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FOUR NEW SPECIES OF ERIOPHYOIDAEA ON PRUNUS DOMESTICA, ROSA CANINA, RUBUS CAESIUS AND PRUNUS PADUS:
RHINOPHYTOPTUS DOMESTICA N. SP., PARAPHYTOPTUS ROSAE N. SP., DIPTACUS CAESIUS N. SP. AND ERIOPHYES PADI N. SP.

BY Rüdiger DOMES
(Accepted March 1999)

SUMMARY: Four new species, Rhinophytoptus domestica, Paraphytoptus rosae, Diptacus caesius and Eriophyes padi are described from Germany and Austria. **Rhinophytoptus domestica** n. sp. prefers the undersurface of the leaves on *P. domestica* as a vagrant, has protogynous and deutogynous females like *R. avium* n. sp., differs from this species by the different nymphal stage, different shield design, female genital cover flap, tarsal empodium, structure on ventral annuli of protogynous female and other morphological characteristics. **Paraphytoptus rosae** n. sp., from *R. canina*, lives on the upper surface of leaves in the stipule region and causes moderate proliferation through cell-division. Hitherto, no species of Paraphytoptus was described from *R. canina*. **Eriophyes padi** n. sp. prefers the under surface of the leaves of *P. padus* as a vagrant. They differ from hitherto known eriophyids of bird cherry in morphological characteristics and specificity of reaction upon their host plant. **Diptacus caesius**, a new species from the dewberry, *R. caesius*, is free-living on the underside of the leaves, where it has not been observed to cause any damage.

RÉSUMÉ : Quatre nouvelles espèces Rhinophytoptus domestica, Paraphytoptus rosae, Diptacus caesius et Eriophyes padi sont décrites d’Allemagne et Autriche. **Rhinophytoptus domestica** n. sp. vit de préférence sur la face inférieure des feuilles de *Prunus domestica*. Les femelles sont protogynes et deutogynes. *R. domestica* se distingue de *R. avium* par les caractères des phases nymphales, une forme différente du bouclier, l’épigynium, l’empodium du tarse, la structure des annuli ventraux de la femelle protogynée. **Paraphytoptus rosae** n. sp. vit à la base de la surface des feuilles dans la région des stipes sur *R. canina*. Aucune espèce du genre n’avait été mentionnée sur *R. canina*, où *P. rosae* provoque de petites proliférations par division cellulaire. **Eriophyes padi** n. sp. est récoltée sur la face inférieure des feuilles de *P. padus*. Elle se distingue des autres Eriophyidae connus sur *P. padus* par les caractères morphologiques et les réactions spécifiques de la plante hôte. **Diptacus caesius** n. sp. vit sur la face inférieure des feuilles de *R. caesius* où elle ne cause pas de dommages apparents.

1. Kirrlacher Straße 3, 76646 Bruchsal, Germany.

The following described new species were detected during an inventory of the Eriophyidae on xylophytes in the area around Bruchsal, carried out during the last ten years.

Rhinophytoptus domestica n. sp.

Fig. 1–2

Beside Acalitus phloeocoptes Nal., Aculus fockeui Nal. et Trt., Aculus schlechtendali Nal., Diptacus gigantorhynchus Nal., Eriophyes tristriatus Nal., Phyllocoptes abaeus Keifer, Phytoptus padi Nal., Phytoptus similis Nal., a new species, Rhinophytoptus domestica, was found on plum (Prunus domestica L.) in Bruchsal, Germany.

Rhinophytoptus domestica has protogyne and deutogyne forms like those of R. avium (DOMES, 1998). It differs by the different nymphal stage, shield design, female genital coverflap, tarsal empodium, structures on ventral annuli, other morphological characteristics and host plants. Protogyne females of R. domestica are similar to those of Rhinotergum schestovici Petanović (PETANOVIC, 1988), but differing by the absence of deep indentations on the dorsal annuli, shield design, female genital coverflap, tarsal empodium.

