in Canada. **Proctotydeus sinhai** sp. n. was found clinging to the elytra of a **C. ferrugineus** adult infesting dried and broken wheat at Winnipeg, Manitoba, Canada.

The generic concepts and the terminology used are those of André (1980 & 1981 a, b). The holotype of the new species is deposited in the Zoologisches Institut und Zoologisches Museum der Universität Hamburg, Bundesrepublik Deutschland. 2 female paratypes will be deposited in the National Collection at the Biosystematic Research Institute, Agriculture Canada, Ottawa, Ontario. Further paratypes will be placed in the National Research Centre, Plant Protection Department, Dokki, Cairo, Egypt.

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Genus **Proctotydeus** Berlese, 1911 sensu Fain & Evans 1966

Type-species: **Proctotydeus schistocerae** Fain & Evans, 1966

Proctotydeus sinhai sp. n.

Female (fig. 1): Length 187-193 μm ; breadth 110-115 μm . Prodorsum: propodosomal setae P1 lies posteriorly to sensillum; P2 shorter than P3; P1 longest. All propodosomal setae strong and serrated, except sensillum which is whip-like and with few spinules. Opisthosoma: dorsal chaetotaxy: 11 (12 missing) pairs of setae present, all setae robust and serrated. Setal measurements: P1: 28 μm ; P2: 11 μm ; P3: 22 μm ; S: 48 μm ; d1 and d2 subequal, 22 μm ; l1: 13 μm ; d3 and d4 subequal, 18 μm ; 14 and 15 subequal, 44 μm ; d5 as long as h1, 17 μm ; h2: 29 μm . Four pairs of aggenital setae present (fig. 7); epimeral formula 3-1-4-2.

Legs (figs 3-6): Tarsus I without apotel; legs II-IV possess claws and empodia. Setal formula as follows:

I: 7 (1)-4-3-3-1

II: 7 (1)-2-3-3-1

III: 7-2-2-2-1

IV: 7-2-1-2-0

Tarsi I and II with a dorsal solenidion in apical position; femur IV not divided.

Gnathosoma visible from above, palpus setal pattern (2-1-5) + ω (fig. 2). All setae simple and nude except the terminal one which is also broader.

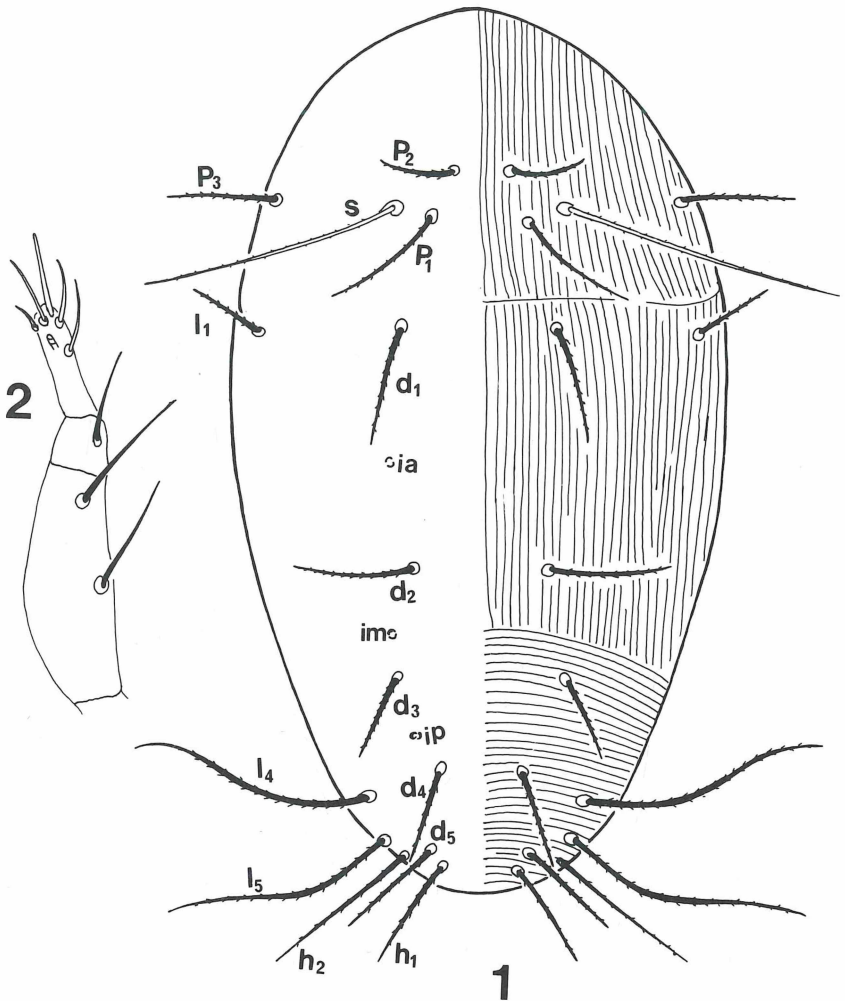
Male: unknown.

Holotype: female found on culture of rusty grain beetle. **Cryptolestes ferrugineus** (Stephens) infesting dried and broken wheat at Winnipeg, Manitoba. Paratypes: 5 females and 3 nymphs collected with the holotype.

