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New species of *Chersodromia* from the Russian Far East (Diptera: Empidoidea: Hybotidae: Tachydromiinae)

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Abstract

Five new species of *Chersodromia*: *C. gamoviensis* **sp. nov.**, *C. leleji* **sp. nov.**, *C. mohican* **sp. nov.**, *C. stenopsis* **sp. nov.** and *C. yamanei* **sp. nov.** are described from the southern part of Primorsk Territory, Russian Far East. A key to species from this region is given. *Chersodromia kamtchatkiana* Chvála, 1970, **syn. nov.** is synonymized with *C. nubifera* Coquillett, 1899. Several species reported in the present paper including *C. nubifera* have palpal sensory pits, and it is suggested that this character is widespread in this genus.

Key words: taxonomy, Palaearctic Region, Primorsk Territory, sandy seashore, Drapetini

Introduction

The genus *Chersodromia* Walker, 1849 is assigned to the subfamily Tachydromiinae of the family Hybotidae. The genus is known worldwide, with 53 described species. The taxonomy of the genus has been studied most intensively in the western part of the Palaearctic Region (e.g., Chvála 1978). However, in the eastern part of the region its taxonomy is poorly studied. Only three species have been described from northeastern Asia, i.e., *C. nubifera* Coquillett, 1899 from the Commander Islands and *C. kamtchatkiana* Chvála, 1970 and *C. hackmani* Chvála, 1978 from the Kamchatka Peninsula (Chvála 1978). In Japan one undescribed species is known from Hokkaido (Saigusa 2008).

In the present paper I describe five new species and redescribe *C. nubifera* based on the material recently collected from the southern part of Primorsk Territory, Russian Far East. The observations of the type specimens of *C. kamtchatkiana* and *C. nubifera* showed that *C. kamtchatkiana* is a junior synonym of *C. nubifera*. Seven species of *Chersodromia* are now described from northeastern Asia.

Material and methods

The survey was conducted in the southern part of Primorsk Territory, Russian Far East from August 21–30, 2010 (Fig. 1). Tavrichanka (1), a sandy shore, is situated at the innermost recess of a broad bay, Amur Bay. Zarubino (2) represents a shore of gravel along the open sea (Fig. 2). Risovaya Bay (3) represents a sandy shore along a tiny bay. Astaf'ev Bay (4) and Vityaz' Bay (5) are sandy shores on the Gamov Peninsula facing open sea (Fig. 3). Telyakovskiy Bay (6) represents a gravel-covered shore facing the same open sea. Pos'et (7) represents a shore of small gravel on the bay of Expedicia Inlet (Fig. 4). The sandy shore on Nazimov Cape (8) faces the open sea (Fig. 5).
All specimens were collected manually by the author and transferred to 99% ethanol in the field. In the laboratory some specimens were dried by freeze-drying method with t-butanol and pinned. To observe the detailed structure of the male terminalia, they were detached from the body, cleared in hot solution of 10% KOH (60–70°C for 1–1.5 hours), and preserved in glycerine.

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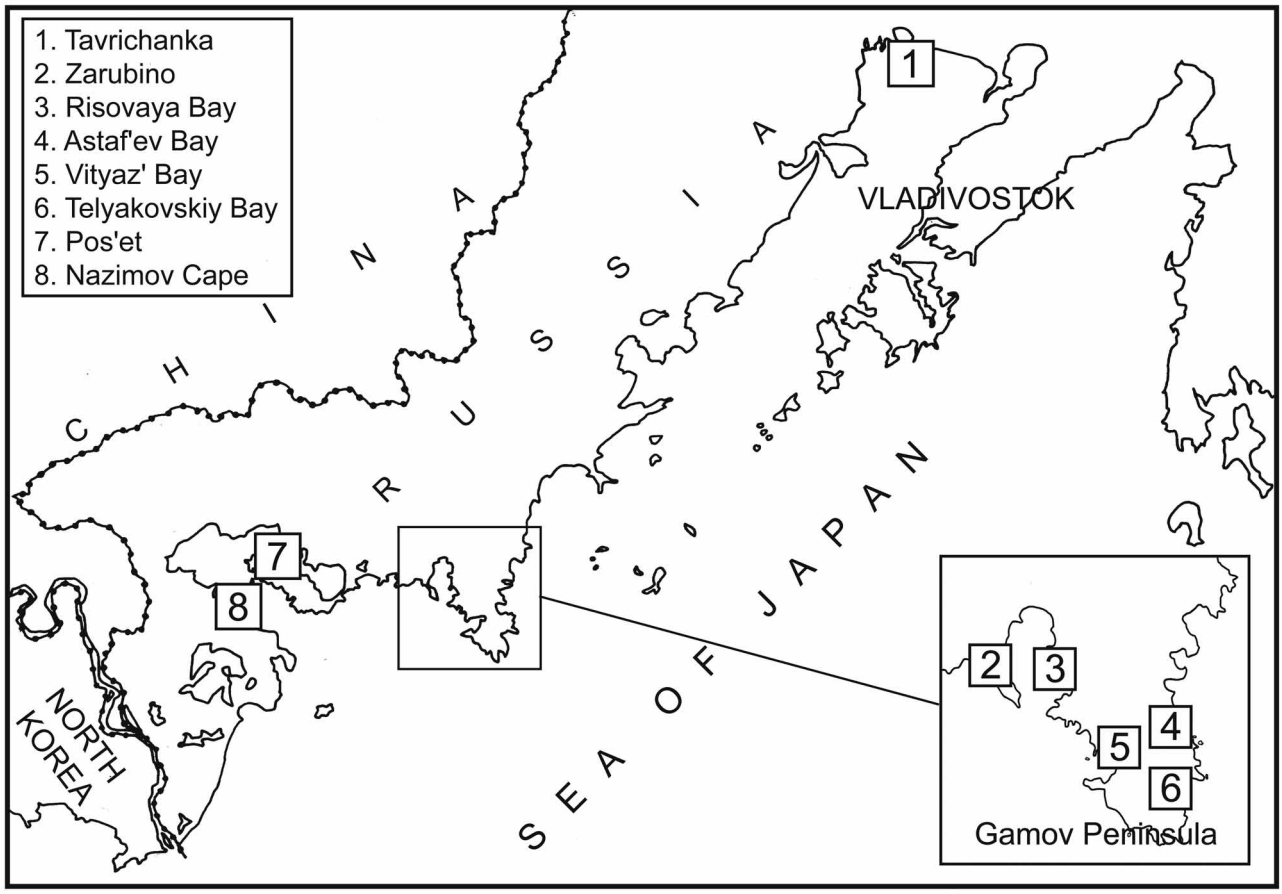


FIGURE 1. Localities surveyed in this study.

Terms used for adult structures primarily follow those of Cumming and Wood (2009). However, the terminology for the antenna is principally taken from Stuckenberg (1999), and for the terminalia and vestiture (Fig. 59) on the thorax from Cumming and Cooper (1992), which is one of the useful reviews of homology for the male terminalia of Tachydromiinae with exquisite illustrations. Although the word "posthumeral seta" was not used in Cumming and Cooper (1992) and generally used in Calyptratae (Cumming and Wood 2009), in the present paper I use it for the seta located posteromediad of the postpronotal seta (Fig. 59). The presence/absence of the seta is one of the important characters in the taxonomy of *Chersodromia*. Chvála (1970, 1978) appears to refer to the seta also as "posthumeral seta" without providing a definition.

In *Chersodromia*, there are some cases where the epandrial lamella bears a prominent dorsoapical expansion which looks like the basalmost lobe of the right surstylus (see also Shamshev and Grootaert 2005). In the present paper, I use the term "basalmost lobe of right surstylus" for this part when it is heavily sclerotized and shiny with the boundary line between it and the right epandrial lamella being distinct in dry or wet specimens (e.g., Fig. 47). On the other hand, the term "expansion" is used for the part when it is not in such a state (e.g., Fig. 62).

Eye height and genal width were measured in frontal view of head (Fig. 41). Coloration of body parts is described from dry specimens. The redescription of *C. nubifera* in this paper is not based on the type specimens but on the recently collected material from this study.

Abbreviations of the type depositories are as follows: FMNH, Finnish Museum of Natural History, University of Helsinki, Finland; IBSS, Institute of Biology and Soil Science, Far Eastern Branch of Russian Academy of Science, Vladivostok, Russia; NIAES, National Institution for Agro-Environmental Sciences, Japan; USNM, United States National Museum of Natural History, Smithsonian Institution, Washington, DC, USA; OUMNH, Oxford University Museum of Natural History, Oxford, UK; TMC, Takuya Maeda Collection at Kagoshima University, Japan.

FIGURES 2–5. Landscapes of some localities surveyed. **2**. Zarubino. **3**. Astaf'ev Bay. **4**. Pos'et. **5**. Nazimov Cape.

