THE FAMILY TENUIPALPIDAE IN BERMUDA
(PROSTIGMATA: ACARI)

GREGORY A. EVANS,1 HARVEY L. CRAMROY2 AND R. OCHOA3
1Entomology and Nematology Department, University of Florida
Gainesville, Florida 32611
3Museum of Zoology, University of Michigan, Ann Arbor, Michigan 48109

ABSTRACT

Four new host plant records and five new distribution records are reported for tenuipalpid mites collected in a survey of the phytophagous mites of Bermuda. A taxonomic key to the five tenuipalpid species and a host plant list are provided.

Key Words: phytophagous mites, tenuipalpid, flat mites, false spider mites, Bermuda, Neotropics

RESUMEN

Se reportan cuatro hospederos nuevos y cinco localidades nuevas para ácaros tenuiipalpidos recolectados en Bermuda. Se incluyen una clave de identificación para las cinco especies de tenuipalpidos y una lista de las plantas hospederas.

Bermuda is a small archipelago in the North Atlantic Ocean with seven main islands comprising a total land area of 54 km². The climate is subtropical and frost-free, but the terrestrial fauna is depauperate due to the extreme isolation of the islands and their geologically young age. Hillburn & Gordon (1989) provided a review of entomology in Bermuda and an introduction to the insect survey initiated in 1987. In December, 1989 and May, 1990, Dr. H. L. Cromroy of the University of Florida traveled to Bermuda to conduct a survey of the phytophagous mites of the island in cooperation with senior plant quarantine officer K. D. Monkman. Financial support was provided by the Department of Agriculture, Fisheries and Parks, Hamilton, Bermuda to conduct the study. Collections were made all over the islands from as many different plants as possible including ornamentals, cultivated crops and weeds. This survey could then serve as a basis for the quarantine of specific plant mites which do not occur on the island.

The following is a report of the species of the family Tenuipalpidae, commonly called false spider mites or flat mites, collected in the survey. No previous records exist of tenuipalpids collected in Bermuda. Setal nomenclature, sculpture terminology and species groups follow that used by Baker & Tuttle (1987). The names and abbreviations used for the various nymphal forms of Brevipalpus phoenicis are given and illustrated in Evans et al. (1993). An asterisk is used to indicate new host and distribution records. All of the collections of tenuipalpids from Bermuda were made by H. L. Cromroy and K. Monkman, unless otherwise noted.

KEY TO THE TENUIPALPIDAE OF BERMUDA
1. Dorsosublateral hysterosomal setae present, palpus 5-segmented.

.......................... Genus Aegyptobia Sayed
One species in genus known to occur in Bermuda having uncinate claws, deeply emarginated rostral shield, long serrate dorsolateral hysterosomal setae and elongate areolae on the dorsocentral region of the propodosoma and hysterosoma.

- Dorsosublateral hysterosomal setae absent, palpus 4-segmented
  . A. nothus Pritchard and Baker

2. Hysterosoma with 6 pairs of lateral setae
   - Hysterosoma with 7 pairs of lateral setae, 2 solenidia on tarsus II (californicus Group), one species in this group known to occur in Bermuda having the dorsocentral and dorsomedial regions areolate, intercoxal area smooth, dorsal setae on femora I and II broad and leaf-like. Nymph with all dorsal idiosomal setae broadly leaf-like. B. viquierae BTA

3. Tarsus II with 1 solenidion (obovatus Group), one species in this group known to occur in Bermuda with broad dorsum, areolate dorsomedial region and rugose lateral region, propodosomal setae short and sublanceolate, similar in size and form as the dorsolateral hysterosomal setae
   - Tarsus II with 2 solenidia (phoenicis Group) 4

4. Palpfemur seta broad and leaf-like, intercoxal area reticulate
   - Palpfemur seta lanceolate, intercoxal area punctate. B. phoenicis (Geijskes)

Genus Aegyptobia Sayed


- Hosts: Juniperus sp., *Juniperus chinensis, *Platycladus orientalis, Quercus sp., Taxodium distichum.
- Distribution: *Bermuda and USA: Florida, North Carolina, Oklahoma.

Genus Brevipalpus Donnadieu

Brevipalpus hondurani Evans 1993:141.

- Distribution: *Bermuda and Honduras.
- Comments: Fungal spores were observed attached to mites in both of these collections.

Brevipalpus phoenicis (Geijskes)

- Brevipalpus phoenicis (Geijskes) 1939:4
Evans et al.: Tenuipalpidae of Bermuda

TYPE: Holotype female, in the Laboratorium voor Entomologie, Landbouwhoogeschool, Wageningen, Netherlands.

HOSTS: Many hosts including hundreds of ornamental and fruit species.

DISTRIBUTION: *Bermuda, Worldwide.


Brevipalpus obovatus Donnadieu

Brevipalpus obovatus Donnadieu 1875:116.

HOSTS: Many hosts including hundreds of ornamental and fruit species.

DISTRIBUTION: *Bermuda, Worldwide.


Brevipalpus viquierae Baker, Tuttle and Abbatiello


HOST: Viquiera sp.

DISTRIBUTION: *Bermuda, Honduras and Mexico.

SPECIMENS EXAMINED: ex. undetermined plant, Bermuda, Paget Parish, Marsh, 7.v.1990, nymph with fungal spores attached.

DISCUSSION

Species of the genus Brevipalpus may play an important role in the dissemination and development of phytoparasitic and saprophytic fungal spores especially in the tropics. In our study, we found fungal spores attached to Brevipalpus hondurani and B. viquierae. Further studies are needed to determine the role these mites play in the dissemination of various fungi.

HOST PLANT LIST FOR BERMUDAN TENUIPALPIDS

Buddleia sp. .................................................. Brevipalpus phoenicis
Citharexylum spinosum L. ................................. Brevipalpus phoenicis
Eriobotrya japonica (Thunb.) ............................. Brevipalpus hondurani
Eupatorium capillifolium .................................. Brevipalpus hondurani
Ipomoea batatas L. ......................................... Brevipalpus obovatus
Ipomoea sp. ................................................. Brevipalpus phoenicis
Juniperus chinensis L. ..................................... Aegyptobia nothus
Myrica cerifera L. .............................................. Brevipalpus phoenicis
Pittosporum sp. .................................................. Brevipalpus phoenicis
Platycladus orientalis (L.) ..................................... Aegyptobia nothus
Quisqualis indica L. ............................................. Brevipalpus phoenicis

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