Rhinotergum schestovici seems to lack deutogyne forms, because PETANOVIC did not describe any. Little agreement exists concerning Rhinophytoptus dudichi Farkas (FARKAS, 1965).

Protogyne female (June–October). Measurements (in μm): 200 (range of 22 specimens, 175–200, \( \bar{X} = 170 \)) long, 70 (65–77, \( \bar{X} = 68 \)) wide and 68 (50–73, \( \bar{X} = 61 \)) thick (at hind shield margin). White and fusiform. Gnathosoma 58 long, chelicerae 67 long. Dorsal shield 40–48 long and 68 wide. Shield pattern distinct (Fig. 1). Dorsal tubercles 7 ahead of rear shield margin; dorsal setae 13–15 long, projecting upwards, 34–35 apart. Foreleg 44–50 long; tibia 10–12, tarsus 10–11; foretibial seta is more than three times shorter than patellar; patella 7–8, femoral seta 20–22; trochanter 4–5. Tarsal solenidion 9–10, tarsal empodium 9–10, 4-rayed, simple. Forecoxae with 1st coxal setae 19–20 long, 11 apart; 2nd coxal setae 35–45 long, 10–13 apart; hind coxal setae 55–61 long, 27–30 apart. Hindleg 42–50 long, tibia 9–10, tarsus 10–11; tarsal solenidion 12, tarsal empodium 10, 4-rayed, simple. Opisthosoma with 22–27 dorsal annuli and ventral annuli, dorsal annuli smooth without indentations, ventral annuli microtuberculate (Fig. 1). Lateral setae 19–22 long, on ventral annuli 1, 57 apart; 1st ventral setae 20–25 long, on sternite 7, 42 apart; 2nd ventral setae 17–21 long, on ventral annuli 13, 25 apart; 3rd ventral setae 40–45 long, on sternite 21, 22 apart. Caudal setae 80–118, accessory setae 5. Female genital coverflap 10 × 30–31, with 14 fine lines; genital setae 15–16 long, arise from middle margin of female coverflap.

Deutogyne female (September–June). Reddish-brown, 180 (range of 21 specimens, 130–230, \( \bar{X} = 162 \)) long, 56 (50–55, \( \bar{X} = 52 \)) wide and 48 (43–70, \( \bar{X} = 44 \) ) thick, fusiform. Gnathosoma 48–58, chelicerae 55–70 μm long. Dorsal shield 43 (38–55) long, 52 (50–55) wide, with shield pattern (Fig. 2). Dorsal tubercles 5–7 long, 5 ahead of rear shield margin; dorsal setae 13–16 long, projecting upwards, 30–32 apart. Foreleg 43–51 long, tibia 10–12, tarsus 10–12, foretibial seta 2–3 times shorter than patellar; patella 6–9, femur 13–15, femoral seta 18–25; trochanter 3–6. Tarsal solenidion 8–9, tarsal empodium 8–9, 4-rayed, simple. Forecoxae with 1st coxal setae 13–15 long, 14 apart; 2nd coxal setae 30–50 long, 12 apart, hind coxal setae 55–75 long, 33 apart. Hindleg 43–44 long, tibia 8–9, tarsus 10; tarsal solenidion 8, tarsal empodium 8, 4-rayed, simple. Opisthosoma with 20–22 dorsal annuli and 59–67 ventral annuli. Lateral setae 19–25 long, on ventral annuli 8–11, 47 apart; 1st ventral setae 20–40 long, on ventral annuli 22–25, 45 apart; 2nd ventral setae 15–20 long, on ventral annuli 35–41, 30 apart; 3rd ventral setae 35–50 long, on ventral annuli 55–62, 25 apart. Caudal setae 60–118, accessory setae 4 long. Female genital coverflap 8–14 × 27–29, with 10 fine longitudinal lines; genital setae 19–20.