Key to species of *Chersodromia* in the southern part of Primorsk Territory

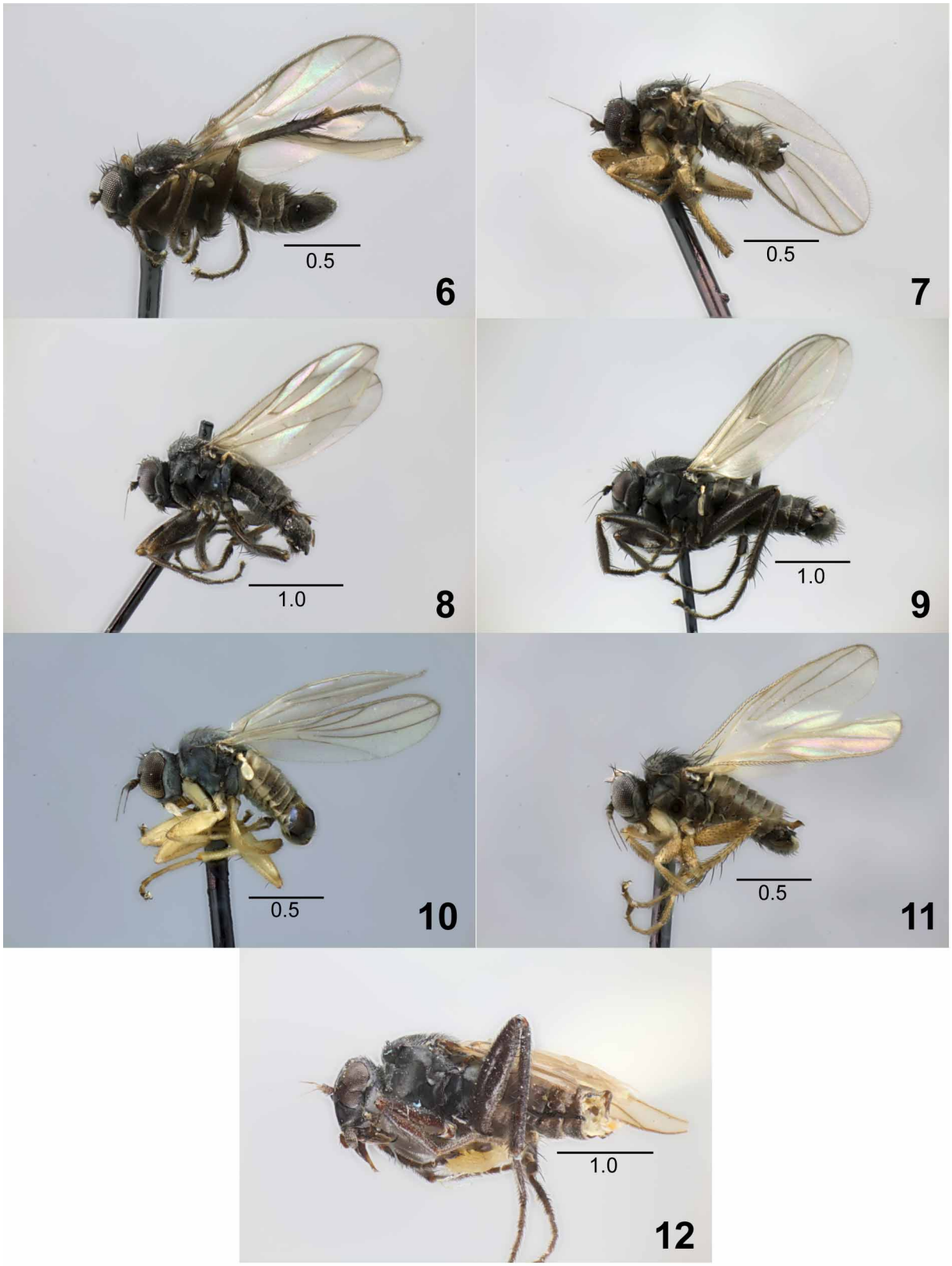
1 Face between compound eyes narrower than frons (Figs. 50, 57) 2
- Face between compound eyes wider than frons (Figs. 20, 27, 34, 41) 3
2 Face between compound eyes narrower than median ocellus (Fig. 50); all setulae on head and thorax whitish . . . . . *C. stenopsis* **sp. nov.**
- Face between compound eyes wider than median ocellus (Fig. 57); all setulae on head and thorax brown or black . . . . . *C. yamanei* **sp. nov.**
3 In frontal view gena wider than one-third of maximum eye height (Figs. 34, 41); fore tibia with distinct tibial gland in basal part (Fig. 19); vein R_1 meeting costa after midway of wing (Figs. 15, 16). 4
- In frontal view gena narrower than one-third of maximum eye height (Figs. 20, 27); tibial gland indistinct; vein R_1 meeting costa at or before midway of wing (Figs. 13, 14) 5
4 Larger species, more than 2.5 mm in body length; katepisternum with small polished area; male fore tibia with posteroventral row of curved setulae; left cercus of male terminalia spatulate (Figs. 45, 48) . . . . . *C. nubifera* Coquillett
- Smaller species, less than 2.0 mm in body length; katepisternum largely polished; male fore tibia without posteroventral row of curved setulae; left cercus of male terminalia oval (Fig. 40) . . . . . *C. mohican* **sp. nov.**
5 Outermost lobe of left surstylus of male terminalia rounded (Figs. 31, 33). Female unknown . . . . . *C. leleji* **sp. nov.**
- Outermost lobe of left surstylus of male terminalia elongated (Fig. 24). Female unknown. . . . . *C. gamoviensis* **sp. nov.**

Chersodromia gamoviensis sp. nov.

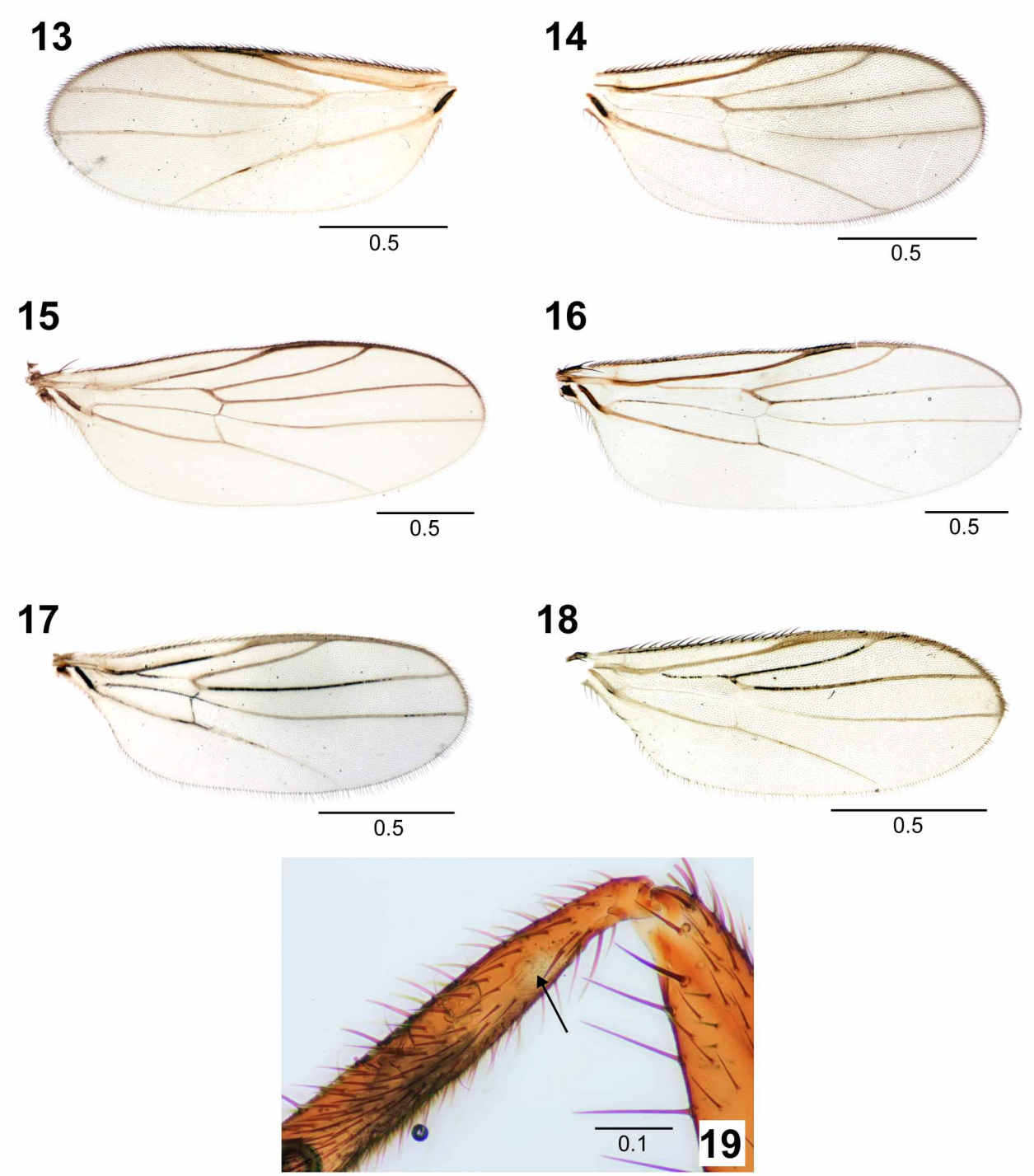
(Figs. 6, 13, 20–26)

Diagnosis. A small, brownish species measuring ca. 1.5 mm. Stylus long. Face wider than frons. Wings normally developed. Male terminalia: right surstylus reduced to small projection; right epandrial lamella conspicuously

large; right cercus very small; left surstylus with simple, slender outermost lobe. Setae on head and thorax black. Vertical setae (2 pairs) present; posthumeral setae absent.



FIGURES 6–12. Habitus in lateral view of species of *Chersodromia*. **6**. Holotype of *C. gamoviensis* **sp. nov. 7**. Holotype of *C. leleji* **sp. nov. 8**. Holotype of *C. mohican* **sp. nov. 9**. *C. nubifera* Coquillett. **10**. Holotype of *C. stenopsis* **sp. nov. 11**. Holotype of *C. yamanei* **sp. nov.** (**6–11**: from Primorsk Territory.) **12**. Syntype of *Chersodromia nubifera* Coquillett (Commander Islands). Scale in mm.



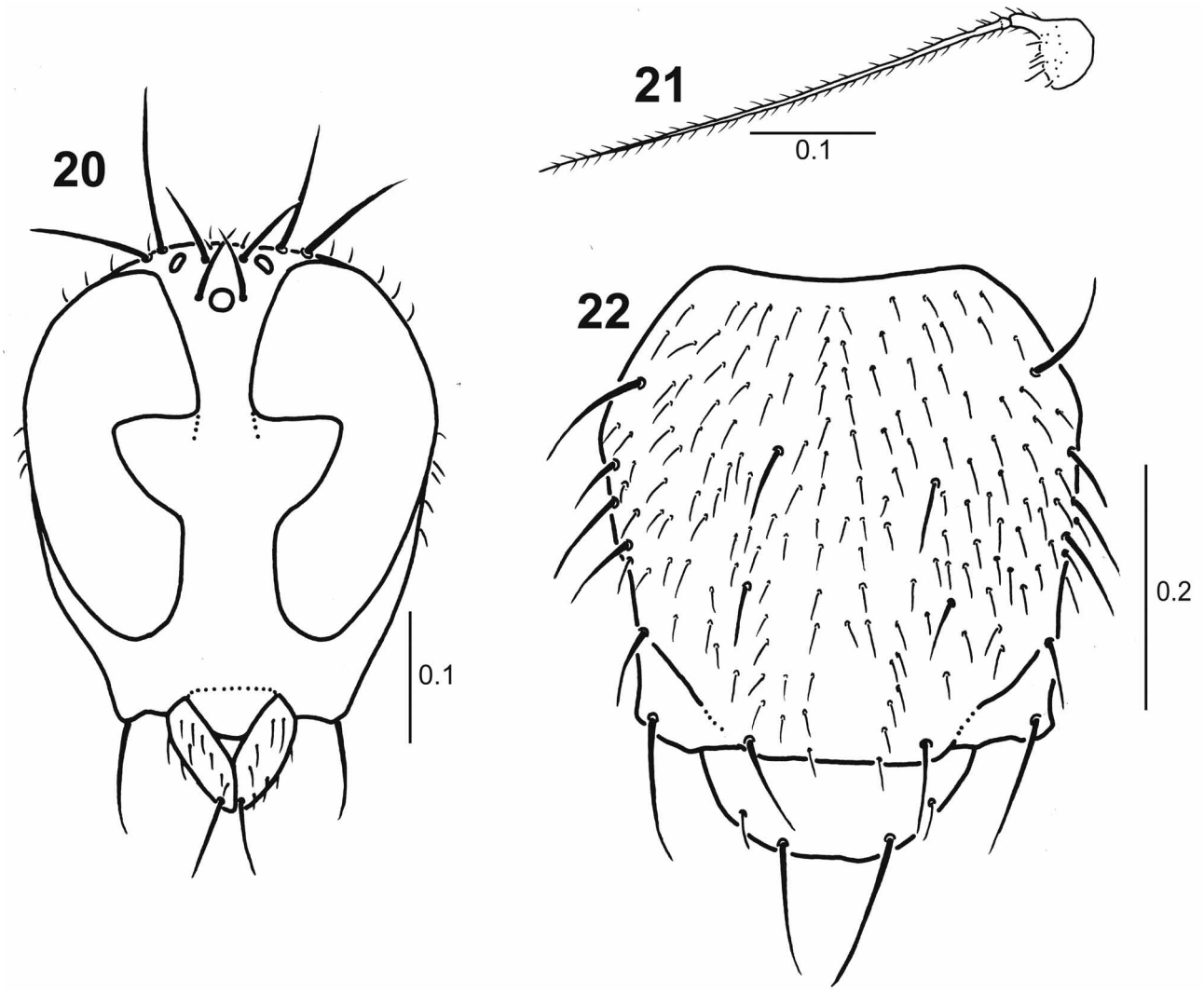
FIGURES 13–19. Male characters of *Chersodromia*. **13–18**. Wings. **13**. Holotype of *C. gamoviensis* **sp. nov. 14**. Paratype of *C. leleji* **sp. nov. 15**. Paratype of *C. mohican* **sp. nov. 16**. *C. nubifera* Coquillett. **17**. Holotype of *C. stenopsis* **sp. nov. 18**. Paratype of *C. yamanei* **sp. nov. 19**. Male fore tibial gland of *Chersodromia nubifera* Coquillett observed using a fore tibia cleared in hot solution of 10% KOH (60–70°C for 1–1.5 hours). Scale in mm.

