

Bryobia praetiosa Koch 1836

Material examined

specimens not examined

Taxonomy

Subfamily Bryobiinae

Tribe Bryobiini

Common Name

clover mite

Distribution

+Australia, Argentina, Austria, Belgium, Bolivia, Brazil, CIS, Canada, Chile, China, Colombia, Costa Rica, Cyprus, Denmark, Egypt, Finland, France, *Germany, Greece, Greenland, Hawaii, Hungary, India, Iran, Iraq, Ireland, Italy, Japan, Korea, Mexico, Morocco, New Zealand, Norway, Pakistan, Paraguay, Peru, Poland, Portugal, Rumania, South Africa, Spain, Sweden, Switzerland, Taiwan, The Netherlands, Turkey, United Kingdom, USA

Taxonomy Changes

Bryobia praetiosa Koch 1836

Bryobia latitans Livshits & Mitrofanov 1966, synonymy Livshits & Mitrofanov 1971

Bryobia pseudopraetiosa Wainstein 1956, synonymy Wainstein 1960

Diagnosis

Larva (Figs 2a, 3)

- dorsal body setae lanceolate (Morgan & Anderson 1957; Miller 1966; Gutierrez & Schicha 1983) (Fig. 3)
- prodorsal setae *v1* short, lanceolate + remaining body setae spatulate (Mathys 1961 - see Notes)
- prodorsum cuticle granulate
- opisthosoma cuticle weakly granulate with widely spaced striae

Female (Figs 1, 2d)

- empodium I short pad with one pair tenent hairs
- empodia II-IV pad with two rows of ventral tenent hairs (Fig. 2f)
- peritreme ending in elongate oval expansion, emergent from body and anastomosing (Fig. 2e)
- prodorsal setae *v2* longer and broader than setae *v1*
- outer prodorsal lobes with broad bases, triangular
 - wider at base than those of *B. rubrioculus*
 - sometimes with swelling on inner margin
- indentation between inner and outer prodorsal lobes broad and shallow
- indentation between inner lobes relatively shallow
- setae *v2* on outer lobes generally not (or just) reaching bases of setae *v1* on inner lobes
- dorsal body setae spatulate, 27-33 long x 17-20 wide
- prodorsum coarsely granulate with thick irregular striae
- opisthosoma coarsely granulate with thick transverse (and oblique) striae
- stylophore with median notch distally

Hosts

Over 270 recorded species of host plant, including: *Ageratum conyzoides*, *A. houstonianum* (Asteraceae), *Agropyron desertorum*, *Ag. smithii* (Poaceae), *Artemisia herba-alba*, *Ar. nova*, *Ar. tridentata*, *Artemisia* sp. (Asteraceae), *Atriplex cinerea*, *At. suberecta*



Fig. 1. *Bryobia praetiosa* live adult female (photo by S. Learnmonth).

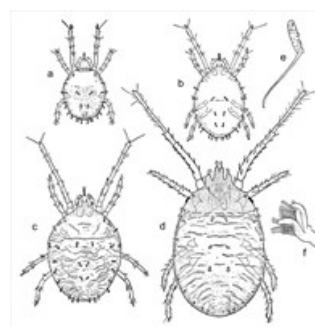


Fig. 2. *Bryobia praetiosa* dorsal habitus - a. larva; b. protonymph; c. deutonymph; d. adult female; e. emergent peritreme; f. empodium (all redrawn from Geijskes (1939)).

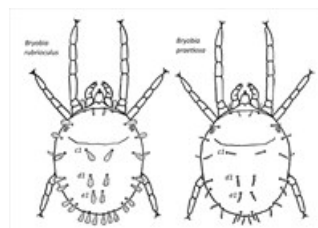


Fig. 3. *Bryobia* larvae, dorsal habitus - *B. rubrioculus* (as *B. arborea*) and *B. praetiosa* (redrawn from Morgan & Anderson 1957).

