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BREVIPALPUS ALII, A NEW SPECIES OF THE GENUS BREVIPALPUS FROM PUNJAB – PAKISTAN

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NEW SPECIES
BREVIPALPUS
ALII
PAKISTAN

SUMMARY: The false spider mite fauna of cotton at Khanewal (a cotton growing area) were explored and a new species, Brevipalpus alii was recorded and described. This belongs to the obovatus group.

RÉSUMÉ : Une nouvelles espèce Brevipalpus alii est décrite de la région produitrice de coton de Khanewal (Pakistan) appartennant au groupe obovatus.

INTRODUCTION

A large number of insect and mite pests attack cotton (Gossypium hirsutum L.). Mites of microscopic nature can cause serious damage to this crop. Lots of work in exploring the mite fauna has been done in India, Taiwan, Mexico, El-Salvador, USA, China and Brazil by GHI & MENON (1969), GUPTA (1975) and MOHANASUNDARAM (1983), ZAHER & OSMAN (1971), TUTTLE et al. (1976), ANDREWS & POE (1980), DENMARK (1983) and FLECHTMANN (1985) respectively.

In Pakistan, the pioneer acrological studies are of CHAUDHRI et al. (1974, 1979), CHAUDHRI (1975, 1977) and CHAUDHRI & AKBAR (1985) made effort first time in Pakistan to explore the mite fauna. Their work is really a land mark in the taxonomy of mite fauna of Pakistan. Cotton carries the paramount importance in the economy of the country, hence, it was considered necessary to carry out the studies on mite fauna of cotton plants. Initially Khanewal district of Punjab Province was selected in the cotton belt area which resulted in the discovery of new species of genus Brevipalpus.

Brevipalpus alii n. sp.
(Fig. 1. A-D)

FEMALE: Body 240 µm long (excluding rostrum), 160 µm wide.

Dorsum: Prodorsum reticulated mediolaterally, reticulations fade away medially and laterally. Prodorsum with three pairs of setae, measuring v2 = sc1 = sc2 8 µm all smooth (Fig. 1A).

Opisthosoma with reticulations mediolaterally and caudally, transverse striations meeting in middle, striations fading away towards lateral margins (Fig. 1A). Dorsocentral opisthosomal setae in three pairs smooth, each 8 µm long. Dorsolateral opisthosomal setae in six pairs smooth, measuring c3

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striations in B. alii

18 µm, d3 5 µm, e3 8 µm, f1 8 µm, h2 9 µm and h1 10 µm.

Venter: Venter with reticulations posterior to apodemes of coxae I and II and lateral to apodemes of coxae III, posterior to apodemes of coxae IV in front of coxae III and IV, anterior and lateral to ventral shield. Reticulations anterior to ventral shield meet in middle. Area between intercoxal setae IC1 covered with reticulations (Fig. 1B). Intercoxal setae IC1 25 µm, IC3a and IC4a 10 µm and 62 µm long respectively. Ventral shield reticulated, aggenital setae ag one pair, 15 µm. Genital shield with reticulations, two pairs of genital setae gl and g2 smooth, each 10 µm long. Anal shield striated, setae two pair ps1 and ps2 measuring 10 µm, each; both smooth (Fig. 1B).

Gnathosoma: Palpus four segmented, terminal segment with 1 eupathidium and 2 setae; segment III with two setae serrate, segment II with one seta, serrate (Fig. 1C). Rostral shield with one median conical lobe deeply notched and two ancillary lobes on each side (Fig. 1D).

Legs: Leg, segments wrinkled. Setae on legs I-IV: coxae 1-1-1-1, trochanters 2-1-1-0, femora 3-2-1-0, genua 2-1-1-0, tibiae 2-2-2-1, tarsi 9-9-5-5. Tarsi I and II each with one sensory peg (Fig. 1A).

Male: Unknown.

Type series: Holotype female collected 5 km. N. Khanewal, 26.10.1993 (Mansoor) on cotton (Gossypium hirsutum L.), two paratypes, females, with the, same data, two females from seven miles East Multan, 17.09.2002, on cotton, microscopic preparations all deposited in Acarology Research Laboratory, Department of Agricultural Entomology, University of Agriculture, Faisalabad, Pakistan.

Remarks: This new species comes close to B. cassiae Baker, Tuttle & Abbatiello, 1975 differing in the shape of the rostral shield, number and shape of opisthosomal lateral setae. Brevipalpus alii n. sp. is also close to B. origanum Baker, Tuttle & Abbatiello, 1975 and being distinct on the basis of the following characters:

1. Rostral shield not ornamented in origanum but with striations in B. alii n. sp.
2. Dorsal setae slightly lanceolate, serrate in origanum but smooth in B. alii n. sp.
3. Ventral shield with transverse areolae in origanum but densely reticulated in B. alii n. sp.

Brevipalpus alii n. sp. also resembles Brevipalpus solidus Chaudhri and Akbar 1985 but can be separated from it on the basis of following characters:

1. Rostral shield with three ancillary lobes in solidus as against two ancillary lobes in B. alii n. sp.
2. Palpus terminal segment with one seta in solidus but two setae in B. alii n. sp.
3. Leg chaetotaxy differs in both the species.

Etymology: This new species (Brevipalpus alii) is named after the first author’s son.

REFERENCES