Description. Holotype, male (Fig. 6). Body length 1.55 mm; head width 0.33 mm; wing length 1.51 mm. Head (Fig. 20) dark brown in ground-colour and greyish pollinose; palpus brown in ground-colour and greyish pollinose; proboscis brown, slightly shining; antenna brown; all setae and setulae on head black. Frons moderate in width; in frontal view face below antennal sockets wider than frons. Ocellar setae (2 pairs) moderate in length, as long as scape, pedicel and postpedicel combined. Vertical setae (2 pairs) longer than ocellar setae. In frontal view gena moderate in width, 1/5 as wide as maximum eye height. Occiput with setulae. Antenna (Fig. 21): postpedicel round

and slightly higher than pedicel in lateral view, with setulae along anterior margin; extension of postpedicel present dorsoapically; stylus long. Palpus with long setulae.

Thorax (Fig. 22) dark brown in ground-colour and greyish pollinose; all setae and setulae on thorax black. Vestiture on thorax: 1 setula on each proepisternum; 1 pair of postpronotal setae; no posthumeral setae; 3 pairs of notopleural setae; 1 pair of supra-alar setae; 1 pair of long, inflected postalar setae; 3 pairs of dorsocentral setae near median line (1 long pair near scutellum); some dorsocentral setulae in multiple rows; 1 pair of incomplete rows of acrostichal setulae; 1 pair of long, inflected apically scutellar setae; 1 pair of subapical scutellar setulae.

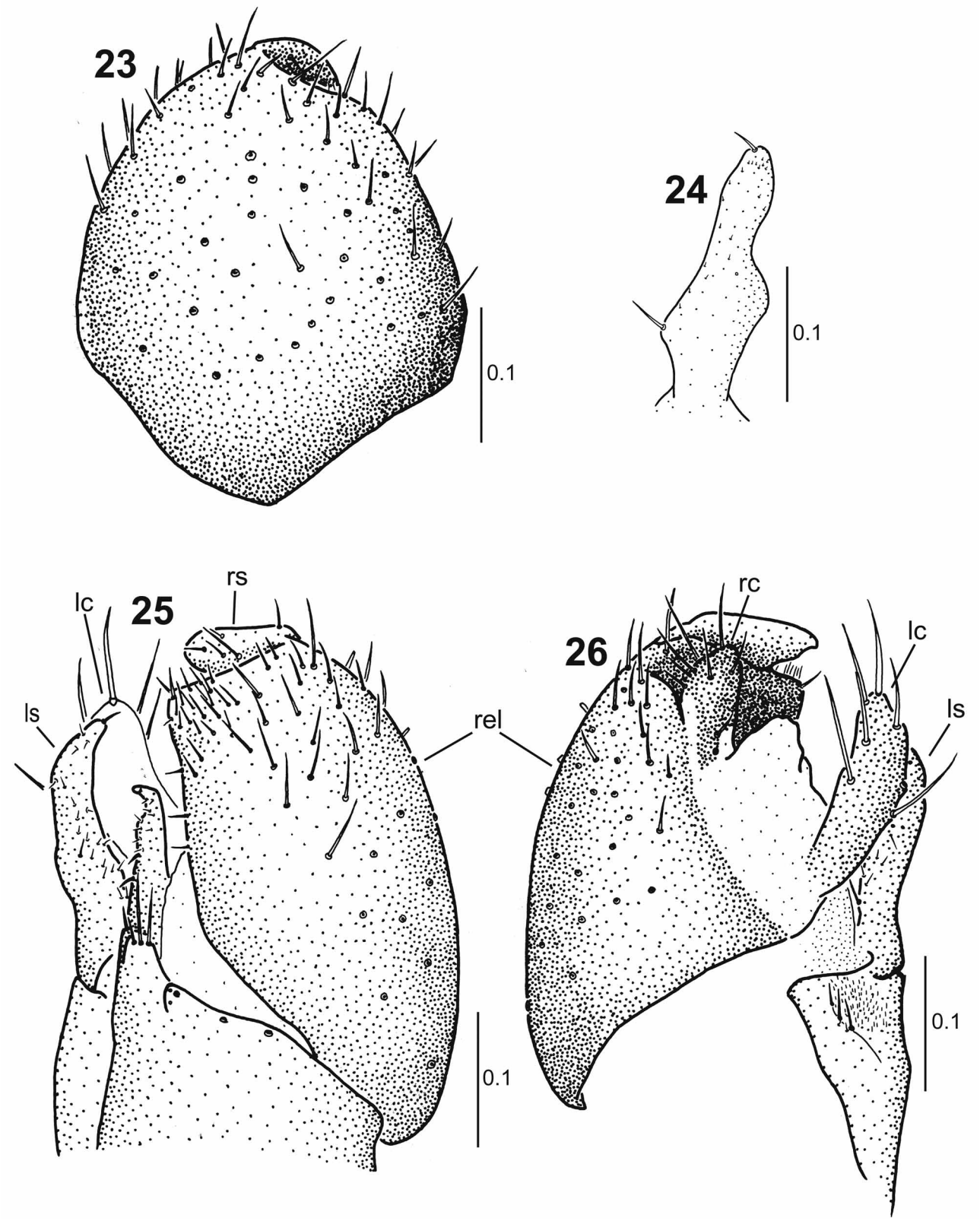
Wing (Fig. 13) normally developed, clear, with pale brown veins. Basicosta with 2 black setae and some setulae; costa with many dark brown setulae along anterior margin, ending at connection with vein M_{1+2}; subcosta absent; R_1 meeting costa at midway of wing; radial sector moderate in length; CuA_1 indistinctly connected to wing margin; anal vein reduced to pale, fold-like line. Calypter pale brown, minute. Halter pale brown, large.



FIGURES 20–22. Male of *Chersodromia gamoviensis* **sp. nov.** (holotype). **20**. Head. **21**. Antenna. **22**. Thorax. Scale in mm.

Legs brown, stout. All setae on legs black; setulae on legs brown to pale brown. Fore femur sparsely covered with setulae (setulae of anteroventral row long), with 1 anterior preapical seta, 1 anteroventral preapical seta, 1 posterior preapical seta and 1 posteroventral preapical seta. Fore tibia somewhat swollen in dorsal view, covered with setulae (especially dense on anterior surface), with 1 anteroventral preapical seta and 1 posteroventral preapical seta. Fore tibial gland indistinct. Mid femur sparsely covered with setulae, with 1 strong anterior preapical seta and 1 anteroventral preapical seta. Mid tibia covered with setulae, with anteroventral row of some small, black spinulae (preapical one long), 1 anterior preapical seta and 1 posteroventral preapical seta. Hind femur covered with setulae, with anteroventral row of ca. 10 setae, 1 anterior preapical seta and 1 posteroventral preapical seta. Hind tibia cov-

ered with setulae (especially dense in apical part of posteroventral surface), with 2 anteroventral setae, 1 anterior seta, 1 anterior preapical seta, 1 anterodorsal seta, 1 anterodorsal preapical seta and 1 dorsal seta. Fore, mid and hind tarsomeres covered with setulae.



FIGURES 23–26. Male terminalia of *Chersodromia gamoviensis* **sp. nov.** (holotype). **23**. Right epandrial lamella with right surstylus. **24**. Left surstylus. **25**. Left lateral view of terminalia. **26**. Right lateral view of terminalia. Scale in mm. lc: left cercus; ls: left surstylus; rc: right cercus; rel: right epandrial lamella; rs: right surstylus.

Preabdomen sparsely covered with pale brown setulae; tergites and sternites brown in ground-colour and sparsely greyish pollinose.

Terminalia (Figs. 23–26). Right surstylus reduced to small projection (Figs. 23, 25), boundary line between it and right epandrial lamella obscure. Right epandrial lamella conspicuously large (see Fig. 6), with short setae (Figs. 23, 25). Left surstylus composed of several lobes; outermost lobe simple, slender (Fig. 24). Left cercus moderate in size, somewhat slender, with some setulae; right cercus very small, bearing some small setulae (Fig. 26).

Female. Unknown.

Type material. HOLOTYPE ♂, labelled: Russian Far East, S. Primorye, Gamov Pen., Astaf'ev Bay (bare sands), 26.viii.2010, leg. T. Maeda (IBSS). **Paratype**: 1 ♂, Gamov Pen., Vityaz' Bay, 23.viii.2010 (NIAES).

Etymology. This species is named after the type locality, Gamov Peninsula.

Distribution. Russian Far East: southern part of Primorsk Territory.

Remarks. This species was found only on the shores facing the open sea. *Chersodromia gamoviensis* is a rarely collected species (only two males were collected in this survey) and very similar to *C. leleji* except in male terminalia. The terminalia of *C. gamoviensis* differs from *C. leleji* mainly in the size of the right epandrial lamella and the shape of the left surstylus. The right epandrial lamella is very large, and the outermost lobe of the left surstylus is slender in *C. gamoviensis.*

Chersodromia leleji sp. nov.

(Figs. 7, 14, 27–33)

Diagnosis. A small, brownish species measuring less than 1.5 mm. Stylus long. Face wider than frons. Katepisternum largely polished. Wings normally developed. Male terminalia: right surstylus reduced to small, pointed projection; right epandrial lamella with setulae along dorsoapical margin; right cercus very small; left surstylus with large, flattened, round outermost lobe. Setae on head and thorax black. Vertical setae (2 pairs) present.