Nymph I. White, 112 long, 55 wide and 50–57 thick (at hind shield margin); Gnathosoma 35, chelicerae 43. Dorsal shield 30 long, 55 wide; dorsal tubercles 3 ahead of rear shield margin, dorsal setae 7 long projecting upwards, 33 apart. Foreleg 21 long, tibia 4, tarsus 5, foretibial setae 5, patella 3, patellar seta 23, femur 7, femoral seta 9, trochanter 2. Tarsal solenidion 5, tarsal empodium 6, 3-rayed, simple. Forecoxae with 1st coxal setae 10, 2nd coxal setae 20, 3rd
Fig. 1: *Rhinophytopus domesticus* n. sp., protogyne female and male.

FIG. 2: *Rhinophytoptus domesticus* n. sp., deutogyne female.

DAF. — Anterior dorsal view, female. ES. — Lateral view of dorsal ventral annuli region. TS. — Tarsal solenidion. TE. — Tarsal empodium. FGC. — Female genital cover flap.
coxal setae 30. Hindleg 18 long, tibia 3, tarsus 5, patella 3, patellar seta 6, femur 5, femoral seta 7, trochanter 2. Tarsal solenidion 5, tarsal empodium 5, 3-rayed, simple. Opisthosoma with 50 dorsal annuli and 55 ventral annuli, microtuberculate. Lateral setae 13, on ventral annuli 12–13, 50 apart; 1st ventral setae 20 long, on ventral annuli 22–23, 35 apart; 2nd ventral setae 25 long, on sternite 33, 17 apart; 3rd ventral setae 25 long, on ventral annuli 51, 20 apart. Caudal setae 60 long, 10 apart, accessory setae 2 long, 3 apart. Genital setae 6–10 long, on ventral annuli 11, 10 apart.


**Male (September–October).** 110–190 (X = 141) long; 51–65 wide and 51 thick (at hind shield margin), white and fusiform. Gnathosoma 50–58, chelicerae 57–66. Dorsal shield 40 long, 56 wide. Shield pattern (Fig. 1), dorsal tubercles 5 ahead of rear shield margin, dorsal setae 10 long, projecting upwards, 23–26 apart. Foreleg 42–45, tibia 9–11, tarsus 10–11; foretibial seta three time shorter than patellar; patella 7, femur 12–15, femoral seta 20–21, trochanter 2–3. Tarsal solenidion 8, tarsal empodium 8, 4-rayed, simple. Forecoxae with 1st coxal setae 20 long, 10–12 apart; 2nd coxal setae 40 long, 10–11 apart; hind coxal setae 60 long, 25–36 apart. Hindleg 37–45, tibia 7–10, tarsus 10, patella 5–7, patellar seta 12–15, femur 12–15, femoral seta 20, trochanter 2–3. Tarsal solenidion 10, tarsal empodium 8, 4-rayed, simple. Opisthosoma with 22–24 dorsal annuli and ventral annuli. Lateral setae 17–20 long, on ventral annuli 1, 50–57 apart; 1st ventral setae 18–20 long, on ventral annuli 6, 37–42 apart; 2nd ventral setae 18–20 long, on ventral annuli 11–12, 20–22 apart; 3rd ventral setae 40 long, on ventral annuli 18–20, 18–25 apart. Caudal setae 70–100 long, 10 apart, accessory setae 3–4 long, 4 apart. Epiandrium 23 wide (Fig. 1); genital setae 15–20 long, 24 apart.

**Host:** *Prunus domestica* L.

**Relation to host:** vagrants on undersurface of the leaves.


**Paraphytoptus rosae** n. sp.

Fig. 3

Besides *Callynrotus schlechtendali* Nalepa; 1894 and *Phylilocoptes chorites* Keifer; 1972, a new species, *Paraphytoptus rosae*, is found on *Rosa canina* L. in Bruchsal, Germany. Mites of the genus *Paraphytoptus* Nalepa, 1896, to which the new species belongs, are characterised by abdominal rings of even numbers dorso-ventrally immediately behind shield, at some point beyond becoming differentiated into dorsal annuli and ventral annuli, the dorsal annuli covering two or more ventral annuli.

