Eutetranychus orientalis (Klein, 1936)

Material examined

non-types

Taxonomy

Subfamily Tetranychinae
Tribe Eurytetranychini

Common Name

Oriental red mite, Oriental mite, Citrus brown mite

Distribution

+Australia, Afghanistan, Caper Verde Islands, China, Cyprus, Egypt, Ethiopia, Hainan Island, Hong Kong, India, *Iran, Iraq, *Israel, Japan, Jordan, Kenya, Kuwait, Lebanon, Malawi, Malaysia, Mali, Mauritania, Mozambique, Nigeria, Pakistan, Philippines, Saudi Arabia, Senegal, South Africa, Sudan, Taiwan, Thailand, Tunisia, Turkey, UAE, Vietnam, Yemen

Taxonomy Changes

Anychus orientalis Klein 1936
Eutetranychus orientalis (Klein) Baker & Pritchard 1960
Anychus ricini Rahman & Sapra 1940, synonymy Baker & Pritchard 1960
Eutetranychus monodoi Andre 1954, synonymy Meyer 1987
Eutetranychus sudanicus El Badry 1970, synonymy Meyer 1987
Eutetranychus anneckei Meyer 1974, synonymy 1987

Diagnosis

Female (Figs 1-3)

- empodium absent, with only lateral true claws reduced to short pads each with pair of tenent hairs (Fig. 1)
- peritreme ending in simple weakly expanded bulb (Fig. 2)
- dorsal opisthosomal setae vary in length and shape, from short weakly to strongly spatulate setae (Figs 3-5) to long spatulate setae (Fig. 6)
- coxae I with two setae (1b, 1c) and coxae II with one seta (2b present; 2c absent) (Fig. 7)
- dorsal opisthosoma with transverse striae between c1-c1 and d1-d1, oblique-longitudinal striae d1-d1 to e1-e1, transverse e1-e1 to h1-h1 (Figs 8, 9)
- pregenital striae transverse to weakly arching around genital flap (Fig. 10)
- tarsus I and II with associated setae (not duplex setae) - the tactile seta is (almost) as long as the solenidion, and the bases of the two setae are not coalesced (Figs 11, 12)
- prodorsum with fine longitudinal striae, with small but distinct lobes (Fig. 13)
- chaetotaxy for legs I-IV (n.b. expression of solenidia is variable):
  - coxae 2, 1, 1, 1
  - femora 8, 6, 3-4, 1-2
  - genua 5, 5, 2, 2
  - tibiae 10-13(1-4+0), 6-8(0-2+0), 6-7(0-1+0), 7
  - tarsi 18(3+3), 14-15(1-2+3), 11(1+0), 11(1+0)
brownish green with orange legs and gnathosoma

Male
- empodia as in female (see Fig. 1)
- dorsal setae as in female (Figs 14, 15)
- peritreme as in female with simple weakly expanded bulb (Fig. 16)
- prodorsum as in female with longitudinal striae
- leg I much longer than body (Fig. 7)
- tarsus I and II as in female, with associated setae (Figs 18, 19)
- chaetotaxy for legs I–IV:
  - coxae 2, 2, 1, 1
  - femora 8, 6, 4, 1
  - genua 5, 5, 2, 2
  - tibiae 13-14(4-5+0), 8(2+0), 6-8(0-2+0), 7
  - tarsi 17(2+3), 15(2+3), 11(1+0), 11(1+0)
- aedeagus dorsally directed, short stout hook at right angle or acute angle to shaft, tapered to blunt tip (Figs 20, 21)
- brownish orange, with orange legs and gnathosoma

