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THREE NEW SPECIES OF DIPTILOMIOPID MITES FOUND IN CHINA (ACARINA : ERIOPHYOIDEA)

BY XIN JIE-LIU AND DONG HUI-QING*

ERIOPHYIDS OF CHINA
A PEST OF THE SUGARCANE

ABSTRACT : Three new species of Diptilomiopidae, namely Peralox ulmi n. sp., Diptacus gigantorubra n. sp. and Diptiloplatus sacchari n. sp., respectively collected on Ulmus pumilo L. and Rubus sp. in Fujian, and on Saccharum officinarum L. in Guangxi as an important pest of the sugarcane, are described.

ERIOPHYIDES DE CHINE
UNE PESTE DE LA CANNE À SUCRE

RÉSUMÉ : Trois espèces nouvelles de Diptilomiopidae, Peralox ulmi n. sp., Diptacus gigantorubra n. sp. et Diptiloplatus sacchari n. sp., respectivement récoltées sur Ulmus pumilo L. et Rubus sp. à Fujian, et sur Saccharum officinarum L. à Guangxi où il s'agit là pour la canne à sucre d'une importante peste, sont décrites.

Three new species of diptilomiopid mites (Diptilomiopidae) are described in this paper. They were collected respectively on Ulmus pumila L. and Rubus sp. in Fujian, and on Saccharum officinarum L. in Guangxi. The mite on the sugarcane is an important pest in China; it attacks mainly the undersurface of the sugarcane leaves. On examination, all these species have been found to be new to science, namely: Peralox ulmi n. sp., Diptacus gigantorubra n. sp. and Diptiloplatus sacchari n. sp. All the measurements used in this paper are in microns. All type materials are deposited in the Laboratory of Agriculture Acarology, Department of Biology, Fudan University, Shanghai.

1. Peralox ulmi n. sp. (fig. 1)

This mite is different from Peralox insolita Keifer (1962) in its more complicated designs on the shield, with only five lateral ridges on tergite and featherclaw 5-rayed. The differences between these two species are given in table 1.

Female : body length 280-296, thickness about 82; fusiform; light green in colour. Rostrum length 37-39, large, curved downwards. Length of shield 44-47, width 56 with a deep furrow at the centre of the rear margin, middle line being short. The admedian line is incomplete. Shield has transverse lines at the centre and joins the submedian lines, the second submedian being complete and extending ahead of the dorsal tubercles. Dorsal tubercles are ahead of the shield margin, 32 apart; dorsal setae 12.3, directed forward.

Foreleg 61.5, patella 7.4 and seta 24.6 long. Tibia 12.3 long, seta 12.3 long. Featherclaw 5-rayed. Second coxal tubercles close to the rear margin. Hindleg 56.7, patella 7.4, seta 9.8 and tibia 9.8 long.

Abdomen tergites 26, with five lateral ridges...
between sixth and fifteenth tergites, the other tergites being without ridge. Sternites very narrow, there being about 80 sternites ahead of the wider rear ring; all abdominal setae present. Lateral seta 20 long, close to sternite 12; first ventral seta 19 long, close to sternite 32; second ventral seta 12.3 long, close to sternite 52; third ventrals 37 long, on 6th ring from end; telosomal seta 50 long; accessory seta absent. Female genitalia 7.4 long, 12.3 wide, cover flap smooth.

Male: not found.

Holotype: female No. 110, 1979.
2. Diptacus gigantorubra n. sp. (Fig. 2)

This new species is similar to *D. rubra* Keifer (1959), but differs from it in that there is no design on the shield, the dorsal tubercles are very long and the featherclaw is 4-rayed. The differences between these two species are given in table 2.