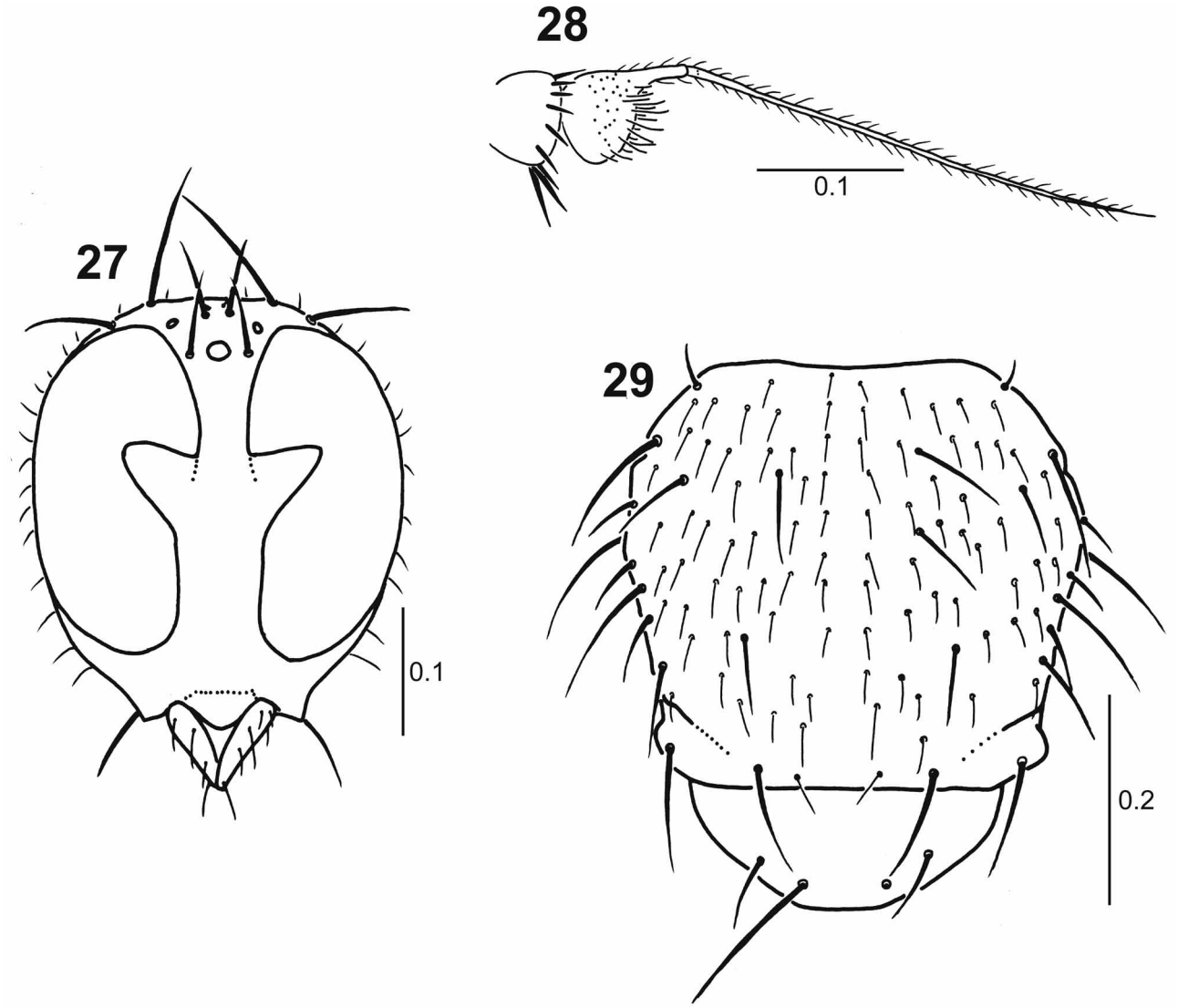
Description. Male (Fig. 7). Body length 1.10–1.27 mm; head width 0.29–0.32 mm; wing length 1.44–1.70 mm. Head (Fig. 27) dark brown in ground-colour and greyish pollinose; palpus brown in ground-colour and greyish pollinose; proboscis brown, slightly shining; antenna brown; all setae and setulae on head black. Frons moderate in width; in frontal view face below antennal sockets wider than frons. Ocellar setae (2 pairs) moderate in length, as long as scape, pedicel and postpedicel combined. Vertical setae (2 pairs) longer than ocellar setae. In frontal view gena moderate in width, 1/5.5 as wide as maximum eye height. Occiput with setulae. Antenna (Fig. 28): postpedicel round and slightly lower than pedicel in lateral view, with setulae along anterior margin; extension of postpedicel present dorsoapically; stylus long, ca. 2.5 times as long as pedicel and postpedicel combined. Palpus with long setulae; sensory pit obscure even with preparation on slide.

Thorax (Fig. 29) dark brown in ground-colour and greyish pollinose; katepisternum largely polished; all setae and setulae on thorax black. Vestiture on thorax: 1 long setula on each proepisternum; 1 pair of long, inflected postpronotal setae; 1 pair of posthumeral setae (sometimes absent); 3–4 pairs of notopleural setae (2 pairs long); 1 pair of supra-alar setae; 1 pair of long, inflected postalar setae; 3–4 pairs of dorsocentral setae near median line (1 long pair near scutellum); some dorsocentral setulae in multiple rows; 1 pair of incomplete rows of acrostichal setulae; 1 pair of long, inflected apically scutellar setae; 1 pair of subapical scutellar setulae.

Wing (Fig. 14) normally developed, clear, with pale brown veins. Basicosta with 1 black seta and some setulae; costa with many dark brown setulae along anterior margin, ending at connection with vein M_{1+2}; subcosta absent; R_1 meeting costa at midway of wing; radial sector moderate in length; CuA_1 indistinctly connected to wing margin; anal vein reduced to pale, fold-like line. Calypter pale brown, minute. Halter pale brown, large.

Legs pale brown, stout. All setae on legs black; setulae on legs brown to pale brown. Fore femur sparsely covered with setulae (setulae of anteroventral and posteroventral rows long; some preapical setulae strong; 2 subbasal setulae long), with 1 anterior preapical seta, 1 posterior preapical seta and 1 anteroventral preapical seta. Fore tibia somewhat swollen in dorsal view, covered with setulae (especially dense on anterior surface), with 1 anteroventral preapical seta, 1 posteroventral preapical seta and 1 strong anterior setula in basal part. Fore tibial gland indistinct. Mid femur sparsely covered with setulae, with anteroventral row of ca. 10 setae, 1 anteroventral preapical seta, 1 anterior preapical seta, posteroventral row of ca. 10 setae, 1 posteroventral preapical seta and 1 posterior preapical seta. Mid tibia covered with setulae, with anteroventral row of 15–20 small, black spinulae (preapical one long), 1

anterior preapical seta and 1 posteroventral preapical seta. Hind femur covered with setulae (some posterior preapical setulae strong), with anteroventral row of ca. 10 setae, 1 anterior preapical seta and 1 posteroventral preapical seta. Hind tibia covered with setulae (especially dense in apical part of posteroventral surface), with 2 anteroventral setae, 1 anterior seta, 1 anterior preapical seta, anterodorsal row of 3 setae and 1 dorsal seta. Fore, mid and hind tarsomeres covered with setulae.

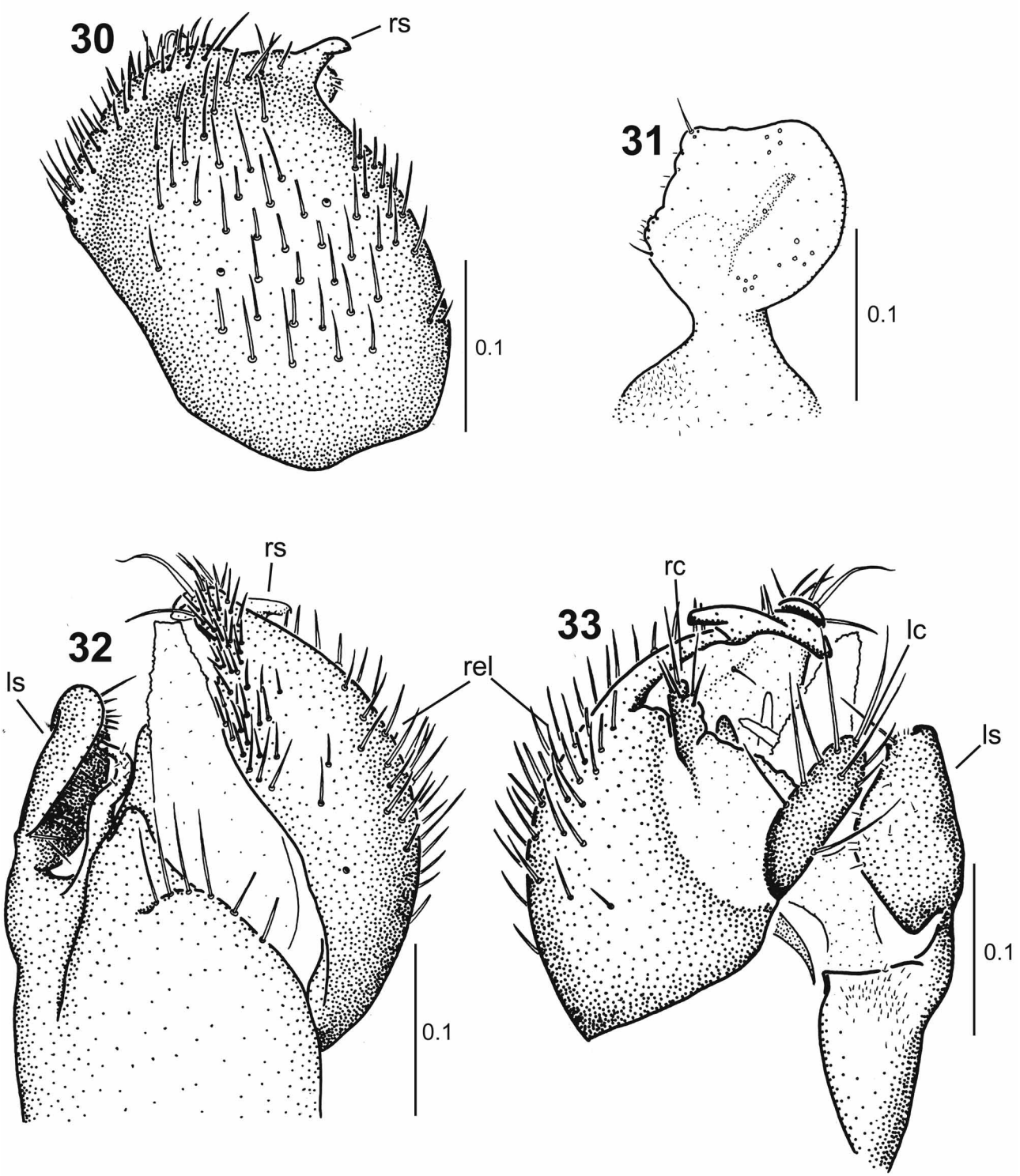


FIGURES 27–29. Male of *Chersodromia leleji* **sp. nov. 27**. Head (holotype). **28**. Antenna (holotype). **29**. Thorax (paratype). Scale in mm.

Preabdomen sparsely covered with pale brown setulae; tergites and sternites brown/dark brown in ground-colour and sparsely greyish pollinose. Tergite 7 with some long setae along posterior margin. Eighth segment hidden, with some setae along posterior margin.

Terminalia (Figs. 30–33). Coloration: right surstylus (inner surface polished brown), right epandrial lamella and cerci dark brown in ground-colour and sparsely greyish pollinose; left surstylus, left epandrial lamella and hypandrium shiny pale brown. Right surstylus reduced to small, pointed projection (Fig. 30), with boundary line between it and right epandrial lamella obscure. Right epandrial lamella with short, black setae (Fig. 30) and whitish microtrichia over surface, with many small setulae in dorsoapical part, which forms weakly differentiated marginal zone (Figs. 30, 32). Left surstylus composed of several lobes; outermost lobe large, flattened and round (Fig. 31). Left cercus somewhat slender, with some setulae; right cercus very small, with some small setulae (Fig. 33).

Female. Unknown.



FIGURES 30–33. Male terminalia of *Chersodromia leleji* **sp. nov.** (holotype). **30**. Right epandrial lamella with right surstylus. **31**. Left surstylus. **32**. Left lateral view of terminalia. **33**. Right lateral view of terminalia. Scale in mm. lc: left cercus; ls: left surstylus; rc: right cercus; rel: right epandrial lamella; rs: right surstylus.

