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TOWARD THE SYSTEMATICS OF THE WATER MITE *LEBERTIA CONVERGELLA* TUZOVSKIJ (ACARIFORMES, LEBERTIIDAE)

К СИСТЕМАТИКЕ ВОДЯНОГО КЛЕЩА *LEBERTIA CONVERGELLA* TUZOVSKIJ (ACARIFORMES, LEBERTIIDAE)

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ABSTRACT

The first illustrated description of female and male of the water mite *Lebertia convergella* from mountain streams of Kamchatka and Magadanskaya Oblast' of Russia is given.

РЕЗЮМЕ

Первое иллюстрированное описание самки и самца водяного клеща *Lebertia convergella* из горных ручьев Камчатки и Магаданской области России.

INTRODUCTION

The water mite *Lebertia convergella* is only known from the deutonymph [Tuzovsky, 1990]. The purpose of the present paper is to describe its female and male.

MATERIAL AND METHODS

The examined material (8 females, 4 males) is collected by the author in mountain streams of Kamchatka and Magadanskaya Oblast': 1 male and 2 females — stream in Snow Valley in the vicinitiy of Magadan city, Magadanskaya Oblast', 15.06. 1982; 1 male (23.06.1983), 1 male (25.06.1983), 2 females (27.06.1983), 1 male (5.07.1983), 2 females (9.07.1983), 1 female (14.07.1983), and 1 female (11.09.1983) in a tributary of the Kamchatka river, 40 km upstream from Ust'-Kamchatsk city of Kamchatskaya Oblast'.

The following designations of body setae and lyriform organs are after Tuzovsky [1987]: Fch — setae of the cheliceral segment, Fp — setae of the pedipalpal segment, Vi — verticales internae, Ve — verticales externae, Oi — occipitales internae, Oe — occipitales externae, Hi — humerales internae, He — humerales externae, Hv — humerales ventralia, Sci — scapulares internae, Sce — scapulares externae, Li — lumbales internae, Le — lumbales externae, Si — sacrales internae, Se — sacrales externae, Ci — caudales internae, Pi — praeanales internae, Pe — praeanales externae; i_1 – i_5 — lyriform organs. All measurements are given in micrometers.

Lebertia (*Septlebertia* ?) *convergella* Tuzovskij, 1990

Female. Color red. Number of body setae (Fig. 1) typical for the genus *Lebertia* [Tuzovsky, 1987]. Setae Fch (Fig. 1, b) longer and thickner than other body setae. Setae Fp, Oi, and Pi without glandularia, other body setae with accompanying glandularia. Anterior pair of lyriform organs (i_1) near eye capsules, i_2–i_4 situated along lateral edges of body (Fig. 1, a), i_5 in posterior part of ventral surface (Fig. 1, c). Length of coxal shield slightly shorter than its width. Suture between coxae I longer than suture between coxae II. Genital flaps with 15–20 medial and 1–3 posterolateral setae. Anal opening situated between setae Ci.

Glandularia Pe situated on anterior projections of coxae II. Anterior setae of coxae I–II long and thick, setae Pe thin and short (Fig. 2, a–b). Integument with narrow strips that vary in form and sizes (Fig. 2, c).

Palp trochanter short, with one dorsodistal seta (Fig. 2, d). Palp femur thick, its proximal dorsal setae (3) short, dorsodistal setae (2) long; ventrodistal seta shorter than ventral margin of it segment. Genu of palps with 7–9 long setae situated on its on medial surface (Fig. 2, e, f, g). Number of setae on left and right palp genua usually varies: 7–8, 8–9, or 7–9. There are 7 setae on both genua in only one female and 8 setae in two females. Tibia of pedipalp rather short, with large distolateral spine; 1–2 dor-