Hosts

>150 recorded species of host plant, with Citrus spp. being the main hosts of economic importance; full host list includes: Acacia modesta, A. nilotica, Albizia harveys, Al. lebbek, Al. prodera (Mimosaceae), Ananas comosus (Bromeliaceae), Annona squamosa (Annonaceae), Bamusa ventricosa (Poaceae), Bauhinia purpurea, B. variegata (Caesalpinaceae), Callistemon lanceolatus (Myrtaceae), Calotropis gigantea, C. procera (Asclepiadaceae), Cannabis sativa (Cannabaceae), Cassia fistula, C. fruticosa, C. holosericea, Ca. occidentalis, Ca. siamea (Caesalpinaceae), *Citrus* sp., *C. aurantium*, C. grandis, C. jambhiri, C. karna, C. limon, C. paradisi, C. reticulata, C. sinensis (Rutaceae), Cocos nucifera (Arecaceae), Cucumis melo, Cucurbita maxima, Cu. moschata, Cu. pepo (Cucurbitaceae), Durio malaccensis, D. zibethinus (Bombacaceae), Ficus burkei, F. carica, F. macrophylla, F. palmata, F. religiosa, F. retusa (Moraceae), Grewia asiatica, G. mollis, G. tenax, G. villosa (Tiliaceae), Hedera japonica (Araliaceae), Hevea brasiliensis (Lauraceae), Ipomoea batatas (Convolvulaceae), Lantana camara (Verbenaceae), Malus domestica (Rosaceae), Manhot esculenta (Euphorbiaceae), Morus alba, M. nigra (Moraceae), Nerium indicum, N. oleander (Apocynaceae), Passiflora sp. (Passifloraceae), Persea americana (Lauraceae), Phoenix dactylifera, P. dealbata (Arecaceae), Plumeria acutifolia, P. alba, P. indica (Apocynaceae), Prunus domestica, P. dulcis, P. persica (Rosaceae), Psidium guajava (Myrtaceae), Pyrus communis, P. pyrifolia (Rosaceae), Ricinus communis (Euphorbiaceae), Rosa sp. (Rosaceae), Saccharum officinarum (Poaceae), Solanum melongena, S. nigrum (Solanaceae), Trema orientalis (Ulmaceae), Zea mays (Poaceae)

Similar Taxa

**Eutetranychus africanus** (Tucker, 1926)

**Eutetranychus orientalis** has one seta on coxae II; *Eu. africanaus* has two setae on coxae II (according to literature).

Biology

Listed as major pest of citrus (Meyer 1974, Gerson 2003).

Oriental red mites feed on the upper surface of leaves, but they do move to ventral surface when present in high numbers. Feeding causes pale-yellow stippling along the midrib and lateral veins of leaves, which becomes greysish or silvery when feeding is severe. Severe infestations can result in leaf necrosis, branch die back and rind damage to the fruit. Host trees suffering from water stress suffer more than healthy hosts. Very little visible webbing is produced, and is usually only associated with the eggs.

Females lay their eggs on the upper leaf surface, usually along the midvein. As with mobile stages, eggs can be found on the ventral surface when the mites are present in high numbers. Depending on temperature, eggs hatch in 4 to 6 days, and usually become adults in 8-11 days.

Severe infestations seem to occur in autumn and winter in subtropical to tropical climates.
References


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Fig. 13. *Eutetranychus orientalis* adult female (non-type; South Africa) - detail of pattern of striae on the prodorsum.

Fig. 14. *Eutetranychus orientalis* adult male (non-type; South Africa) - dorsal habitus.

Fig. 15. *Eutetranychus orientalis* adult male (non-type; South Africa) - posterior dorsal opisthosoma.

Fig. 16. *Eutetranychus orientalis* adult male (non-type; South Africa) - detail of the peritreme (arrow indicates tip).

Fig. 17. *Eutetranychus orientalis* adult male (non-type; Australia) - detail of leg I much longer than body.

Fig. 18. *Eutetranychus orientalis* adult male (non-type; South Africa) - detail of the associated setae on tarsus I (arrow indicates bases).
Fig. 19. *Eutetranychus orientalis* adult male (non-type; South Africa) - detail of the associated setae on tarsus II (same individual; arrows indicates setal bases and tips).

Fig. 20. *Eutetranychus orientalis* adult male (non-type; South Africa) - detail of the aedeagus at different focal points (same individual).

Fig. 21. *Eutetranychus orientalis* adult male (non-type; Australia) - details of the aedeagus.