Type material. HOLOTYPE ♂, labelled: Russian Far East, S. Primorye, Gamov Pen., Vityaz' Bay, 24.viii.2010, leg. T. Maeda (IBSS). **Paratypes** (dried specimens): 13 ♂, same data as holotype; 7 ♂, same loc., 23.viii.2010. Other specimens examined (in alc.): 7 ♂, Amur Bay, 3–5 km E. Tavrichanka, 22.viii.2010; 2 ♂, Zarubino, 25.viii.2010; 38 ♂, Pos'et, 25.viii.2010; 4 ♂, Andreevka, Risovaya Bay, 23.viii.2010; 4 ♂, Gamov Pen., Astaf'ev Bay (bare sands), 26.viii.2010; 10 ♂, Gamov Pen., Vityaz' Bay, 23.viii.2010; 44 ♂, Gamov Pen., Telyakovskiy Bay, 24.viii.2010; 19 ♂, Nazimov Cape, 28.viii.2010.

Type depository. Two paratypes are deposited in IBSS; some paratypes are in FMNH, NIAES, USNM, OUMNH and TMC.

Etymology. The specific epithet is dedicated to the hymenopterist, Dr. Arkady S. Lelej, of the Institute of Biology and Soil Science, Far Eastern Branch of Russian Academy of Science, Vladivostok, Russia.

Distribution. Russian Far East: southern part of Primorsk Territory.

Remarks. This species was collected on different seashore types in the southern part of Primorsk Territory. *Chersodromia leleji* closely resembles *C. gamoviensis* and is distinguished from the latter only in the structure of the male terminalia.

Chersodromia mohican sp. nov.

(Figs. 8, 15, 34–40)

Diagnosis. A somewhat large species measuring more than 1.5 mm, with wide gena. Katepisternum largely polished. Vein R_1 meeting costa after midway of wing. Fore tibial gland distinct. Male terminalia heavily sclerotized, with right surstylus composed of 3 distinct lobes, right epandrial lamella on right lateral side with incomplete row of brown setae, and oval left cercus. Vertical setae (2 pairs) and supra-alar setae present; posthumeral setae absent. Hind femur with anteroventral row of setae mainly in apical half.

Description. Male (Fig. 8). Body length 1.80–1.95 mm; head width 0.38–0.42 mm; wing length 2.10–2.20 mm. Head (Fig. 34) black in ground-colour and greyish pollinose; palpus dark brown in ground-colour and greyish pollinose; proboscis brown, slightly shining; antenna dark brown; all setae and setulae on head black. Frons moderate in width; in frontal view face below antennal sockets slightly wider than frons. Ocellar setae (2 pairs) somewhat long, as long as scape, pedicel and postpedicel combined. Vertical setae (2 pairs) slightly longer than ocellar setae. In frontal view gena wide, 1/3 as wide as maximum eye height. Occiput sparsely with setulae. Antenna (Fig. 35): postpedicel round in lateral view, bearing setulae on anterior margin; extension of postpedicel present dorsoapically; stylus long, ca. 2.5 times as long as pedicel and postpedicel combined. Palpus with ca. 10 setulae (apical one longest) and sensory pit visible in wet specimens without preparation on slide.

Thorax (Fig. 36) black in ground-colour and greyish pollinose; katepisternum largely polished; all setae and setulae black. Vestiture on thorax: 1 or 2 setulae on each proepisternum; 1 pair of postpronotal setae; no posthumeral setae; 3–4 pairs of notopleural setae; 1 pair of supra-alar setae; 1 pair of long postalar setae; 2–3 pairs of dorsocentral setae near median line; many dorsocentral setulae in multiple rows; 1 pair of incomplete rows acrostichal setulae; 1 pair of inflected apically scutellar setae; 1 pair of tiny subapical scutellar setulae.

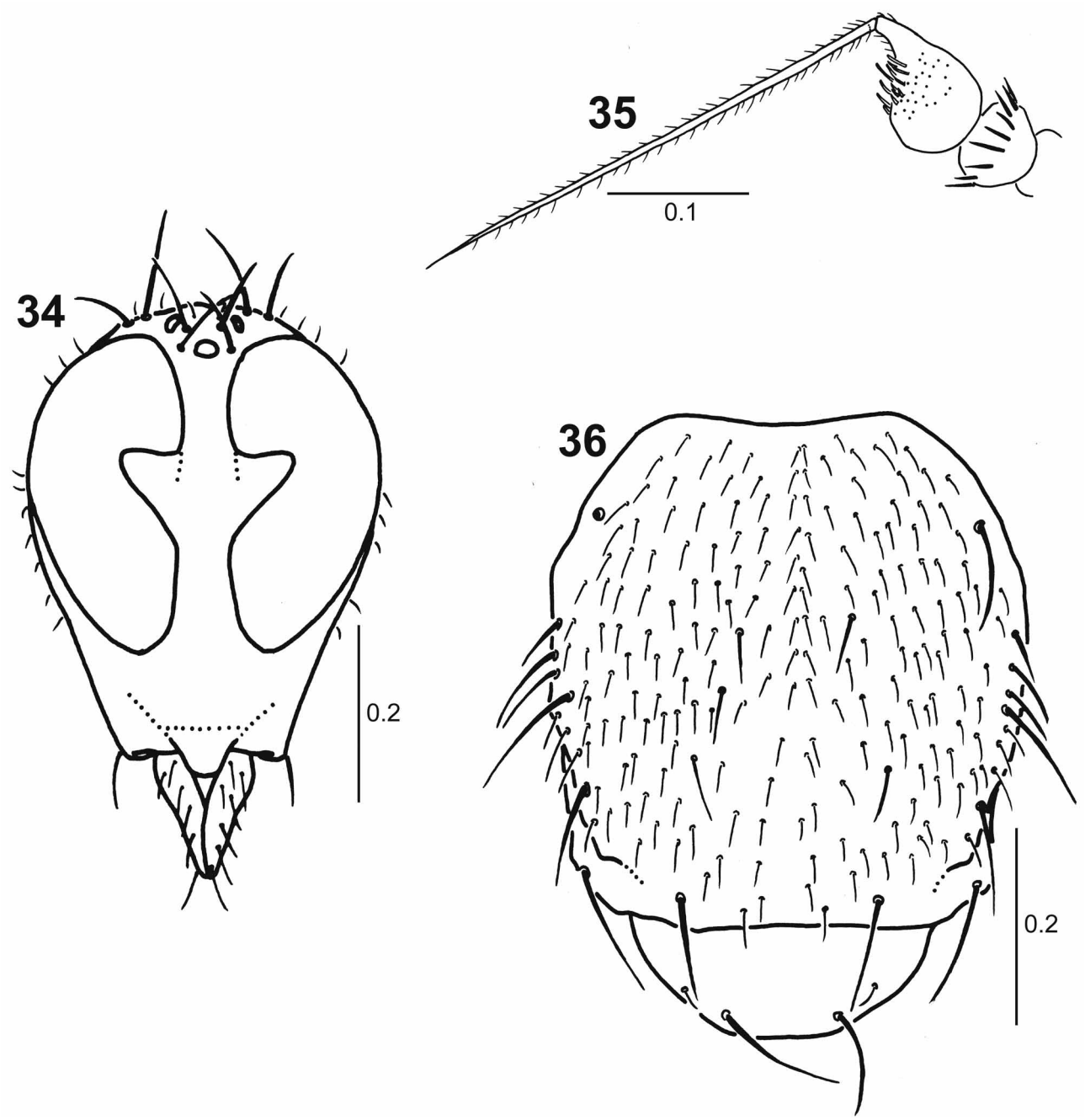
Wing (Fig. 15) normally developed, somewhat narrow, clear, with pale brown veins. Basicosta with 1 or 2 dark brown setae and some black setulae; costa with small, brown setulae along anterior margin, ending at connection with vein M_{1+2}; subcosta absent; R_1 meeting costa after midway of wing; radial sector moderate in length; CuA_1 indistinctly connected to wing margin; anal vein reduced to pale, fold-like line. Calypter greyish entirely and whitish partially. Halter dark brown.

Legs brown, stout; all setae black; setulae black/brown. Fore femur covered with setulae, with anteroventral row of setae, 1 anterior preapical seta, 1 anteroventral preapical seta and 1 posterior preapical seta. Fore tibia covered with setulae (especially dense on anterior surface), with 1 anteroventral preapical seta and 1 posteroventral preapical seta. Fore tibial gland distinct. Mid femur covered with setulae, with 1 anterior preapical seta. Mid tibia covered with setulae, with anteroventral row of many tiny, black spinulae, 1 posterior preapical seta, 1 posteroventral preapical seta and 1 posteroventral seta. Hind femur covered with setulae, with ventral row of 1 or 2 setae near base, anteroventral row of ca. 5 setae mainly in apical half and 1 anterior seta near apex. Hind tibia covered with setulae (strong, short setulae present on ventral surface in apical part), with anterodorsal row of 3 setae, anterior row of 2 setae, 1 anterior preapical seta, anteroventral row of 2 setae and 1 anteroventral preapical seta. Fore, mid and hind tarsomeres densely covered with setulae.

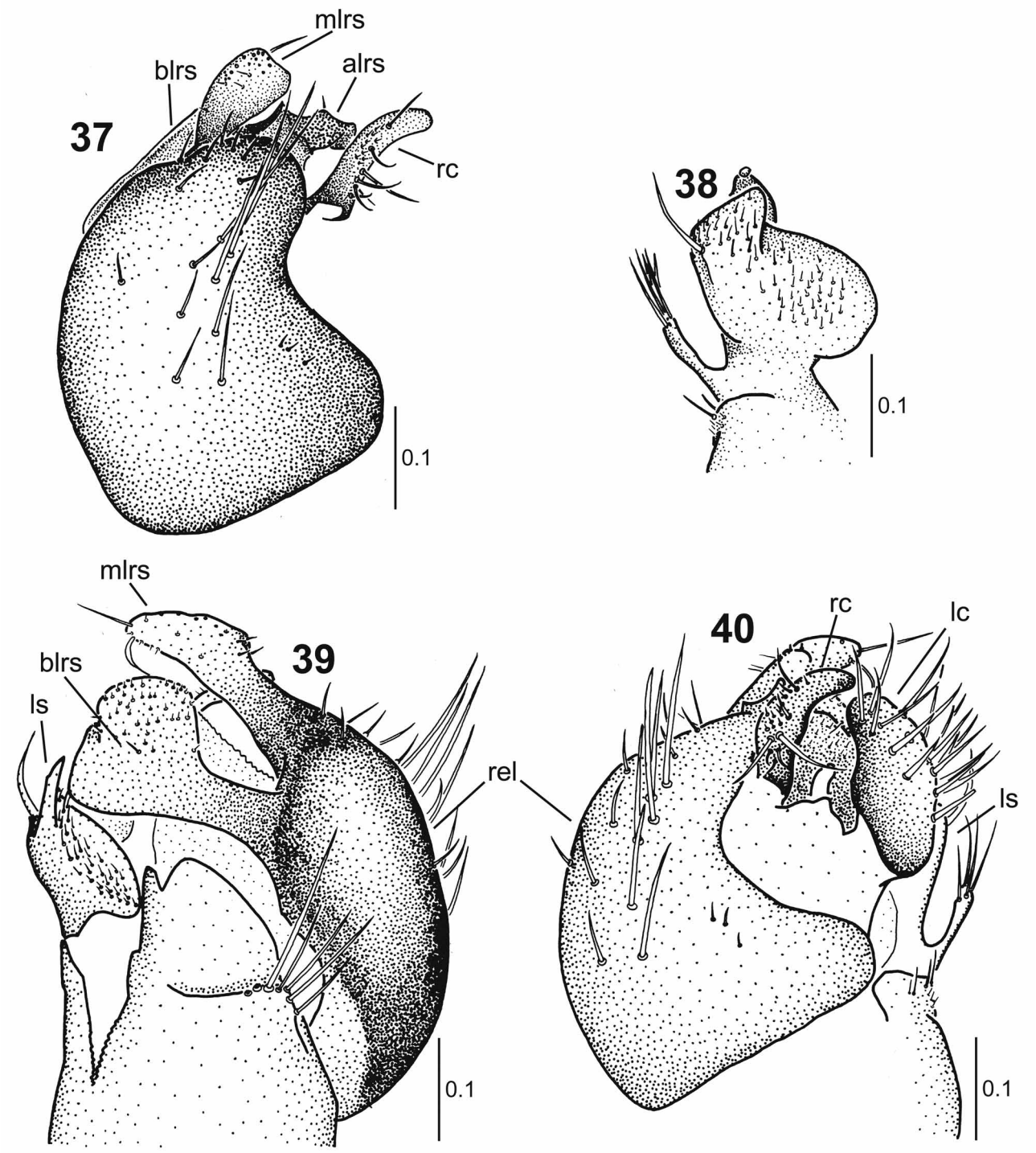
Preabdomen sparsely covered with brown setulae; tergites and sternites brown in ground-colour, sparsely whitish pollinose; membrane pale brown. Tergites 1–7 each with 2 plaques laterally and 1 pair of small shiny pits dorsolaterally. Tergite 7 with some black setae along posterior margin. Eighth segment hidden, with some black setae along posterior margin.