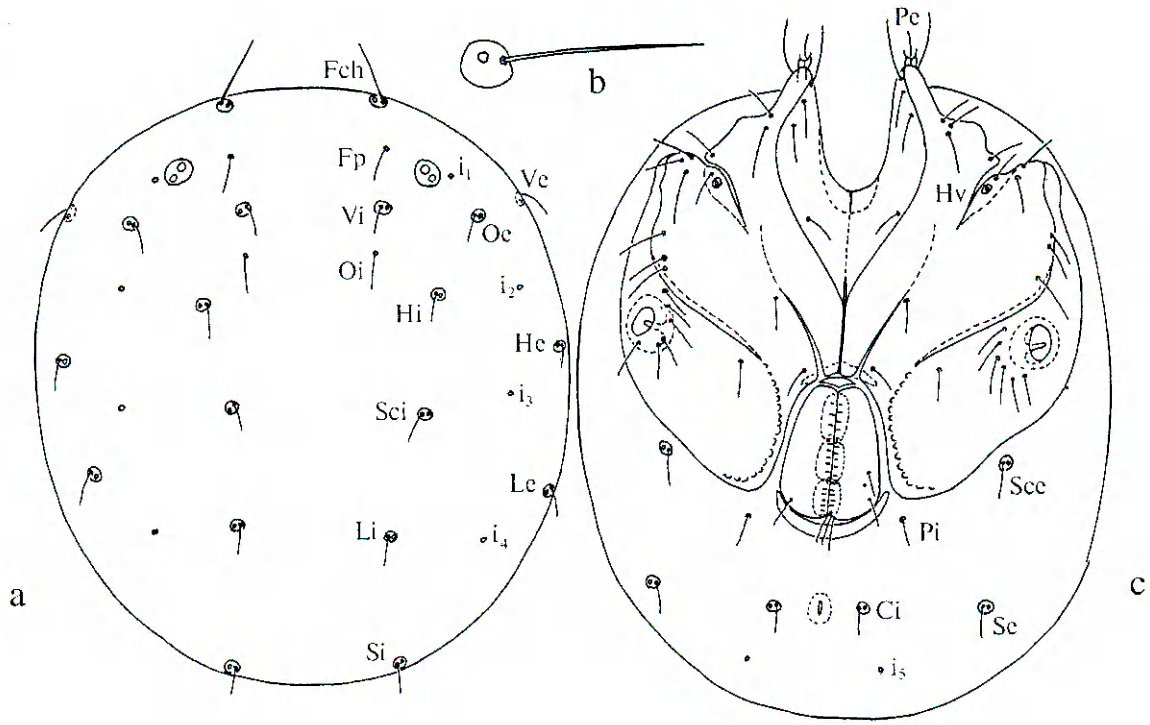

Fig.1. *Lebertia convergella*, female: a — dorsal view, b — setae Fch, c — ventral view.

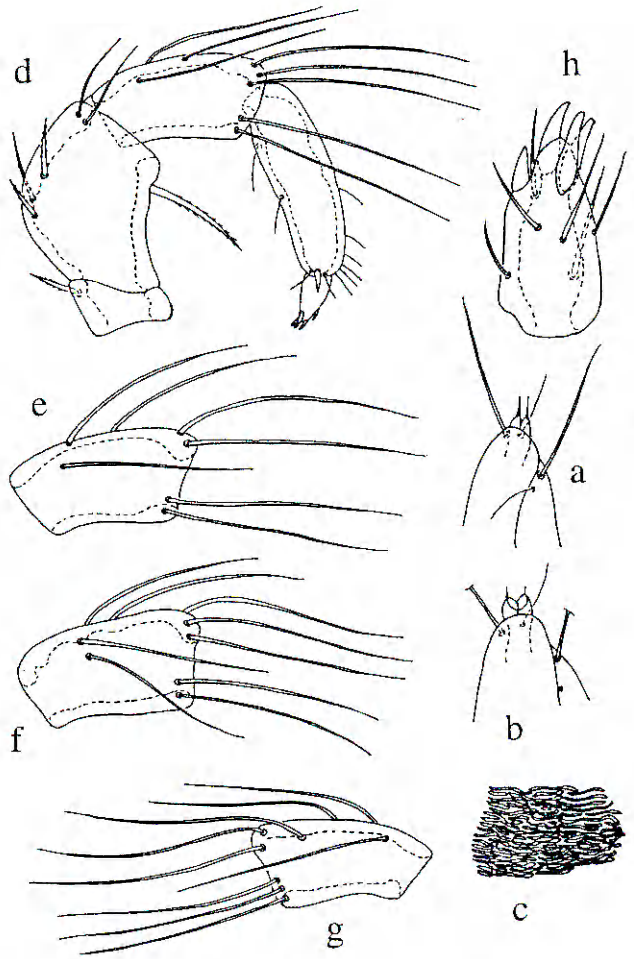

Fig. 2. *Lebertia convergella*, female: a, b — anterior parts of coxae I+II, c — fragment of integument, d — pedipalp; e, f, g — genu of pedipalp, h — tarsus of pedipalp.