At the abdominal end of *P. rosae* 7–10 dorsal annuli cover more ventral annuli. These dorsal annuli are broad, smooth and non-microtuberculate. *P. rosae* have dorsal tubercles outside of the shield by some point beyond becoming differentiated into dorsal annuli and ventral annuli, the dorsal annuli covering two or more ventral annuli.

*Paraphytoptus* species typically have a semi-open surface life among plant hairs. The anterior end is buried in the hairs. However, *P. rosae* is an exception, since it lives on hairless parts of *Rosa canina* L., on the basic upper surface of leaves, in the stipule region. Hitherto, no species of *Paraphytoptus* has been described from *Rosa canina*. *P. rosae*, with a 6-rayed tarsal empodium, is similar to *P. arcceuthobii
Fig. 3: *Paraphytoptus rosea* n. sp., female and male.

Keifer, these species sharing the dorsal annuli covering two ventral annuli only on rear ¼ abdomen and the host lacking hairs. The two species differ in shield design, female genital coverflap, accessory setae and by microtubercle structure. Only the abdominal end of *P. rosae* is similar to that of *P. calipluchea* Keifer.

**FEMALE (WINTER).** Measurements: 173 (range of 34 specimens, 163–195) long, worm-like, colour yellowish, 53 wide and 55 thick (on rear shield margin). Gnathosoma 32–40 long, rostral setae 10; chelicerae 37–42 long, almost straight. Dorsal shield 32–37 long, 53 wide; shield design 7 lines. Dorsal tubercles located by the side of rear shield margin, 30–33 apart, with dorsal setae 14–20 long, pointing backward over abdomen.

Foreleg 30–31 long, tibia 5–7, tarsus 7–9 long; foretibial seta 6–7, patellar seta 25–27 long; patella 5, femur 8–9; femoral seta 10–15; trochanter 2–3; tarsal solenidion 10–12 long, very slightly knobbed; tarsal empodium 8–10 long, 6-rayed, undivided. Hindleg 27–28 long, tibia 4–5, tarsus 6–7 long; tarsal solenidion 11–12 long, tarsal empodium 9 long, 6-rayed, simple. First forecoxal tubercles 15 apart, setae 10–12 long; second forecoxal tubercles 18 apart, setae 20–29 long; hindcoxal tubercles 30 apart, setae 30–50 long, unforked.

Opisthosoma with 53–66 microtuberculate, 1.5 μm small, dorsal annuli and 7–10 smooth 3–4 broad dorsal annuli at end of abdomen throughout in ventral annuli and 58–65, microtuberculate, 1.8 broad ventral annuli behind shield and 5–7 smooth, 2.5 broad, ventral annuli at end of abdomen. Lateral tubercles 57 apart on ventral annuli 8–10, setae 20–30 long; 1st ventral tubercles 35 apart on ventral annuli 19–25, setae 40–65 long; 2nd ventral tubercles 16 apart on ventral annuli 29–40, setae 15–20 long; 3rd ventral tubercles 22 apart on ventral annuli 51–67, setae 30–35 long. Caudal setae 70 long, accessory setae missing.

Female genitalia: genital coverflap 8–10 long, 24–26 wide, with 8–10 longitudinal scoring, genital tubercles 22 apart, setae 10–20 long, arise from middle margin of female coverflap.

**FEMALE (VEGETATION PERIOD).** 230 (range of 15 specimens, 200–270) long, 61 (50–67) wide and 43 (38–55) thick; worm-like, white. Gnathosoma 32–40 long, chelicerae 34–42 long. Dorsal shield 30–45 long and 50–67 wide; with shield pattern (Fig. 1). Dorsal tubercles, outside of shield, on rear shield margin, 30–32 apart with dorsal setae 13–16 long, pointing backward.