Terminalia (Figs. 37–40). Coloration: right epandrial lamella brown in ground-colour and greyish pollinose; right cercus shiny pale brown; left cercus brown; left surstylus shiny brown; left epandrial lamella and hypandrium shiny brown (apical part of hypandrium light brown). Right surstylus composed of 3 lobes; apical lobe shiny dark brown, small and relatively complicated, boundary line between it and right epandrial lamella relatively obscure (Fig. 37); median lobe shiny pale brown, flattened and somewhat triangular with 2 long setulae at apex, boundary line between apical lobes obscure (Figs. 37, 39); basalmost lobe shiny brown, flattened, and looks like leaf of ginkgo (Fig. 39). Right epandrial lamella with incomplete row of brown setae on right lateral side (Figs. 37, 40). Left surstylus consisting of several lobes; outermost lobe large, composed of 2 main projections, of which bigger one somewhat round (Fig. 38). Right cercus small, sclerotized and elongate; left cercus large, heavily sclerotized and oval, with setae (Fig. 40).

Female. Body length 1.65–1.70 mm; head width 0.43–0.49 mm; wing length 2.23–2.36 mm. Resembling males except in structures of mid leg and terminalia. Mid tibia without anteroventral row of spinulae, but with 1 anteroventral seta on median part. Cercus brown.



FIGURES 34–36. Male of *Chersodromia mohican* **sp. nov. 34**. Head (paratype). **35**. Antenna (holotype). **36**. Thorax (paratype). Scale in mm.



FIGURES 37–40. Male terminalia of *Chersodromia mohican* **sp. nov.** (holotype). **37**. Right epandrial lamella, right surstylus and right cercus. **38**. Left surstylus. **39**. Left lateral view of terminalia. **40**. Right lateral view of terminalia. Scale in mm. alrs: apical lobe of right surstylus; blrs: basalmost lobe of right surstylus; lc: left cercus; ls: left surstylus; mlrs: median lobe of right surstylus; rc: right cercus; rel: right epandrial lamella.

Type material. HOLOTYPE ♂, labelled: Russian Far East, S. Primorye, Nazimov Cape, 28.viii.2010, leg. T. Maeda (USNM). **Paratypes**: 20 ♂, 20 ♀ (dried specimens), same data as holotype. Other specimens examined (in alc.): 1 ♀, Gamov Pen., Astaf'ev Bay (bare sands), 26.viii.2010; 2 ♂, 7 ♀, Gamov Pen., Telyakovskiy Bay, 24.viii.2010; 23 ♂, 72 ♀, Nazimov Cape, 28.viii.2010.

Type depository. Some paratypes (males and females) are deposited in IBSS, NIAES, OUMNH, TMC and USNM.

Etymology. The specific epithet "*mohican*" derives from an English word, "mohican" meaning a kind of human hair style. The incomplete row of brown erect setae on the right epandrial lamella of this species looks like Mohican style pattern.

Distribution. Russian Far East: southern part of Primorsk Territory.

Remarks. This species was not collected on the shores along bays. The adults were found only on sandy shores facing the open sea (Fig. 5), running about on washed up debris consisting mainly of seaweeds.

Chersodromia mohican slightly resembles *C. nubifera*, both belonging to the *hirta*-group established by Chvála (1978). They have a wide gena, distinct fore tibial glands and a prominent basalmost lobe of the right epandrial lamella. In body size, however, *C. mohican* is smaller than *C. nubifera*. The size of the polished area on the katepisternum of *C. mohican* is larger than that of *C. nubifera*. The male terminalia of the former also differs from that of the latter in detail (see key to species).

Chersodromia nubifera (Coquillett)

(Figs. 9, 12, 16, 19, 41–49)

Tachydromia nubifera Coquillett, 1899: 343; Melander, 1902: 342; Aldrich, 1905: 313.
Coloboneura nubifera (Coquillett): Coquillett, 1903: 265; Melander, 1910: 52, 1928: 294, 1945: 81, 82; Curran, 1931: 11 (in key).
Tachista nubifera (Coquillett): Kertész, 1909: 142.
Chersodromia kamtchatkiana Chvála, 1970: 388–390, figs. 6–8; Chvála, 1978: 71–73, figs. 10–12; Shamshev, 2001: 278 (in key). **syn. nov.**
Chersodromia nubifera (Coquillett): Chvála, 1970: 390, fig. 9; 1978: 74; Shamshev, 2001: 278 (in key).

Diagnosis. A large, black species measuring more than 2.5 mm, with wide gena. Stylus long. Polished area on katepisternum small. Vein R_1 meeting costa after midway of wing. Fore tibia swollen, with distinct gland. Male terminalia heavily sclerotized with right surstylus composed of 3 distinct lobes and large, spatulate left cercus. Long, black vertical setae (2 pairs) and supra-alar setae present; posthumeral setae absent. Hind femur with anteroventral row of somewhat erect setae mainly in apical half.

Description. Male (Fig. 9). Body length 2.55–2.85 mm; head width 0.43–0.52; wing length 2.55–2.75 mm. Head (Fig. 41) black in ground-colour and greyish pollinose; palpus brown in ground-colour and greyish pollinose; proboscis brown, slightly shining; antenna dark brown; all setae and setulae on head black. Frons relatively narrow; in frontal view face below antennal sockets wider than frons. Ocellar setae (2 pairs) moderate in length, as long as scape, pedicel and postpedicel combined. Vertical setae (2 pairs) longer than ocellar setae. In frontal view gena very wide, 1/2.5 as wide as maximum eye height. Occiput with setulae (some on its lateral side long). Antenna (Fig. 42): postpedicel round in lateral view, bearing brown setulae on anterior margin; extension of postpedicel present dorsoapically; stylus long, ca. 2.5 times as long as pedicel and postpedicel combined. Palpus sparsely covered with ca. 15 setulae (apical one longest) and sensory pit visible without preparation in wet specimens.

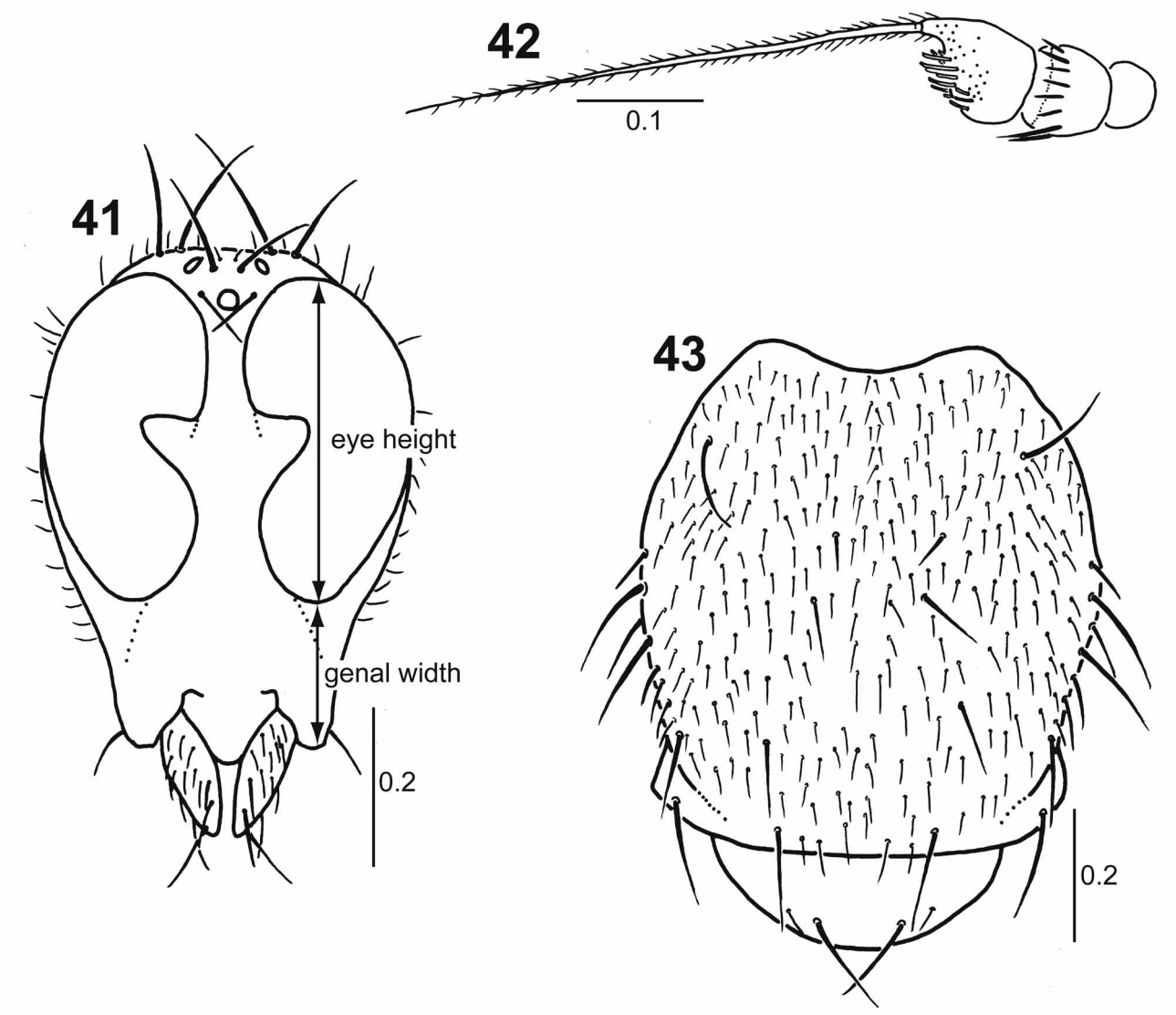
Thorax (Fig. 43) black in ground-colour, greyish pollinose; all setae and setulae black. Katepisternum with small polished area. Vestiture on thorax: 2–3 setulae on each proepisternum; 1 pair of long, inflected postpronotal setae; no posthumeral setae; 4–5 pairs of notopleural setae; 1 pair of supra-alar setae; 1 pair of long postalar setae; 2–3 pairs of dorsocentral setae in rows near median line; many dorsocentral setulae in multiple rows; 1 pair of incomplete rows of acrostichal setulae; 1 pair of inflected apically scutellar setae; 1 pair of tiny subapical scutellar setulae.