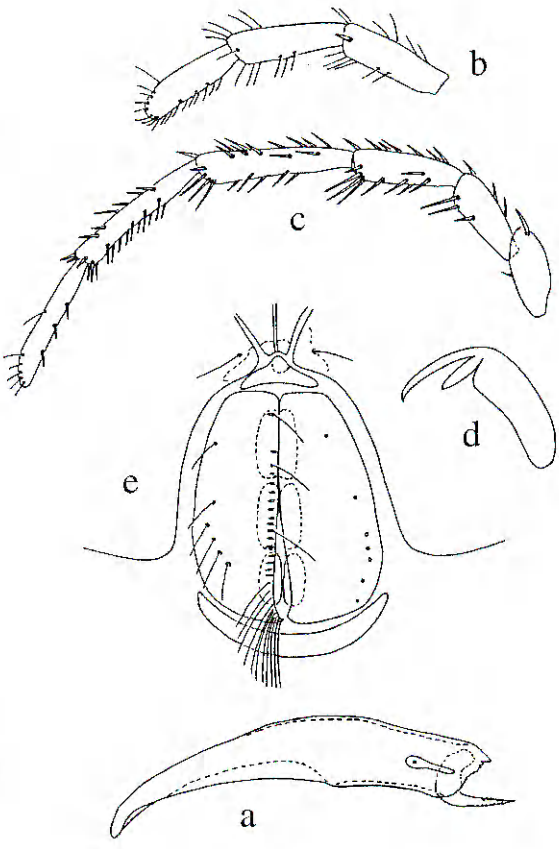

Fig. 3. *Lebertia convergella*: a — chelicera, b — genu, tibia and tarsus of leg I, c — leg IV, d — ambulacra, e — genital flaps; a–d — female, e — male.

sal setae situated near middle of segment; bases of two ventral setae subdivide tibia as 2:2:3. Tarsus of pedipalp (Fig. 2, h) with short dorsal solenidion, 5 thin setae and with 4 thick spines.

Chelicera (Fig. 3, a) with long basal segment and small stylet.

Legs thin, (Fig. 3, b–c), with numerous thin and thick setae, swimming setae absent. Ambulacra with large external and short internal teeth, blade with concave ventral margin (Fig. 3, d).

Measurements. Body length 1140–1425; length of coxal shield 700–735, its width 735–815; length of suture between coxae I 185–215, length of suture between coxae II 115–155; length of genital flaps 220–260; length of basal segment of chelicera 305–315, length of cheliceral stylet 50–55; length of pedipalpal segments: 40, 130–140, 115–130, 135–145, 40; length of leg segments: I — 80–90, 145–165, 130–140, 185–205, 185–215, 165–190; II — 85–90, 170–190, 135–165, 235–255, 215–295, 220–260; III — 90–100, 170–210, 170–195, 275–295, 300–325, 260–285; IV — 165–190, 195–220, 220–245, 310–345, 310–335, 275–320.

Male. Similar to the female but differs by the smaller sizes and by the number of genital setae. The genital flaps (Fig. 3, e) with 25–30 medial and 5–10 lateral setae.

Measurements. Body length 980–1345; length of coxal shield 695–765, its width 650–800; length of suture between coxae I 185–210, length of suture between coxae II 115–145; length of genital flaps 185–190; length of basal segment of chelicera 245–285, length of cheliceral stylet 50–55; length of pedipalpal segments: 40–50, 115–140, 115–130, 130–135, 32–40; length of leg segments: I — 80–85, 130–150, 115–140; 160–195, 180–210, 160–180; II — 80–100, 145–170, 120–155, 220–245, 245–280, 225–250; III — 90–100, 155–210, 160–190, 250–285, 285–315, 260–285; IV — 160–195, 180–220, 210–245, 285–325, 290–325, 270–305.

DISCUSSION

The genus *Lebertia* Neuman, 1880 includes (more than 400 species [Viets, 1987]) grouped in six subgenera: *Lebertia* Neuman, 1880; *Pilolebertia* Thor, 1900; *Pseudolebertia* Thor, 1897; *Hexalebertia* Thor, 1907; *Mixolebertia* Thor, 1906; and *Septlebertia* Imamura, 1954. This division is based mainly on the number of setae on the medial surface of the pedipalpal genu [Cook, 1974]. The pedipalpal genu in species of the subgenera *Lebertia, Pilolebertia,* and *Pseudolebertia* with five, *Hexalebertia* and *Mixolebertia* with six, and *Septlebertia* with seven long setae. Based on the number of these setae, *L. convergella* should be included in the subgenus *Septlebertia* with the following species: *Lebertia imamurai* [Viets, 1956] = *L. brunnea* [sensu Imamura, 1954], *L. elsteri* [Schwoerbel, 1957] and *L.* sp. Only the pedipalp is figured for the last species [Cook, 1974]. Adults of *L. elsteri* are characterized by extremely developed coxal shield occupying about 4/5 of the ventral surface, and about 1/2 of the ventral surface in adults of *L. convergella*. Adults of *L. convergella* differ from *L. imamurai* not only by the number of setae on pedipalpal genu (7–9), but also by the red color. Pedipalpal genu in adults of *L. imamurai* have seven setae, and the color of the body is dark brown [Imamura, 1954].

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