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Holarctic Genus *Pseudoseioptera* Stackelberg (Diptera, Ulidiidae (= Otitidae)).

Part II.

A Redescription of the Genus and a Review of Species¹

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Голарктичний рід *Pseudoseioptera* Stackelberg (Diptera, Ulidiidae (= Otitidae)). Частина II. Переопис роду та огляд видів. Каменєва О.П., Корнєєв В.О. — Переописано та ревизовано голарктичний рід *Pseudoseioptera*, до складу якого включено три види: неарктичні *P. albipes* (Cresson) і *P. dubiosa* (Johnson) та палеарктичний *P. demonstrans* (Hennig) (= *P. ingrlica* Stackelberg, syn.n.). Наведено таблицю для визначення видів *Pseudoseioptera*.

Голарктический род *Pseudoseioptera* Stackelberg (Diptera, Ulidiidae (=Otitidae)). Часть II. Переописание рода и обзор видов. Каменева Е.П., Корнеев В.А. — Переописан и ревизован голарктический род *Pseudoseioptera*, в состав которого включены три вида: неарктические *P. albipes* (Cresson) и *P. dubiosa* (Johnson) и палеарктический *P. demonstrans* (Hennig) (= *P. ingrlica* Stackelberg, syn.n.). Приводится таблица для определения видов *Pseudoseioptera*.

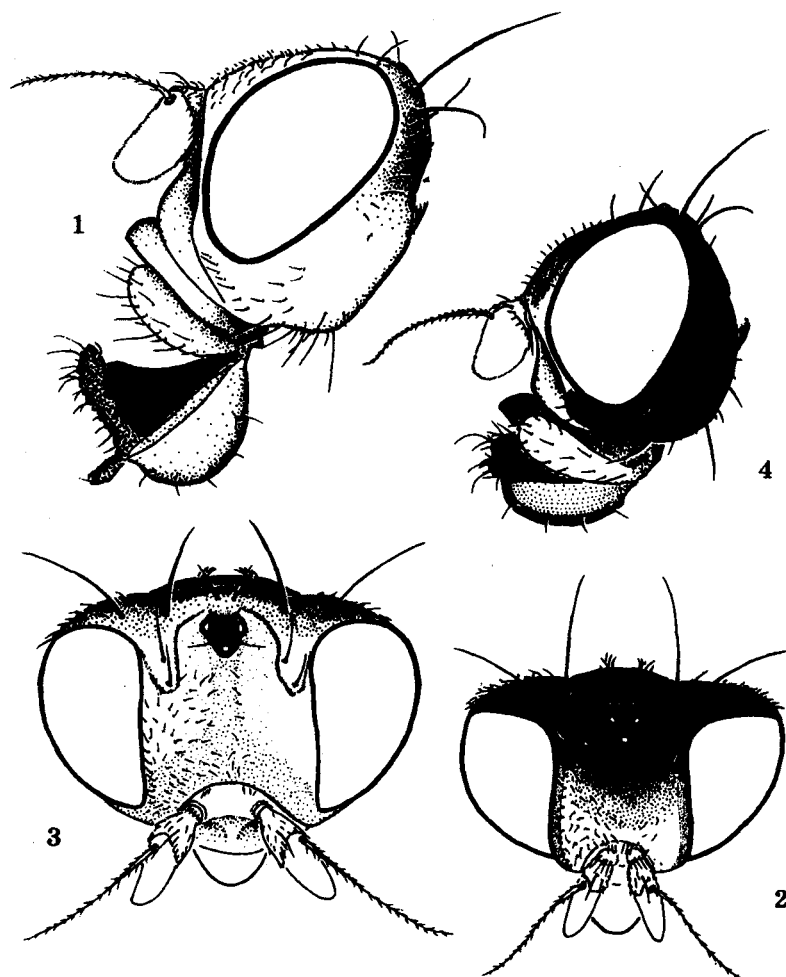
Genus *Pseudoseioptera* Stackelberg

Stackelberg, 1955: 328; Krivosheina, Kovalev, 1972: 82; Soós, 1984: 57; Steyskal, 1987: 805; Kameneva, 1992: 26.

