

Oligonychus iseilemae Hirst and observations on a red spider mite *Tetranychus* sp. on coconut foliage*

Information on the spider mites of the coconut palm is limited to the world list of five species under two genera (Kurian et al., 1979). Sathiamma (1981) grouped the phytophagous mite fauna associated with the coconut palm in Kerala under Tetranychidae, Tenuipalpidae and Eriophidae. Further observations on the mite fauna of root (wilt) disease affected coconut palms carried out in the light of the report of a possible role of mites in the transmission of 'cadang-cadang' disease of coconut in the Philippines (Briones and Sill, 1963; Oldfield, 1970) brought out *Oligonychus iseilemae* as a new record from the foliage. *Tetranychus* sp. was also common on the foliage.

I. The coconut white mite

Oligonychus iseilemae Hirst (= *Paratetranychus iseilemae* Hirst). (Acarina: Tetranychidae)

Habitat: Lives in colony comprising the eggs, larvae, nymphs and adults on the adaxial surface of the coconut leaflet. Colonisation of the mite is more along the mid-vein. But when many colonies are present, they are observed on the entire lower surface.

Description: The distinguishing characters (Hirst, 1924) are: aedeagus bearing a small sigmoid dorsal bend without any distal enlargement and with the tip directed upward; peritreme with U-shaped distal end.

Distribution: The pest was originally recorded from Coimbatore, S. India (Hirst, 1924). The mite is known only from the types from S. India (Pritchard and Baker, 1955). The present record from kayangulam, Kerala, S. India is for the first time on coconut.

Host plants: Originally recorded from the grass *Iseilema lascum*. *O. iseilemae* is now observed for the first time from *Cocos nucifera* L. Under laboratory conditions, the mite thrives well on periwinkle (*Catharanthus roseus*) and maize (*Zea mays*).

Economic importance: The larvae, nymphs and adults suck sap from the leaf and cause pale yellow specks, which coalesce and result in browning and subsequent drying of the leaflets. Of the 60% mite infested coconut leaflets, 45% yielded white mites and 62% of the population of the mites per leaflet represented *O. iseilemae*. Population of the mites per leaflet ranged from 1 to 203 and the average number of females in the colony was 2.6. The mean number of eggs for the total number of females counted on a leaflet was 2.5 per mite.

Life cycle: *O. iseilemae* completed its life cycle on coconut foliage in 7-10 days (50 replications) with an egg period of 1-4, larval 1-2, protonymph 1-3 and deutonymph 2-4 days at a temperature range of 24-32°C and RH 35-96% in the laboratory.

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Seasonal abundance: The mite is abundant on coconut palms during November and December. It is present on the palm throughout the year, but its population is quite low during August and September.

2. The coconut red spider mite *Tetranychus* sp.

Tetranychus sp., different from red palm mite *Raoiella indica* Hirst (Tenuipalpidae), also occurs on coconut foliage either alone or co-exists with *O. iseilemae*. The mites suck sap from the lamina, but the damage is not so severe as that of the white mite. The infestation is also much less than that of *O. iseilemae*; only 4% leaflets were infested yielding nearly 6% of the total mite population on the foliage. The number of mites varied from 40 to 578 per leaflet. *Tetranychus* sp. is abundant on the palm during January to March.

Of the five species of spider mites recorded from coconut palm, *Oligonychus indicus* Hirst on foliage (Channa Basavanna and Banu, 1972), *Tetranychus fijiensis* Hirst and *T. hindustanicus* Hirst on foliage and flowers (Nair, 1975) were observed in India. *Oligonychus pratensis* Banks from Mauritius (Montia, 1958), *Oligonychus* sp. from Sri Lanka (Anon, 1977) and *T. fijiensis* from Fiji (Hirst, 1924; Simmonds, 1925), Philippines (Rimando, 1962), Seychelles (Gutierrez, 1974) and Sri Lanka (Anon, 1977) were the other spider mite species recorded on coconut. It is not known whether *Oligonychus* sp. from Sri Lanka and *Tetranychus* sp. reported in the present study are identical with the mites cited.

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