Foreleg 28–32 long, tibia 5–6, tarsus 7–8 long; foretibial seta approximately three times shorter than patellar; patella 5–7, femur 8–11, femoral seta 10–15 long; trochanter 2–3 long; tarsal solenidion 9–11, tarsal empodium 8–10, 6-rayed, simple. Hindleg 27–32 long, tibia 4–5, tarsus 7–8; tarsal solenidion 11, tarsal empodium 7–10, 6-rayed, simple. First forecoxal tubercles 15 apart, setae 10–12.5 long; second forecoxal tubercles 18 apart, setae 20–25 long; hindcoxal tubercles 30 apart, setae 30–50 long, unforked.

Opisthosoma with 53–66 microtuberculate, 1.5 μm small, dorsal annuli and 7–9, 2.5–3 μm broad, smooth dorsal annuli at end of abdomen; 58–70 microtuberculate, 1.5 μm small, ventral annuli behind shield and 5–8 smooth, 2.5–5 μm broad, ventral annuli at end of abdomen. Lateral tubercles 58 apart, setae 20–30 long on ventral annuli 8–12; 1st ventral tubercles 43 apart, setae 45–63 long on ventral annuli 18–25; 2nd ventral tubercles 23 apart, on ventral annuli 30–38, setae 10–20 long; 3rd ventral tubercles 25 apart, on ventral annuli 56–65, setae 25–35 long. Caudal setae 60–70, accessory setae missing.

Female genital coverflap 22–28 × 8–10, scored, 12 striae; genital setae 15–30 long, 15 apart, arising from middle margin of female coverflap.

**NYMPH I.** 95–100 long, 32–38 wide and 30–36 thick. Shield 25–30 long and 32–38 wide; dorsal setae 7–11 long, projecting upwards; foreleg 16 long, tibia 3, tarsus 4 long, foretibial seta 7, patellar seta 20 long, femoral seta 7 long; tarsal solenidion 5, tarsal empodium 5 long. Hindleg 15 long, tibia 2–3, tarsus 3 long; tarsal solenidion 7, tarsal empodium 7, 4-rayed.


**NYMPH II.** 150–165 long, 50 wide and 37–42 thick. Shield 33 long and 50 wide, shield pattern 5 lines,

**MALE (FROM MID-MAY).** 156–175 long, 54–55 wide and 55 thick (at hind shield margin), white and worm-like. Gnathosoma 35–38, chelicerae 37–40 long. Dorsal shield 30 long and 54 wide. Shield pattern lined (Fig. 2). Dorsal tubercles located outside shield, on side of shield margin 25 apart, with dorsal setae 20 long, pointing backwards. Foreleg 27 long, tibia 5, tarsus 22 long, 23–24 apart; foretibial seta three times shorter than patellar; patella 5, femur 8 long; femoral seta 15 long. Tarsal solenidion 10, tarsal empodium 8 long, 6-rayed, simple. Hindleg 26 long, tibia 5, tarsus 6 long; patella 5, femur 8 long; femoral seta 13 long. Tarsal solenidion 12, tarsal empodium 8 long, 6-rayed, simple.

Opisthosoma with 65 microtuberculate, 1.5 small, and 9 smooth, 2.5–3 broad, dorsal annuli at end of abdomen and 68 microtuberculate, 1.5 µm small, and 5, 2–2.5 µm broad ventral annuli at end of abdomen. Lateral tubercles 53–55 apart, setae 30 long, on ventral annuli 13–14; 1st ventral tubercles 40–41 apart, setae 55 long, on ventral annuli 26–27; 2nd ventral tubercles 20–22 apart, setae 25 long, on ventral annuli 41–43; 3rd ventral tubercles 24–25 apart, setae 30 long, on ventral annuli 67–68. Caudal setae 70–90 long, accessory setae missing. Male genitalia (Fig. 2), genital setae 15 long.