Redescription. Head (fig. 1–4) slightly higher or as high as long. Frons setulose; setulae reclinate on orbital plates and proclinate or inclinate on vitta. Vertical plates with 2 or, anterior pair is shorter than posterior. Ocellar bristles as long as orbital, laterocliniate. Eyes oval, ca. 1.5 times as high as long. Lunula small, with few setulae. Face concave, higher than wide, with antennal grooves distinctive, but not deep. Clypeus rather large, convex, produced anteriorly. Parafacialia and gena narrow. Occiput slightly swollen. Postocellar bristles slightly divergent; inner and outer verticals well-developed. Postvertical and postocular bristles seta-like. Genal, postgenal and gular bristles long. Prementum large, swollen; labella fleshy; palpi wide.

Thorax robust, shining; only proepisternum, lower margin of katepisternum and katatergum sparsely microtomentose, anatergum microtrichose. Scutum slightly convex, with numerous setulae, not arranged into rows (fig. 8). Scutellum convex, bare, shining. Subscutellum large. Anepisternal suture weak, but distinctive. Proepisternal setae present, but weak. 1 postpronotal, 2 notopleural bristles. 1 supraalar bristle in posterior third, 1 intraalar, 1 postalar, 1 dorsocentral in posterior portion of scutum; 1 weak acrostichal bristle on the level of dc;

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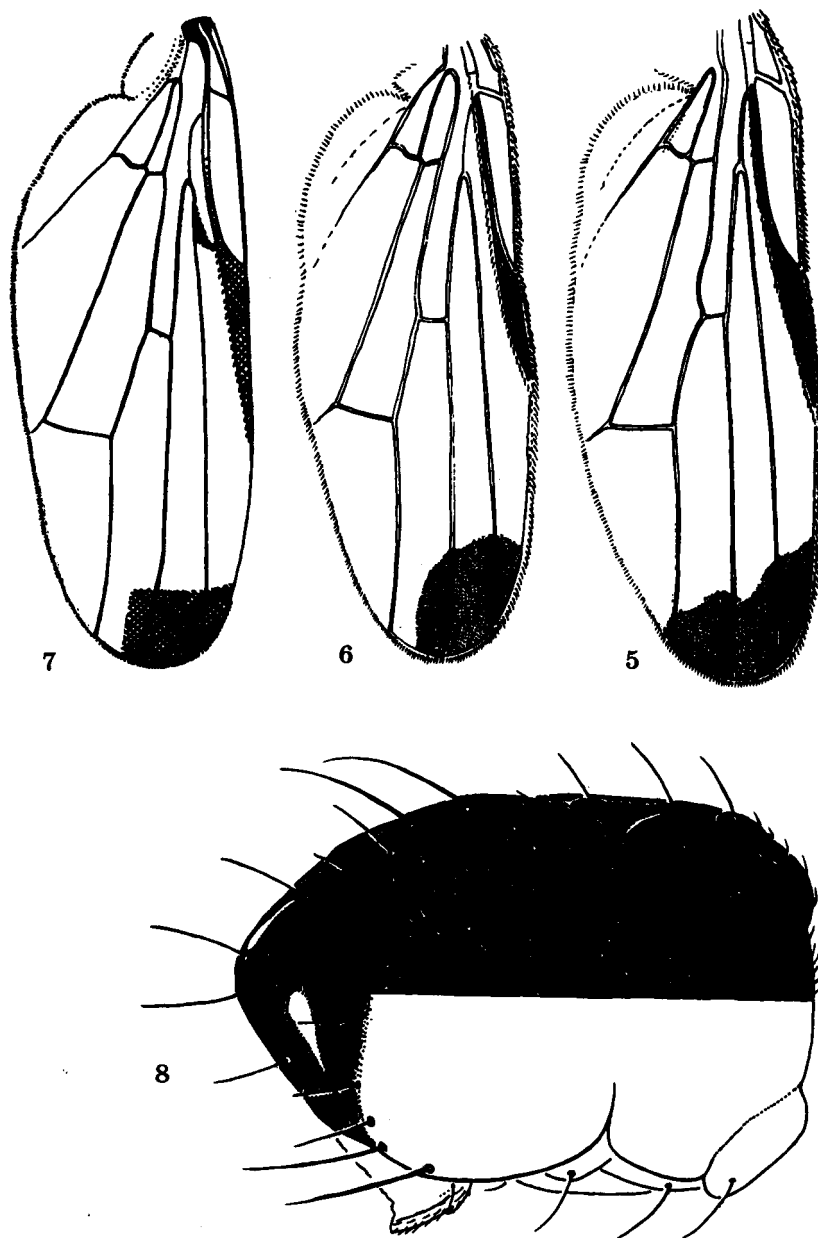


Figs 1-4. *Pseudoseioptera* heads: 1, 3 — *P. albipes*; 2, 4 — *P. demonstrans* (1, 4 — lateral view; 2, 3 — dorsal view).