Wing (Fig. 16) normally developed, somewhat narrow and entirely clear with grey tinge on anterior part, with pale brown veins. Basicosta with 1 or 2 dark brown setae and some black setulae; costa with small, brown setulae along anterior margin, ending at connection with vein M_{1+2}; subcosta absent; R_1 meeting costa after midway of wing; radial sector moderate in length; CuA_1 connected to wing margin; anal vein reduced to pale, fold-like line. Calypter whitish with brown tinge. Halter brown, partially whitish.

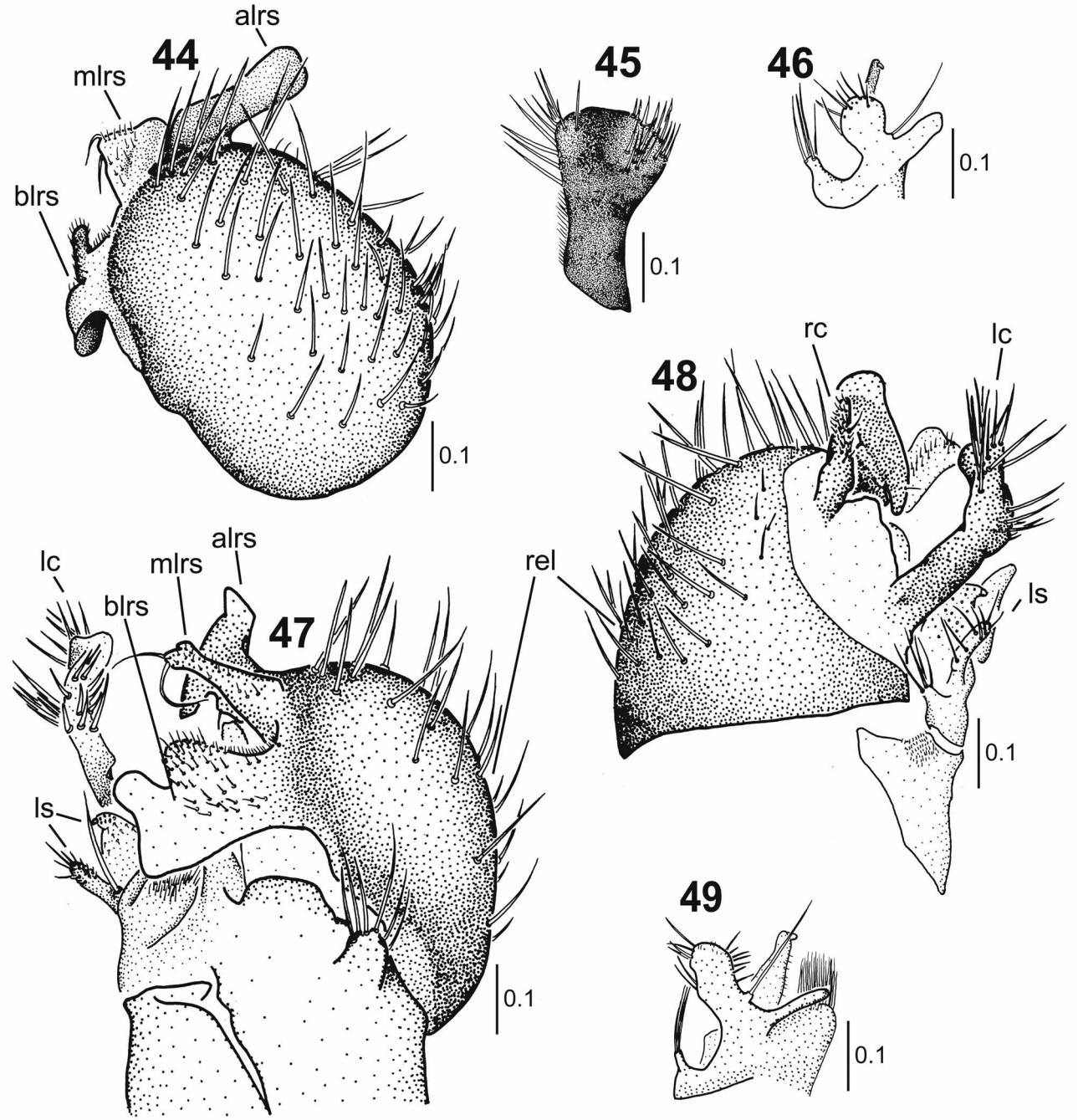
Legs stout, dark brown; all setae and setulae on legs black. Fore femur covered with short setulae except on ventral surface, with 1 anterior seta, anteroventral row of 12–17 long setulae, strong preapical setulae (1 posterodorsal preapical, 1 posterior preapical, 1 or 2 posteroventral), posteroventral row of long setulae and long, dense whitish microtrichia on ventral surface. Fore tibia swollen in dorsal view, covered with setulae (especially dense on

anterior surface), with 1 anteroventral preapical seta and 1 posteroventral preapical seta, posteroventral row of curved setulae, and whitish microtrichia on ventral surface. Fore tibial gland distinct (Fig. 19). Mid femur covered with setulae, with anteroventral row of ca. 15 tiny, black spinulae, 1 anterior seta, posteroventral row of strong setulae mainly in apical half. Mid tibia covered with setulae, with anteroventral row of many short, black spinulae (distances between adjoining spinulae very close to one another, with row appearing as comb), 3–4 anterior setae near base, 1 anterior preapical seta, 1 anterodorsal seta, 1 anteroventral preapical seta, 1 posteroventral preapical seta and 1 posterior seta. Hind femur densely covered with setulae, with 1 ventral seta near base, anteroventral row of 3–6 somewhat erect setae mainly in apical half and 1 anterior seta near apex. Hind tibia covered with setulae (strong, short setulae present on ventral surface mainly in apical half), with anteroventral row of 5 setae, 1 anterior preapical seta, anterior row of 5 setae, 2 anterodorsal preapical setae, anterodorsal row of 4 setae, dorsal row of 4 setae and 1 ventral preapical seta. Fore, mid and hind tarsomeres densely covered with setulae, fore and mid tarsomeres greyish pollinose.

Preabdomen covered with dark brown setulae; tergites and sternites dark brown in ground-colour, sparsely whitish pollinose; membrane pale brown in ground-colour, sparsely whitish pollinose. Tergites 1–7 each with 2 plaques laterally and 1 pair of small shiny pits dorsolaterally. Tergite 7 with many setae along posterior margin. Eighth segment hidden, with many setae along posterior margin.



FIGURES 41–43. Male characters of *Chersodromia nubifera* Coquillett based on the present material. **41**. Head. **42**. Antenna. **43**. Thorax. Scale in mm.



FIGURES 44–49. Male terminalia of *Chersodromia nubifera* Coquillett. **44**. Right epandrial lamella with right surstylus. **45**. Left cercus. **46**. Left surstylus. **47**. Left lateral view of terminalia. **48**. Right lateral view of terminalia. (**44–48**: based on the present material.) **49**. Left surstylus of male terminalia of syntype (Commander Islands). Scale in mm. alrs: apical lobe of right surstylus; blrs: basalmost lobe of right surstylus; lc: left cercus; ls: left surstylus; mlrs: median lobe of right surstylus; rc: right cercus; rel: right epandrial lamella.

Terminalia (Figs. 44–48). Coloration: right epandrial lamella dark brown in ground-colour and greyish pollinose; right cercus shiny light brown; left cercus shiny black; left surstylus shiny black/brown; left epandrial lamella and hypandrium dark brown. Right surstylus composed of 3 lobes with distinct boundary line between right epandrial lamella in both dry and wet specimens (Figs. 44, 47); apical lobe shiny black, elongate with round tip (Fig. 44); median lobe shiny pale brown, flattened with 2 long setulae at apex (Figs. 44, 47); basalmost lobe shiny brown, flattened (Fig. 47). Right epandrial lamella with dark brown setae. Left surstylus consisting of several lobes; outermost lobe small, trifurcate, tip of median projection rounded (Fig. 46). Right cercus small, sclerotized (Fig. 48); left cercus conspicuously large, heavily sclerotized and spatulate (Fig. 45), with apical setae.

Female. Body length 2.43–2.50 mm; head width 0.48–0.50 mm; wing length 2.60–2.66 mm. Resembling males except in structures of fore and mid legs and terminalia. Fore tibia more slender than in males, without posteroventral row of curved setulae. Mid femur without anteroventral row of spinulae (but alternative row of long setulae present). Mid tibia without anteroventral row of spinulae. Cercus brown.

Material examined. The above description is not based on the type material (Commander Is.) but specimens collected in the southern part of Primorsk Territory. Specimens examined here are deposited in IBSS, USNM, OUMNH and TMC.

Dried specimens: 20 ♂, 20 ♀, S. Primorye, Gamov Pen., Astaf'ev Bay (bare sands), 26.viii.2010. Alcohol specimens: 6 ♂, 7 ♀, S. Primorye, Gamov Pen., Astaf'ev Bay (bare sands), 26.viii.2010; 3 ♂, 1 ♀, same loc. (scrub zone), 26.viii.2010; 1 ♂, 1 ♀, Gamov Pen., Vityaz' Bay, 23.viii.2010; 2 ♀, same loc., 24.viii.2010; 24 ♂, 44 ♀, Nazimov Cape, 28.viii.2010.

Type material. 1 ♂, 2 ♀ syntypes of *C. nubifera* labelled: Bering island, L. Stejinger coll., vi-viii. 1897; USNM-2054080. The male is here designated as the lectotype and the two females as the paralectotypes.

Paratypes of *C. kamtchatkiana* (OUMNH-2007-060): 1 ♂ and 1 individual (abdomen missing) labelled: Bolscherjetsk, Kamtschatka, Y. Wuorentaus coll., 19.viii.1917.

Distribution. Russian Far East: Primorsk Territory (new record), Kamchatka Peninsula and Commander Islands.

Remarks. In the present survey, this species was not collected on the shores along bays. The adults were quite abundant on sandy shores facing the open sea (Figs. 3, 5), running about on washed up debris, comprised mainly of seaweeds.

Chersodromia kamtchatkiana is herein considered a junior synonym of *C. nubifera*. Coquillett (1899) described *C. nubifera*, based on three specimens (syntypes), one male and two females. Later *C. nubifera* was redescribed by Chvála (1970), and provided an illustration of the male syntype (Chvála 1970, fig. 9) drawn by a curator working in the museum it was deposited in. When the same male syntype was observed (Fig. 12), I found an error in the illustration of the terminalia. The structure of the left surstylus in Chvála's illustration differs from that of the syntype specimen, probably because the artist misunderstood the configuration of some parts in particular the outermost lobe and inner lobes. Since the difference is slight but important for identification, the structure is redrawn (Fig. 49). The terminalia are actually similar to those of *C. kamtchatkiana* given in papers by Chvála (1970, 1978) except in the structure of right epandrial lamella. Finally after examining a paratype of *C. kamtchatkiana*, it is clearly conspecific with *C. nubifera*, on the basis of the structure of the right surstylus. In Chvála (1970), the drawing is from an angle where the basalmost lobe of the right epandrial lamella cannot be observed.