(Chenopodiaceae), *Brassica juncea*, *Br. nigra*, *Br. oleraceae*, *Br. rapa* (Brassicaceae), *Bromus inermis*, *Bro. willdenowii*, *Bromus* sp. (Poaceae), *Chenopodium album*, *Ch. mbrosioides*, *Ch. murale* (Chenopodiaceae), *Chrysanthemum oronarium*, *Chr. nanseosus*, *Chrysanthemum* sp. (Asteraceae), *Convolvulus arvensis*, *Convolvulus* sp. (Convolvulaceae), *Cucumis sativus*, *Cucumis* sp., *Cucurbita moschata*, *Cu. pepo*, *Cucurbita* sp. (Cucurbitaceae), *Cydonia oblonga* (Rosaceae), *Cynodon dactylon*, *Dactylis glomerata* (Poaceae), *Dianthus caryophyllus*, *Dianthus* sp. (Caryophyllaceae), *Duranta repens* (Verbenaceae), *Euphorbia hirta* (Euphorbiaceae), *Ficus carica*, *F. palmata* (Moraceae), *Fragaria chiloensis*, *Fr. vesca*, *Fragaria* sp. (Rosaceae), *Galium aparine*, *Galium* sp. (Rubiaceae), *Hedera colchica*, *He. helix*, *Hedera* sp. (Araliaceae), *Hibiscus sabdariffa*, *Hibiscus* sp. (Malvaceae), *Hordeum arizonicum*, *Ho. vulgare* (Poaceae), *Ipomoea acuminata*, *Ipomoea* sp. (Convolvulaceae), *Litchi chinensis* (Sapindaceae), *Malus domestica*, *Malus* sp. (Rosaceae), *Malva hispanica*, *M. parviflora*, *Malva* sp. (Malvaceae), *Medicago hispida*, *Me. polymorpha*, *Me. sativa* (Fabaceae), *Passiflora edulis*, *P. quadrangularis* (Passifloraceae), *Pinus cembroides*, *P. douglasiana*, *P. pinceana*, *P. ponderosa*, *P. rigida*, *P. wallichiana*, *Pinus* sp. (Pinaceae), *Poaceae, *Prunus armeniaca*, *Pr. avium*, *Pr. domestica*, *Pr. dulcis*, *Pr. persica*, *Pr. serotina*, *Pr. triloba*, *Pyrus communis*, *Pyrus* spp. (Rosaceae), *Ribes alpinum*, *R. divaricatum*, *R. rubrum*, *R. uva-crispa* (Grossulariaceae), *Saccharum officinarum* (Poaceae), *Senecio burchelli*, *Se. cineraria*, *Se. niveus* (Asteraceae), *Solanum ducamara*, *So. melongena*, *So. tuberosum* (Solanaceae), *Trichilia emetica* (Meliaceae), *Trifolium alexandrinum*, *T. dubium*, *T. pratense*, *T. repens*, *Trifolium* sp. (Fabaceae), *Ulmus americana*, *U. pumila*, *Ulmus* sp. (Ulmaceae), *Vicia cracca*, *V. faba* (Fabaceae), *Vitis vinifera* (Vitaceae)

Similar Taxa

Bryobia kissophila (*Hedera* spp.), *B. ribis* (*Ribes* spp.), *B. rubrioculus* (apple and pear) - see Notes

Biology

Bryobia praetiosa is generally found on herbaceous plants in temperate climates, and rarely occurs on trees. Commonly found on clovers in Tasmania. Large populations of this species may damage clover, lucerne and ryegrass, causing the foliage to turn yellow and wilt. Overwintering stages will sometimes invade houses.

References

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Notes

Since the first description of *B. praetiosa*, there has been confusion over the exact diagnosis of this species. None of Koch's original specimens are known to be available, and hence much information is the result of speculation. Van Eyndhoven (1956, 1958) collected specimens from the original locality and these are considered to be true *B. praetiosa*. Mathys (1957, 1961) made critical contributions to the taxonomy of this species through use of the larvae, as did Morgan & Anderson (1957). *Bryobia rubrioculus* has long been confused with *B. praetiosa*.

Morgan & Anderson (1957) indicated how to separate *praetiosa* from *rubrioculus* by using the larvae (Fig. 1), and with characters of the female. The two species can be separated using the length of the idiosoma, and distance between dorsal opisthosomal setae of the female: idiosoma Br 636, Bp 878; *c1-c1* 64 Br, 142 Bp; *d1-d1* 45 Br, 122 Bp; *e1-e1* 32 Br, 85 Bp.

Womersley apparently identified all Australian *Bryobia* as *praetiosa* (Gutierrez & Schicha 1983).

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