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4 scutellars. Anepisternal and anepimeral bristles lacking. 2 katepisternal bristles distinctive, but somewhat weaker than npl.

Wings (fig. 5-7) hyaline, microtrichose on the entire surface. Costa with 2 indistinctive breaks: distad of humeral vein and just before apex of subcosta; with 2 rows of rather long and thin setulae from humeral break to the apex of R_{2+3} ; well-developed bristle before humeral break on ventral side; no costal spurs. Vein Sc complete, bowed at acute angle in apical portion. Stigma long. Vein R_1 setulose



Figs 5-8. *Pseudoseioptera* wings (5-7) and thorax (8, dorsal view): 5, 8 — *P. demonstrans*; 6 — *P. albipes*; 7 — *P. dubiosa*. (7 — redrawn from Steyskal, 1956).
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above on all its length; its apex is situated far distad from the middle of wing length, and on line with M-Cu vein. Veins R_{4+5} and M subparallel or very slightly convergent. Cell r_{4+5} not narrowed towards its apex. Vein CuA_2 slightly sinuate, cell cup with a very short extension at its lower apex. Alula developed. Calypters rather narrow, with long ciliae; upper calypter shorter than lower one.

Legs not modified, femora and tibiae setulose, forefemora with a row of posteroventral bristles in apical half, hindfemora with 2 subapical bristles on dorsal surface. Midtibiae with one apical spur and 3 setae. Tarsi setulose, with dark enlarged setulae on apical margin of tarsomeres 1-4. Claws simple.

Abdomen shining, rather densely setulose. In males protandrial segments as in all other Ulidiidae, moderately long, without spiracle. Hypandrium not connected to caudal portion of basiphallus. Gonites plate-like, slightly swollen, with few setulae; parameres not produced, with 4-6 sensilla-like setulae. Aedeagus moderately long and wide, without either glans, or sclerotized preglans, with two sclerotized taeniae on anterior surface, and on caudal surface with very short spinulae on medial and fine setulae on subapical portion; it is coiled and hidden in the rest into membranous pouch at ventral surface on right side of abdomen. Epandrium elongate, slightly expanded in antero-caudal direction. Surstyli joined to ventro-apical portion of epandrium, small, subtriangular, with 2-3 prensisetae and few setulae on ventro-medial surface. Cerci weakly sclerotized.

In female abdominal tergum 6 is vestigial, hidden below tergum 5; sterna without anterior apodemes. Terminalia very similar to those of other Ulidiidae. Tergosternum 7 large and flattened, eversible membrane with very small, but distinctively teeth-like squamae on ventral and dorsal surface between the taeniae (fig. 18); tergosternum 8 with dorsal and ventral rows of sensillar setulae; cerci divided from it with a suture; 4-6 moderately long cercal setae (fig. 19); 2+2 elongate slightly wrinkled spermathecae, joined in pairs with short stems (fig. 20).

Key to the species of *Pseudoseioptera*

- 1(2). Postpronotum and legs yellow. Cell r_1 with brown streak behind of Sc apex (fig. 7). Fronto-orbital plates in anterior portion with silver tomentosity *P. dubiosa* Johnson
- 2(1). Postpronotum and femora black. Cell r_1 behind of Sc apex hyaline. Fronto-orbital plates in anterior portion with or without silver tomentosity.....3
- 3(4). Frons yellow. Fronto-orbital plates and bordering lateral portion of frontal vitta shining, only with the medial strip and area bordering with lunula opaque; a very small anterior portion of fronto-orbital plates with indistinct silver tomentosity (fig. 3). Cell bc and basal portion of cell c brown *P. albipes* Cresson
- 4(3). Fronto-orbital plates and frontal vitta opaque, only the vertical plates shining black, or, rarely, yellow; fronto-orbital plates silver tomentose (fig. 2). Cell bc and basal portion of cell c hyaline ... *P. demonstrans* Hennig

Pseudoseioptera albipes (Cresson)

Cresson, 1919: 192²; Leonard, 1928: 851²; Brimley, 1938: 382²; Steyskal, 1956: 31; 1965: 648; (*Seioptera*); Krivosheina, Kovalev, 1972: 83 (*Pseudoseioptera*). — *currani* Harriot, 1942: 196; Steyskal, 1956: 31; 1965: 648 (*Seioptera*).

