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False Spider Mites (Acarina: Tenuipalpidae) on *Rosa indica* in Punjab, Pakistan

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Abstract.- As a result of survey of some localities of central Punjab, one new species *i.e., B. rosaensis* and two already known species *i.e., B. recula* Chaudhri and *B. karachiensis* Chaudhri have been collected. New species has been described in detail whereas known species have been provided with new collection data. All the species have been found infesting rose plant.

Key Words: Mites, Rose, Punjab.

INTRODUCTION

The genus *Brevipalus* is a very rich and cosmopolitan genus. Its species are known to inhabit all types of habitats and feed on every type of vegetation, *i.e.* crops, fruit plants, vegetables and ornamental plants. *Brevipalpus californicus* (Banks), *Brevipalpus phoenicis* (Geijskes) and *Brevipalpus obovatus* Donnadieu are serious pests of many crop, citrus and ornamental plants throughout many countries of the world including Pakistan (Pritchard and Baker, 1958), *Brevipalpus sipho* Chaudhri and Akbar has been found damaging *Luffa acutanaqula* in Pakistan (Chaudhri and Akbar, 1985) whereas, *Brevipalpus olearius* Sayed has been found damaging olive in Egypt (Pritchard and Baker, 1958). Rimando (1962) has recorded *Breivpalus phoenicis* (Geijskes) attacking citrus in Philippine, whereas Siddiqui *et al.* (1979) found *Brevipalpus nocivus* as a serious pest of lady's finger in Pakistan. Chaudhri and Akbar (1985) recorded *B. recula* on *Rosa indica*. Pritchard and Baker (1958), Deleon (1961a), Rimando (1962), Baker and Tuttle (1964), Chaudhri (1972), Chaudhri *et al.* (1974), Baker *et al.* (1975), Meyer (1979), Baker and Tuttle (1987), Ochoa and Salas (1987, 1989), Akbar and Aheer (1990) and Bozai and Bream (1995) have made important contributions to this genus. The present authors have reported 3 species of this genus on *Rosa indica* from Punjab. Out of these, 1 species, new to science has been described in detail whereas 2 already known species have been provided with new distribution records and host plants.

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1. ***Brevipalpus rosaensis***, new species
(Fig. 1A-D)

Female

Dorsum

Body 260 µm long (without rostrum), 175 µm wide. Rostrum reaching the base of genua 1. Rostral shield pitted with few striations at the base, 1 median conical and 4 ancillary lobes on each side (Fig. 1D). Palpus four segmented, terminal segment with 1 eupathidium and 2 setae, II segment with 1 and segment III with 2 barbed setae (Fig. 1C).

Prodorsum with well defined reticulations, fade away towards lateral margins and center. Prodorsal setae 3 pairs, slightly lanceolate, serrate *v2* = *sc1* = 8 µm, *sc2* 10 µm. Eye 2 pairs, 1 pair on each side (Fig. 1A).

Opisthosoma ornamented with reticulations mediolaterally, running upto caudal end, transverse broken striations with medially, striation fade away towards lateral margin. Opisthosomal central setae 3 pairs, simple (*c1, d1, el*) each 5 µm. Opisthosomal dorsolateral setae 7 pairs, slightly lanceolate, serrate, measuring *c3* 5 µm, *d3* 8 µm, *e3* = *f1* = 5 µm, *f2* = *h2* = 9 µm, *h1* 8 µm, all fall short of distances between their bases (Fig. 1A).

Venter

Venter with striations at coxae 1, reticulations

at coxae II, and lateral to apodemes of coxae II. Coxa III with striations, irregular wavy striations lateral to apodeme of coxae III. Area anterior and lateral to ventral shield with reticulations, anterior reticulations meet in the middle. Intercoxal setae *IC1* 42 µm simple, *IC3*a 1 pair 8 µm, *IC4*a 33 µm, fall short of distance to setae *IC3*a. Ventral shield reticulated entirely, aggenital setae (*ag*) 10 µm, simple. Genital shield with wavy striations giving the appearance of reticulations, setae two pairs, *g1* 10 µm, *g2* 13 µm, simple. Anal shield reticulated, setae *ps1* 8 µm, *ps2* 5 µm, both simple (Fig. 1B).