Female: body length 200-225, width 65-70, colour white and translucent, fusiform. Rostrum 45 long. Shield 45-50 long, 55 wide, without design; dorsal tubercles very long, with transvers axle ahead of rear shield margin, dorsal seta 17.2

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**Fig. 2:** *Diptacus gigantorubra* n. sp.

a. — Dorsal view of adult female.  
b. — Featherclaw.  
c. — coxae and external female genitalia.  
d. — Side skin structure.
Table 2.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Diaptocus rubra</th>
<th>Diaptocus giganteorubra n. sp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of body</td>
<td>150-180</td>
<td>200-225</td>
</tr>
<tr>
<td>Thickness of body</td>
<td>55</td>
<td>65-70</td>
</tr>
<tr>
<td>Width of shield</td>
<td>47</td>
<td>55</td>
</tr>
<tr>
<td>Pattern of shield</td>
<td>present</td>
<td>absent</td>
</tr>
<tr>
<td>Length of genitalia</td>
<td>18</td>
<td>12.5</td>
</tr>
<tr>
<td>Featherclaw rays</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

long, directed forward, definite ridge short between the forecoxae.


Abdominal thanosome with about 48 tergites, wider than sternites, without microtubercle; 55-70 sternites with microtubercles. Lateral seta 17.5 long, close to 12th sternite; first ventral seta 55-56 long, on 28th sternite, second ventral seta 15 long, close to 40th-43rd sternite; third ventral seta 32 long, on 9th ring from end. Telosomal

Figure 3: Diaptocplus sacchari n. sp.

- a. Dorsal view of adult female
- b. Featherclaw
- c. Coxae and external female genitalia
- d. Male genitalia
- e. Internal female genital structure
3. Diptiloplatus sacchari n. sp. (Fig. 3)

This mite is different from Diptiloplatus megagrostis Keifer (1975), but the featherclaw of this mite is divided and without any short central rays. Tergites somewhat wider than sternites. Hind patellar seta present. Shield pattern simple, with only a pair of admedian. The differences between these two species are set forth in table 3.

Female : long and flattened, 220-240 long, 61 thick colour white. Rostrum 47 long, projecting downward, and at right angle with body. Shield 52-56 long, about 50 wide, subtriangular shape, design simple, no median line, with only two incomplete admedian lines, extending one third of the distance from rear shield margin, outline strong. Dorsal tubercles with longitudinal axle or inclined axle, 12-14 apart. Dorsal seta short, projecting inward.

Foreleg 50, patella 7.4, seta 35 long ; tibia 12 long, seta 7.4 long ; featherclaw divided and 7 rayed. Hindleg 45, patella 7.4, seta 9.8 long ; tibia 8.8 long. Lack of a definite ridge between the fore coxae ; two pairs of borecoxal tubercles close to each other ; second coxal tubercles larger, coxal base smooth, seta 54 long.

Abdomen flattened in dorsal view, with tergites having a shallow broad trough extending over most of the length of the abdomen. About 80-90 tergites, smooth ; 96 sternites with microtubercules. Lateral seta 13.5 long, close to sternite 14 ; first ventral seta 66 long, on sternite 32 ; second ventral seta 37 long, on sternites 48-50 ; third ventral seta 49 long, close to 10th sternite from rear. Accessory seta present, 25 long. Female genitalia 18 long, 27 wide, a few small spots below the genitalia, the basal area of cover flap having short dashes, other parts smooth.

Male : 18 long, 44 wide, with 74 tergites and 92 sternites, all the setae shorter than those of the female.

Holotype : Female No. 1, 1980.
Paratype : No. slide II and III.
Type host : Saccharum officinarum L.
Collected : August 8, 1980.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Diptiloplatus megagrostis</th>
<th>Diptiloplatus sacchari</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tergites</td>
<td>15</td>
<td>75-85</td>
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<tr>
<td>Number of sternites</td>
<td>52-57</td>
<td>66</td>
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<td>Length of body</td>
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<td>220-240</td>
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<tr>
<td>Thickness of body</td>
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<tr>
<td>Length of hindleg</td>
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<td>47</td>
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<td>Patellar seta of hindleg</td>
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<tr>
<td>Featherclaw</td>
<td>with short central rays</td>
<td>without short central rays</td>
</tr>
<tr>
<td>Featherclaw ray</td>
<td>6</td>
<td>7</td>
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</tbody>
</table>

REFERENCES


Paru en mai 1983.