Type material. Types of *S. albipes* (number and sexes not known) not located, presumed to be in the Academy of Sciences, Philadelphia; types of *S. currani* (number and sexes not known) in American Museum of Natural History, New York (not studied; collection data not available). **Non-type materials** USA: (no collection data), ♂ (collector not given); Georgia: Atlanta, 5.07.1941, ♀ (Fattig); Maryland: Bethesda, Montg'y Co. 1.06.1960, ♀ (Sabrosky); Bethesda, 10.05.1960, 2♀ (Sabrosky); Maryland: Forest Glen, 06.1959, ♀ (Quigley); Beltsville, 20.27.05.1970, ♀ (Carlson); Patuxent Wildlife Refuge, nr. Laurei, Malaise trap, 4.06.1967, ♀ (D.R.Smith); Michigan: East Lansing, 8.06.1939, ♀ (Sabrosky); Missouri: Oxford, 05.1945, 2♀ (Hull); Pennsylvania, Roxborough, 06.1909 ♀ (collector not given); Virginia: Fairfax Co., Dead Run, 5.06.1915, ♀ (Shannon); [Ohio, according to Steyskal, 1956], Athens Co., Carbondale, 9.06.1931, 2♀ (Stehr) (USNM).

Redescription. Female. Head (fig. 1) ratio (length : height : width) = 1 : 1,1 : 1,4. Frons (fig. 3) 1,1 times as long as wide; ocellar triangle and vertical plates shining yellow, rarely black; frontal vitta shining, at the middle and in anterior portion opaque, reddish-yellow; fronto-orbital plates shining, reddish yellow; parafacialia light yellow, narrow, with slight silver-white tomentosity. Frontal setulae black. Lunula orange; face as long as wide in its narrowest portion; its surface subshining or slightly tomentose in antennal grooves and upper half of medial carina, shining in lower half. Clypeus shining, brownish yellow. Gena opaque yellow or brownish, subgena shining yellow. Postcranium, or occiput, shining black, yellow at margins; postocular and occipital setulae and bristles black. Antennae orange; scape and pedicellum with black setulae; first flagellomere whitish microtrichose, 1,5–1,6 times as long as wide, broadly rounded at apex; arista yellow in basal third, black in apical portion, distinctly brownish pubescent. Mouthparts brownish-yellow, prementum (= theca) yellow, shining. Palpi yellow, with black setulae.

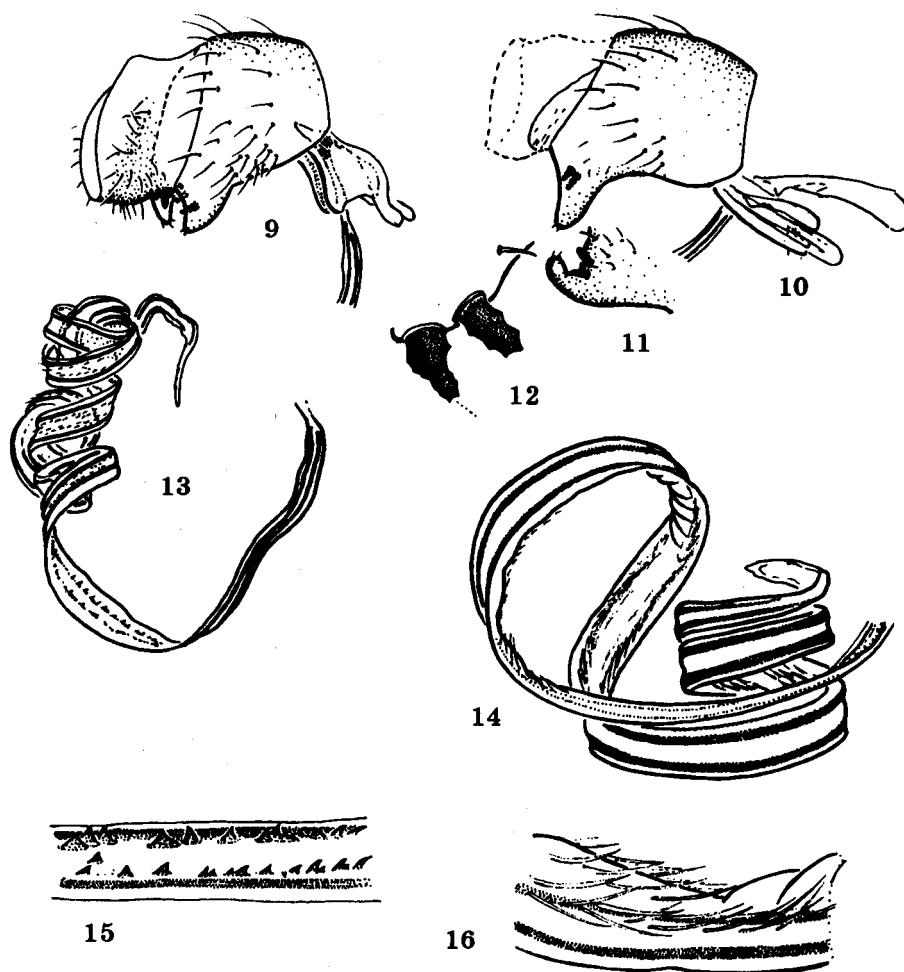
Thorax completely dark brown to black, only presternum yellowish-brown. Scutum 1,4 times as long as wide. Subscutellum subshining, microtrichose. Set of bristles normal for the genus, *sa* well-developed. All the bristles and setulae black.