Legs

Legs segments wrinkled. Setae on legs segments; coxae 2-2-1-1, trochanters 1-1-2-1, femora 4-4-2-1, genua 3-3-1-1, tibiae 5-5-3-3, setae on tarsi not clear. Dorsal seta on femora I and II lanceolate, serrate, equal to ½ the width of the respective segment. One seta each on tibia III and IV serrate. Tarsi I and II each with one sensory peg.

Male

Not in collection.

Type

Holotype female collected from Sharaqpur on 14-9-1996 from rose (*Rosa indica*) (Mansoor), paratype one female with same collection data, all deposited in the Acarology Research Laboratory Department of Agric. Entomology, University of Agriculture, Faisalabad.

Remarks

This new species *B. rosaensis* is closer to *B. cassiae* Baker *et al*. on the basis of most of the characters, but the following are the points of differences between them:

1. Rostrum reaching distal end of femora I in *cassiae* whereas it is long and reaches the base of genua I in this new species.
2. Rostral shield with only a few striations proximally in *cassiae* whereas the shield is entirely pitted and with longitudinal striations in this new species.
3. Areas posterior to seta *IC4a* with very sparce areolae in *cassiae* but heavily reticulated in this new species.
4. Genital shield with a few areolae in *cassiae* whereas wavy striations are present on the shield in this new species.

The new species can also be separated from *B. clypealis* Siddiqui *et al*. on the basis of the following characters:

1. Rostral shield striated in *clypealis* whereas dots and striation are present on it in this new species.
2. Rostrum reaches distal end of femora I in *clypealis* whereas it reaches upto the distal end of femora I in this new species.
3. Only prodorsal setae *v2*, *sc1* and *sc2* serrate in *clypealis* whereas all the prodorsal setae serrate in this new species.
4. Opisthosoma medially with longer than broad reticulations in *clypealis* but transverse striations medially in this new species.

2. ***Brevipalpus recula*** Chaudhri

Brevipalus recula, Chaudhri, 1972c: 63; 1974: 57; Chaudhri and Akbar, 1985: 64.

Known distribution

Kotri, Multan, Alipur, Bahawalpur.

Known host plants

Buddleia asiatica, Helianthus annuus, Rosa indica, Tegets tenuifolia.

New distribution records

The specimens of this species have been collected by Mansoor from Khanpur on 10-05-1996 from *Rosa indica* and Lalsohanra on 20-06-1996 from *Azadirachta indica* (Bahawalpur) and deposited in the Acarology Research Laboratory, Department of Agric. Entomology, University of Agriculture, Faisalabad.

3. ***Brevipalpus karachiensis*** Chaudhri

Brevipalus karachiensis, Chaudhri, 1974: 43; Chaudhri and Akbar, 1985: 72.

Fig. 1. *Brevipalpus rosaensis*, new species; A, dorsal side; B, ventral side; C, palpus; D, rostral shield.

Known distribution

Havalian, Kalar Kahar, Karachi, Kotri, Lahore, Sialkot, Gujranwala, Shakargarh.

Known host plants

Convolvulus sp., *Kickxia ramosissima, Ocimum basilicum*, *Tagetes tenuifolia, Solanum tuberosum, Thuja orientalis*.

New distribution records

The specimens of this species have been collected by Mansoor from Faisalabad on 7-8-1996

from *Rosa indica* and Sahiwal on 9-9-1996 from *Hibiscus esculentus* and deposited in the Acarology Research Laboratory, Department of Agric. Entomology, University of Agriculture, Faisalabad.

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