Tetranychus urticae
Koch 1836

Material examined
non-types

Taxonomy
Subfamily Tetranychinae
Tribe Tetranychini

Common Name
- Two spotted spider mite
- Carmine spider mite
- Common red spider mite
- Glasshouse red spider mite
- Hop red spider mite
- Linden mite
- Red spider mite
- Red spider
- Tropical red spider mite

Distribution
World-wide distribution - see Bolland et al. (1998)
type country = *Germany

Taxonomy Changes
There are many synonymies listed in Bolland et al. (1998) for this species.
The two most recent are:
Acarus haematodes Boisduval 1867
Tetranychus telarius haematodes (Boisduval) Murray 1877, synonymy Smith & Baker 1968
Acarus cinnabarinus Boisduval 1867
Tetranychus cinnabarinus (Boisduval) Boudreaux 1956, synonymy Dupont 1979

Diagnosis
Female
- empodia I-IV with dorsal spur absent above proximoventral hairs (Fig. 1)
- tarsus I with the sockets of four tactile setae proximal to, and one solenidion overlapping, the socket of the proximal duplex seta (Figs 2, 3)
- pregenital striae ranging from longitudinal entire (Fig. 4), to longitudinal with weak or broken striae medially (Fig. 5), to longitudinal with a broad anterior band of broken striae (Figs 6-8)
- peritreme hook moderately long (Fig. 9)
- dorsal striae between setae e1-f1 forming the diamond pattern - i.e. striae between setae e1-f1 longitudinal or often irregular, between e1-f1 transverse, between f1-f1 longitudinal (Figs 10, 11)
- dorsal striae with lobes and ventral striae without lobes
- greenish yellow in cool temperate climate with overwintering orange-yellow form (Gutierrez & Schicha 1983); carmine in warm temperate and subtropical zones (present year round); Davis (1968) lists colour as brownish red, with dark lateral spots to green or
yellowish with one large trifid food spot on either side of body (= classic two-spotted mite) and he noted the presence of an orange-reddish overwintering form in Stanthorpe, amongst actively feeding two-spotted females.

![band of broken striae.](image1)

**Hosts**

>870 recorded species of host plant; listed in Bolland et al. (1998)

type hosts = *Glycine max*(Fabaceae), *Urtica* sp. (Urticaceae)

**Similar Taxa**

*Tetranychus parakanzawai* Ehara 1999

*Tetranychus pueraricola* Ehara & Gotoh 1996

*Tetranychus truncatus* Ehara 1956

Ehara (1999) and Ehara & Gotoh (1996) separate these species based on the length of the knob of the aedeagus (in addition to molecular differences [Gotoh et al. 1998] (Figs 11, 12):

- urticae 2.5-2.6 μm;
- pueraricola 2.1 μm;
- truncatus 1.5 μm;
- parakanzawai = 3.3 μm

**Biology**

*Tetranychus urticae* is the most damaging spider mite of all. Heavy infestations can destroy crops and kill trees. Control is usually achieved through careful application of pesticide and the use of biological control agents, usually the Chilean predatory mite, *Phytoseilus persimilis* (Phytoseiidae). Outbreaks of *T. urticae* are usually associated with the overuse of pesticides.

Adult females are green in areas with cool temperate climate and have overwintering stages that are orange-yellow (Gutierrez & Schicha 1983). In warm temperate and subtropical zones, adult females are carmine and are present year round. Adults overwinter on the ground or in sheltered areas such as bark.

**References**


Ehara, S. (1956) Tetranychoid mites of mulberry in Japan. *Journal of the Faculty*
of Science, Hokkaido University, Series VI Zoology 12: 499-510


**Notes**

_Tetranychus cinnabarinus_ and _T. telarius_ are here considered synonyms of _T. urticae_. _Tetranychus cinnabarinus_ is considered to be the carmine form of _T. urticae_ (Auger et al. 2013). The splitting of the two taxa _T. urticae_ and _T. cinnabarinus_ still occurs in the literature, and their taxonomic status can be somewhat controversial. In some locations the two taxa occur together and are apparently distinguishable (Zhang & Jacobson 2000); however a wide degree of reproductive compatibility exists between.

Lobes on the striae have been used as a means for separating the two taxa (Brandenburg & Kennedy 1981); however, cuticular lobes are highly variable in their presence/absence and shape.

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Fig. 17. Comparison of the aedeagi of two populations of mites identified as *Tetranychus urticae* from Australia.