Wing (fig. 6) hyaline, 0,36–0,41 times as wide as long; cell *bc* brown, and *c* brown at the base, hyaline in the rest; *sc* brown. Apical spot extends 0,42–0,46 of distance from *M*–*Cu* (= *tp*) to apex. Calypters light yellow, with whitish ciliae. Halteres yellow.

Legs. All the coxae and femora black, except the extreme knees yellow, with black setae and setulae. Fore- and midtibiae yellow, hindtibiae brownish-black in basal 4/5, yellow in apical portion. Tarsi yellow, with yellowish setulae and brownish ventro-marginal setulae on tarsomeres 3–5; claws black.

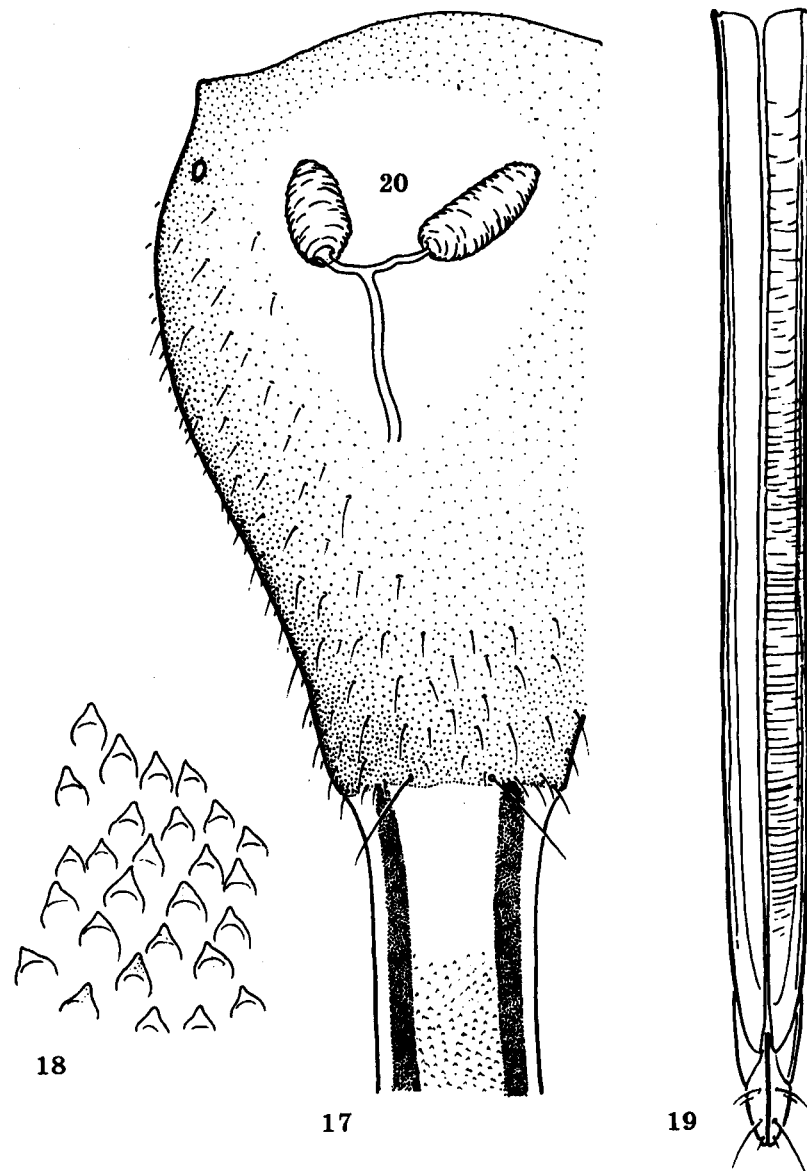
Abdomen completely shining-black, with setulae and bristles black except the pleura opaque. Postabdomen very similar to that of *P. demonstrans*.