**HOST:** *Rosa canina* L.

**RELATION TO HOST:** Mites preferring the upper surface of leaves in stipule region, where they cause moderate proliferation through cell-division.


**Eríphyes padi** n. sp.

Reddish mites of the genus *Eríphyes* have been found as vagrants on the undersurfaces of bird-cherry leaves, which also bear cecidiens of *Phytoptus padi* Nalepa, 1889 on the upperside. They differ from other known eriophyids of bird cherry in morphological characteristics and their affect on their host plant, *Prunus padus* L.

Species previously found on *Prunus padus* L. are: *Eríphyes paderineus* Nalepa, 1909, *Phyllocoptes padi* Rovainen, 1947, *Phytoptus distinguidenus* Kieffer, 1902 and *Phytoptus padi* Nalepa, 1889. These species stimulate rust, erineum or galls on leaves of *Prunus padus* L. Mites of the new species do not cause such effects. The new species is similar to *Eríphyes paderineus* Nalepa, 1909 in the appearance of the 5-rayed, simple tarsal empodium and tarsal solenidion. Totally different is the shield pattern, length of gnathosoma and chelicera, presence of setae accessoryae, appearance of the female genital coverflap, length of setae genitals, setae ventrales 1 and 2, setae dorsales, shield, legs and setae coxales 1–3.

**FEMALE.** Measurements (in µm): 160 (range of 15 specimens, 128–165, X = 151) long, 48 (48–65, X = 58) wide and 44 (43–45, X = 45) thick (at the shield margin) reddish and tear-shaped. Gnathosoma 30–35 long, chelicera 30–35 long. Dorsal shield 42–45 long and 61–65 wide, with short lobe over rostrum. Shield pattern (Fig. 3). Dorsal tubercles 5–8 ahead of rear shield margin; dorsal setae 10–18 long, projecting dorso-centrally, 20 apart. Foreleg 31–32 long, tibia 6–7, tarsus 7–8; foretibial seta 6–8, patellar seta 30; patella 5; femoral seta 10–12; trochanter 3. Tarsal solenidion 8–10, tarsal empodium 10, 5-rayed, simple. Forecoxes with 1st coxal setae 10 long, 12–15 apart; 2nd coxal setae 20 long, 8–9 apart; hind coxal setae 30 long, 24–27 apart. Hindleg 28–29 long, tibia 5–6, tarsus 7; tarsal solenidion 8–10, tarsal empodium 10, 5-rayed, simple. Opisthosoma with all setae

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**TYPE:** Holotype female on slide ZMH Nr. A18/99. Paratype females (10) on slide ZMH Nr. A18/99. All deposited in Zoologisches Museum, Hamburg, Germany.
Fig. 4: Eriophyes padi n. sp.

regular, 48–51 dorsal annuli and 60–66 ventral annuli; dorsal annuli smooth, ventral annuli microtuberculate (Fig. 4). Lateral setae 20–35 long, on ventral annuli 10–12, 45–51 apart; first ventral setae 40–50 long, on ventral annuli 24–26, 30–36 apart; second ventral setae 25–30 long, on ventral annuli 40–47, 16–17 apart; third ventral setae 30 long, on ventral annuli 55–62, 22–24 apart. Caudal setae 80 long, 10 apart, accessory setae 5 long, 5–6 apart. Female genital coverflap 8 x 22, with 10–12 lines; genital setae 25–30 long, 14–16 apart.