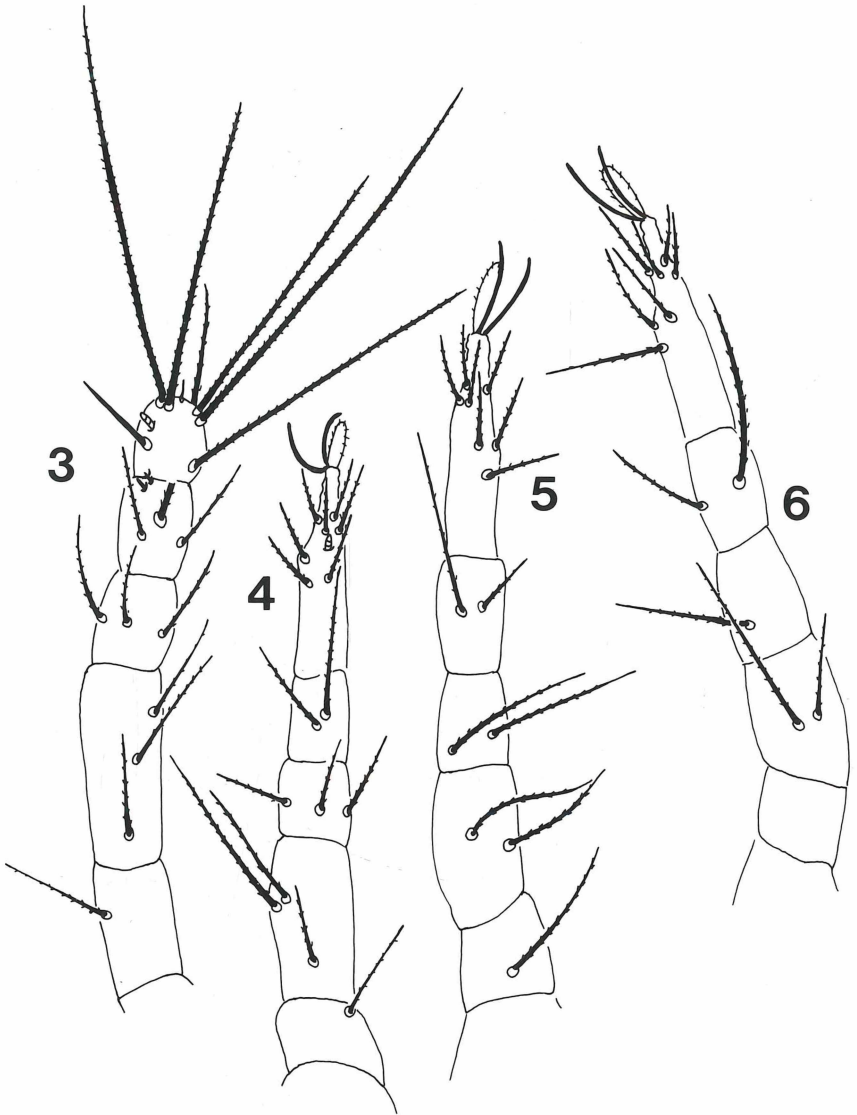
Remarks: According to André 1980, seven species of the genus **Proctotydeus** Berlese have been described. Recently, Rosa and Flechtmann (1983) and Rosa et al. (1985) reported **Proctotydeus partamonae** and **Proctotydeus alvearii** from the nests of stingless bees in Brazil. **Proctotydeus sinhai** sp. n. can be distinguished from all other **Proctotydeus** species by the relative lengths of the dorsal setae and the sensory setae, which have few spinules.

A c k n o w l e d g e m e n t

I am grateful to Mr. C. J. Demianyk for maintaining the culture of **Cryptolestes ferrugineus** in order to obtain further specimens.



Figs 1-2: *Proctotydeus sinhai* sp. n., female, (1) dorsum, (2) palp.



Figs 3-6: *Proctotydeus sinhai* sp. n., female, chaetotaxy of legs I-IV.

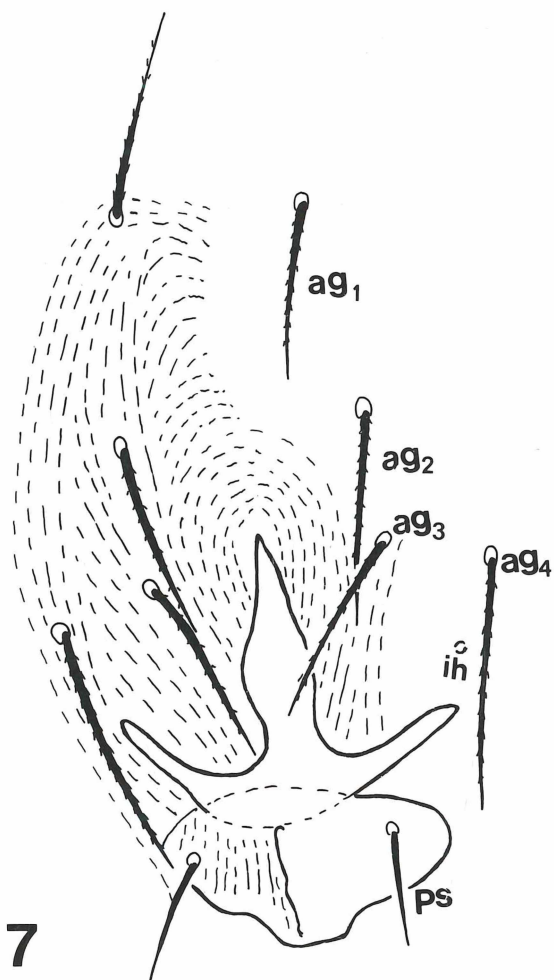


Fig. 7: *Proctotydeus sinhai* sp. n., female, genito-anal region.

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