Male. Similar to female in general features. Terminalia as shown on figs. 10-12, 14-16.



Figs 9-16. *Pseudoseioptera* male terminalia: 9, 13 — *P. demonstrans* (redrawn from Krivosheina and Kovalev, 1972); 10-12, 14-16 — *P. albipes*. 9, 10 — epandrium and hypandrium, right view; 11 — surstylus, posterior view; 12 — prensisetae, enlarged; 13, 14 — aedeagus; 15 — basal and 16 — medial portion of aedeagus.

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Figs 17–20. *Pseudoseioptera* female terminalia: 17–20 — *P. albipes*; 17 — tergosternum 7 and eversible membrane; 18 — scales of eversible membrane, enlarged; 19 — aculeus; 20 — spermathecae (two of the four).

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Pseudoseioptera dubiosa (Johnson)

Johnson, 1921³: 15; 1925: 260³; 1927: 217³; Harriot, 1942: 196; Steyskal, 1965: 648 (*Seioptera*); Krivosheina, Kovalev, 1972: 83 (*Pseudoseioptera*).

Type material: Holotype *S. dubiosa* ♀: USA: Maine, Northeast Harbor, Mount Desert Island (not located, possibly in the Museum of Comparative Zoology, Harvard University, Cambridge, USA). **Non-type material:** USA: Maine, Bar Harbor, Mount Desert Island ♀ (data and collector not known) (not located); Manitoba, Red Deer River, 08.1937, ♂ (H.T.Peters) (University of Kansas) (examined and redescribed by Steyskal).

Description (after Steyskal, 1956). Female. Head. Ocellar triangle and vertical plates shining black; frontal vitta opaque, reddish-yellow, brownish-black in posterior third fronto-orbital plates and parafacialia light yellow, narrow, with slight silver-white tomentosity. Postcranium swollen in lower portion.

Thorax dark brown to black, presternum and postpronotum yellow. Scutum with distinct pair of grayish tomentose lines. Set of bristles normal for the genus, sa well-developed. All the bristles and setulae black.

Wing (fig. 7) hyaline, 0,37 times as wide as long; cell bc and c light yellow; sc brown. Vein Sc setulose only at apical half. Cell r_1 behind of Sc apex with brown streak. Apical spot extends 0,4 of distance from M-Cu (= tp) to apex.

Legs yellow. Abdomen yellow in basal portion.

Male terminalia not examined.

Pseudoseioptera demonstrans (Hennig)

Hennig, 1941: 75; Soós, 1984: 75 (*Seioptera*). — «*demonstratus* Hennig»: Krivosheina, Kovalev, 1972: 83 (*Pseudoseioptera*) (misspelling of *demonstrans*). — *ingrica* Stackelberg, 1955: 329; Richter, 1970: 130; Krivosheina, Kovalev, 1972: 83; Soós, 1984: 57; Kameneva, 1992: 26 (*Pseudoseioptera*) syn.n.