**HOST:** *Prunus padus* L. (Mallnitz, Carinthia, Austria).

**RELATION TO HOST:** vagrant on undersurface of leaves.


**Diptacus caesius** n. sp.

Fig. 5–7

*Diptacus caesius* was found as a vagrant on the undersurface of dewberry leaves, *Rubus caesius* L. Conspicuous is the wax secretion on dorsal side of the opisthosoma, which is partially covered by three 15 µm-broad bands of thin, small wax plates, up to 22 µm in length (Fig. 5). The whole shield is covered with small and thin wax plates. They are shorter than...
FIG. 5: Diptacus caesius n. sp. protogyne female and male.
those of opisthosoma and bowed downwards. These mites are difficult to detect because the wax-coating breaks up the typical eriophyid form. Adult females and males have considerable more wax secretion than the nymphs.

Manson (1984) described a new species, *Levonga papaitongensis*, with a wax bearing abdomen, from *Rubus* sp. in New Zealand. Characteristic for the genus *Levonga* is the absence of femoral, tibial and patellar setae on the hind legs, and lateral and 1st coxal setae. Mites of the new species have all these setae. Hence, the new species does not belong to *Levonga*. From the morphological characteristics it must be assigned to the genus *Diptacus*.

Xin & Dong (1983) referred to *Diptacus gigantorubra* on *Rubus* sp. *D. caesium* is different from *D. gigantorubra*: the latter has simple tarsal empodium, U-like shield pattern, different proportions between the dorsal and ventral annuli, a different form of the nymphs. Hence, the new species does not belong to *Levonga*. From the morphological characteristics it must be assigned to the genus *Diptacus*.

*Diptacus caesium* is similar to *D. calicoryli* Keifer 1943, which also develops white flocculent wax. *D. caesium* differs from *D. calicoryli* by the shield pattern, female genital coverflap with 14–18 longitudinal markings, tarsal empodium 5-rayed, the microtubercles on the dorsal and ventral annuli, and the host plant.

Protogyne Female. 218 (range of 15 specimens, 170–242, $\bar{X}=218$) long, 69 (68–70, $\bar{X}=69$) wide and 70 (63–77, $\bar{X}=70$) thick (at shield margin) white, fusiform. Gnathosoma 45–47 long, chelicera 52–55 long. Dorsal shield 50–55 long and 68–70 wide. Shield pattern (Fig. 6). Dorsal tubercules long, finger-like, 11 ahead of rear shield margin, dorsal setae 16–20 long, projecting upwards and forward, 37 apart. Setae frontalis 5, 13 apart. Foreleg 47–52 long, tibia 12–16, tarsus 9–11; foretibial seta 12–15, patellar seta 40–50; patella 7; femoral seta 10; trochanter 4. Tarsal solenidion 7–8, tarsal empodium 8–9, 5-rayed, divided. Hindleg 42 long, tibia 12, tarsus 8–10; tarsal solenidion 7–8, tarsal empodium 8–9, 5-rayed, divided. Forecoxae with 1st coxal setae 15–17 long, 13–16 apart; 2nd coxal setae 30 long, 10–11 apart; hind coxal setae 50 long, 25–28 apart.

Opisthosoma with all setae regular, 46–49 smooth dorsal annuli and 71–72 ventral, microtuberculate annuli. Lateral setae 30 long, on ventral annuli 10–13, 61 apart; 1st ventral setae 70–73 long, on ventral annuli 22–29, 48–50 apart; 2nd ventral setae 25–30 long, on ventral annuli 41–44, 28–30 apart; 3rd ventral setae 43–45 long, on ventral annuli 60–65, 20 apart. Caudal setae 100–120 long, 10 apart, accessory setae absent.

Female genital coverflap 13–16 $\times$ 35–38, 14–18 longitudinal lines; genital setae 20 long, 22 apart.

Deutogyne Female. 190 (range of 10 specimens 165–215, $\bar{X}=190$) long, 70 wide and 45–47 thick, white, fusiform. Gnathosoma 57, chelicera 80 long. Dorsal shield 55 long, 45 wide; shield pattern as shown in fig. 7. Dorsal tubercules 5 long, 5 ahead of rear shield margin 25 apart. Dorsal setae 26 long, projecting upwards. Setae frontalis 5, 13 apart. Foreleg 53 long, tibia 13, tarsus 10, foretibial seta 10, patella 9, patellar seta 40, femoral seta 23, trochanter 5. Tarsal solenidion 10, tarsal empodium 10, 5-rayed, divided. Hindleg 54 long, tibia 12, tarsus 12, tarsal solenidion 10, tarsal empodium 10, 5-rayed, divided. Forecoxae with 1st coxal setae 15 long, 20 apart; 2nd coxal setae 30 long, 22 apart; hind coxal setae 50–70 long, 43 apart. Opisthosoma with 27–33 dorsal annuli, 86 ventral annuli, microtuberculate. Lateral setae 30 long, on ventral annuli 10–11, 60 apart; 1st ventral setae 50–70 long, on ventral annuli 39–40, 48 apart; 2nd ventral setae 20–30 long, on ventral annuli 58–59, 20 apart; 3rd ventral setae 40 long, on ventral annuli 79–80, 24 apart. Caudal setae 90 long, 10 apart, accessory setae absent. Female genital coverflap 16 $\times$ 50, 18 longitudinal lines; genital setae 20 long, 22 apart.

Male (June–September). 105–180 long, 55–68 wide, 40–55 thick (at hind shield margin), white fusiform. Gnathosoma 33–38, chelicera 45–53. Dorsal shield 53–58 long, 55–68 wide. Shield pattern as shown in Fig. 1. Dorsal tubercles 8 long, 3–5 ahead of rear shield margin, dorsal setae 10–18 long, projecting anteriad. Setae frontalis 6–7, 15 apart. Foreleg 38; tibia 9, tarsus 8, tibial seta 5, patella 6, patellar seta 38–40, femur 11, femoral seta 12, trochanter 4, tarsal solenidion 9, tarsal empodium 10, 5-rayed, divided. Hindleg 38, tibia 9, tarsus 8. Forecoxae with 1st coxal setae 15, 13 apart; 2nd coxal setae 30, 10 apart, 3rd coxal setae 50, 23 apart. Opisthosoma with
FIG. 6: *Diptacus caesius* n. sp. protogyne female and male.


**Nymph II.** White, 138–168 long, 48–55 wide and 52–55 thick (at shield margin); Gnathosoma 38–50, chelicera 46–59. Dorsal shield 30–38 long, 48–55 wide. Shield pattern as in first nymph. Dorsal tubercles 10 long, 3–5 ahead of rear shield margin, 26 apart; dorsal setae 14 long, projecting anteriad. Setae frontalis 5, 14 apart. Foreleg 28 long, tibia 6, tarsus 6, tibial seta 5; patella 5, patellar seta 30; femur 8, femoral seta 7, trochanter 3. Hindleg 27, tibia 6, tarsus 5. Forecoxae with 1st coxal setae 10 long, 10 apart; 2nd coxal setae 15, 8 apart; hind coxal setae 25,
17 apart. Opisthosoma 43-44 dorsal annuli and 51-53 ventral annuli, microtuberculate. Lateral setae 17-20, on ventral annuli 10-11, 43-54 apart; 1st ventral setae 50-52, on ventral annuli 22-23, 32-39 apart; 2nd ventral setae 15, on ventral annuli 31-32, 18-23 apart; 3rd ventral setae 28-35, on ventral annuli 46-47, 15-22 apart. Caudal setae 50, 7-8 apart, accessory setae absent. Female genital cover flap absent, genital setae 10 long, on ventral annuli 11, 10 apart.

HOSTS: *Rubus caesius* L. and *Rubus fruticosus* L.

RELATION TO HOSTS: Vagrant on undersurface of leaves of *Rubus caesius* L and *Rubus fruticosus* L. No damage to the hosts is apparent.


REFERENCES


**Nalepa (A.), 1909.** — Der Erzeuger des Erinofum, Duv. — *Marcellia*, 8: 45-49.