Type material. Holotype *S. demonstrans* ♀: CHINA: "Sjaolin, Manshukuo/ leg. W. Alin 11. 6. 1939" (typed on white paper) and «Type» Mandshuria: Gaolinsy, 2-8. 07. 1939, ♀ (Alin) (DEI); paratype ♀: "Gaolinsy/ Manshukuo/ leg. W. Alin" and "Paratyp" <sic> (cut) (typed on red paper) (DEI); Lectotype *Ps. ingrica*: ♀: RUSSIA: Leningrad reg., «vic. Luga, NW Russia / Tolmatschevo», 3.07.1938 (Stackelberg), with the two latest labels: "Syntypus *Pseudoseioptera ingrica* Stack." and "Holotypus *Pseudoseioptera ingrica* Stack." [both handwritten by V.A.Richter]; paralectotype ♀: ibid., 5.07.1937 (Stackelberg), with the two latest labels: "Syntypus *Pseudoseioptera ingrica* Stack." and "Paratypus *Pseudoseioptera ingrica* Stack." [both handwritten by V.A.Richter] (here designated) (ZISP). **Non-type material.** RUSSIA: Moscow reg., Malinki village, vic. Krasnaya Pakhra, 7. 06. 1973 (Kovalev) (ZMMU); Amur reg., Zeya, 27.06.1982, ♀, 20.06.1982, ♀ (Ozerov), 2.07.1981, ♀ (Shatalkin), 1.07.1982, ♀ (Ozerov) (ZMMU); Khabarovsk kray (= Khabarovsk Territory), Yevreiskaya A. Obl.(= Jewish Aut. Reg.), Maly Khingan Mts., Dichun riv., 8.07.1979, ♀ (Shatalkin); ibid., Obluch'e, 2.07.1980, ♀ (Shatalkin) (ZMMU); Primorsky kray, Kamenushka 40 km SE of Ussuriisk, Ussuri Natural State Reserve, 19.07.1983, ♀ (Shatalkin), 2.07.1985, ♀ (Ozerov) (ZMMU), ibid., larvae under the bark of *Ulmus*, *Populus* and *Juglans*, reared adults (number not known) (N.P.Krivosheina) (materials not located).

3 Cited after: Steyskal, 1956.

Redescription. Female. Head ratio (length : height : width) = 1 : 1 : 1,57. Frons 1,1 times as long as wide; ocellar triangle and vertical plates shining black (very rarely the latter yellow); frontal vitta opaque, reddish-yellow, brownish-black in posterior third, rarely completely yellow; fronto-orbital plates and parafacialia light yellow, narrow, with slight silver-white tomentosity. Frontal setulae black, reclinate on orbital plates and proclinate or inclinate on vitta. Lunula orange; face as long as wide in its narrowest portion; its surface subshining or slightly tomentose in antennal grooves and upper half of medial carina, shining in lower half. Clypeus shining, brownish yellow. Gena opaque yellow or brownish, subgena shining yellow. Postcranium, or occiput, shining black, yellow at margins, rarely yellow with broad black X-shaped spot; postocular and occipital setulae and bristles black. Antennae orange; scape and pedicellum with black setulae; first flagellomere whitish microtrichose, 1,5–1,6 times as long as wide, broadly rounded at apex; arista yellow in basal third, black in apical portion, distinctly brownish pubescent. Mouthparts brownish-yellow, prementum yellow, shining. Palpi yellow, with black setulae.

Thorax completely dark brown to black, only presternum yellowish-brown. Scutum (fig. 8) 1,5 times as long as wide. Subscutellum subshining, microtrichose. Set of bristles normal for the genus, *sa* well-developed. All the bristles and setulae black.

Wing (fig. 5) hyaline, 0,39–0,41 times as wide as long; cell *bc* brown, and *c* brown at the base, hyaline in the rest; *sc* brown, rarely (in the paratype of *S. demonstrans*) light yellow. Apical spot extends 0,42–0,46 of distance from *M*–*Cu* (= *tp*) to apex. Calypters light yellow, with whitish ciliae. Halteres yellow.

Legs. All the coxae and femora black, except the extreme knees yellow, with black setae and setulae. Fore- and midtibiae yellow, hindtibiae brownish-black in basal 4/5, yellow in apical portion. Tarsi yellow, with yellowish setulae and brownish ventro-marginal setulae on tarsomeres 3–5; claws black.

Abdomen completely shining-black, with setulae and bristles black except the pleura opaque. Postabdomen as shown on figs 17–20.

Male (after Krivosheina, Kovalev, 1972). Similar to female in general features. Terminalia as was figured by Kovalev (loc. cit.) (fig. 9, 13). Tergosterna 7+8 broadly fused.

Discussion. Hennig (1941) noted that *P. demonstrans* lacked *sa* bristles, and Steyskal (1956) accepted his suggestion. Really, these bristles are situated in the posterior part of scutum, close to *pa* (fig. 8).

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