Although Chvála (1970) mentioned differences in wing venation and size of the polished area on the katepisternum between *C. kamtchatkiana* and *C. nubifera*, I consider these differences are due to variation within *C. nubifera*.

An undescribed species from Hokkaido, Japan (Saigusa 2008) is probably *C. nubifera* because the diagnostic characters of the former are very similar to those of *C. nubifera*.

Chersodromia stenopsis sp. nov.

(Figs. 10, 17, 50–56)

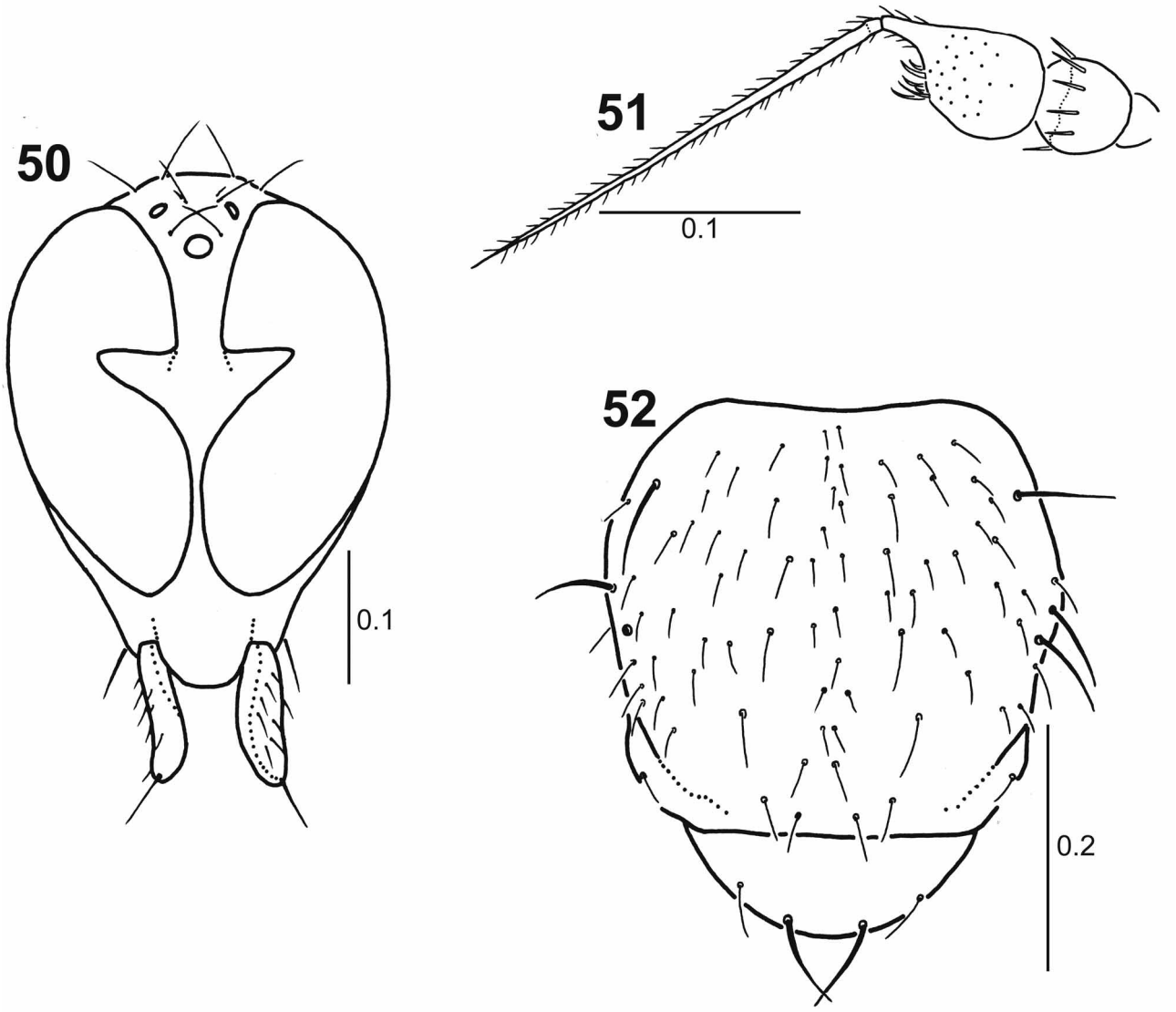
Diagnosis. A small, greyish species measuring less than 1.5 mm. Face extremely narrow. Katepisternum dull. Wings normally developed. Male terminalia: right surstylus being pointed lobe; left surstylus with bifurcate outermost lobe; left cercus small. Setae on head and thorax dark brown, small (postalar setae conspicuously small); setulae on head and thorax whitish, small. Vertical setae (2 pairs) present; proepisternal setae/setulae, posthumeral setae and supra-alar setae absent.

Description. Male (Fig. 10). Body length 1.19–1.34 mm; head width 0.32–0.35 mm; wing length 1.45–1.60 mm. Head (Fig. 50) grey in ground-colour and whitish pollinose; palpus whitish pollinose; proboscis pale brown, slightly shining; antenna brown; all setae on head dark brown; all setulae on head whitish with brown tinge. Frons moderate in width; in frontal view face extremely narrow, narrower than median ocellus. Ocellar setae (2 pairs) and vertical setae (2 pairs) short, as long as scape and pedicel combined. In frontal view gena narrow, 1/7 as wide as maximum eye height. Occiput with setulae. Antenna (Fig. 51): postpedicel round in lateral view, bearing setulae

along anterior margin; extension of postpedicel present dorsoapically; stylus moderate in length, ca. 2 times as long as pedicel and postpedicel combined. Palpus with some setulae and sensory pit, but it hardly visible without preparation on slide.

Thorax (Fig. 52) grey in ground-colour and whitish pollinose; no polished area on katepisternum; all setae brown; all setulae whitish with brown tinge. Vestiture on thorax: proepisternal seta/setula absent; 1 pair of long postpronotal setae; no posthumeral setae; 2 pairs of notopleural setae; no supra-alar setae (1 or 2 pairs of supra-alar setulae present); 1 pair of small postalar setae; some dorsocentral setulae in multiple rows; 1 pair of incomplete rows of some acrostichal setulae; 1 pair of long apically scutellar setae; 1 pair of tiny subapical scutellar setulae.

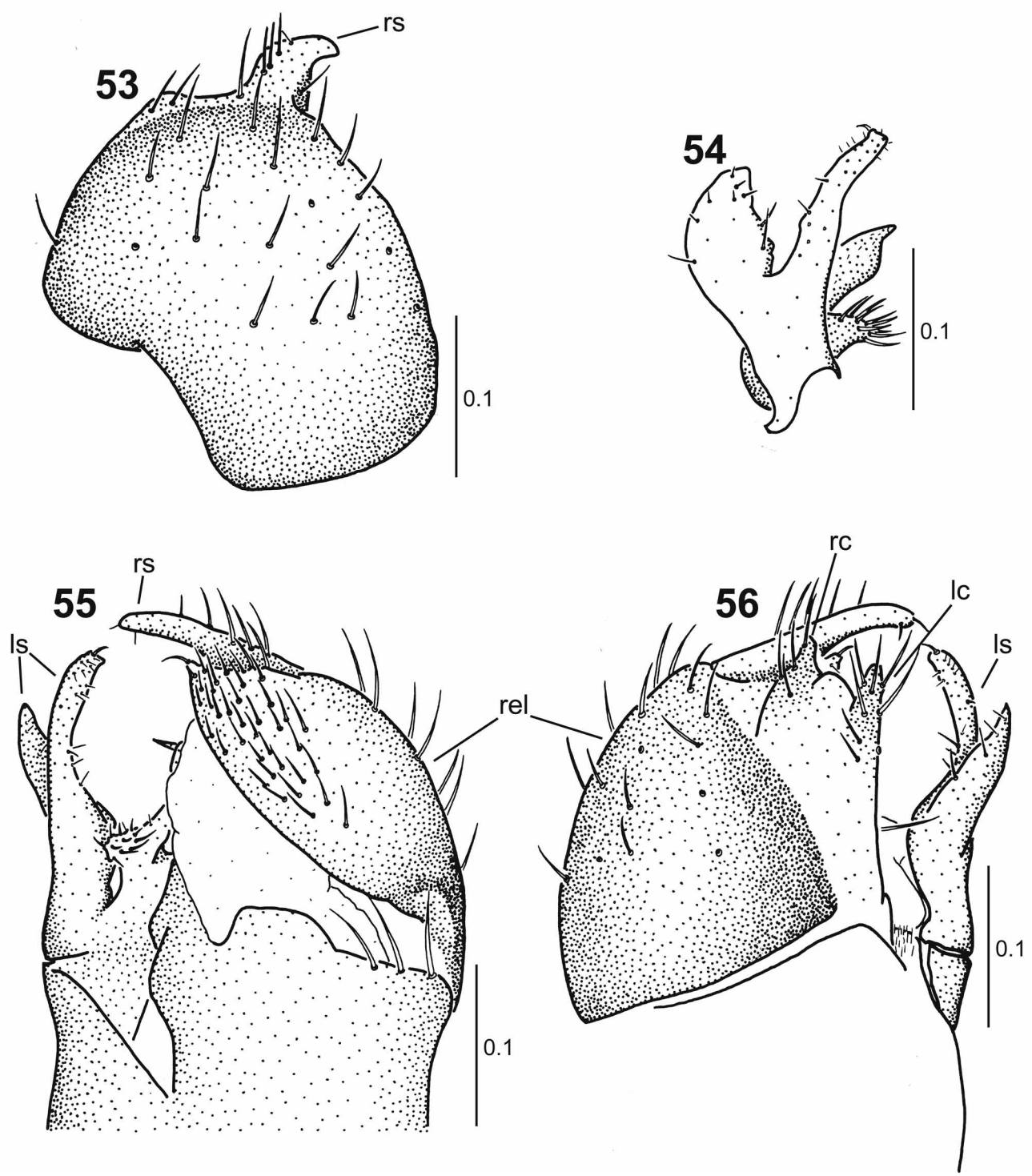
Wing (Fig. 17) normally developed, clear with grey tinge; veins pale brown. Basicosta with 1 dark brown seta; costa with pale brown setulae along anterior margin, ending at connection with vein M_{1+2}; subcosta absent; R_1 meeting costa before midway of wing; radial sector moderate in length; CuA_1 indistinctly connected to wing margin; anal vein reduced to pale, fold-like line. Calypter minute, whitish with brown tinge. Halter pale brown, large.



FIGURES 50–52. Male of *Chersodromia stenopsis* **sp. nov.** (holotype). **50**. Head. **51**. Antenna. **52**. Thorax. Scale in mm.

Legs pale brown, somewhat slender. Setae on legs brown/pale brown; all setulae on legs whitish with brown tinge. Fore femur sparsely covered with setulae (setulae of anteroventral and posteroventral rows long), with 1 short anterior preapical seta and 1 posterior preapical seta. Fore tibia covered with setulae, with 1 anteroventral preapical seta and 1 posteroventral preapical seta. Fore tibial gland indistinct. Mid femur covered with setulae, with 1 anterior preapical seta, 1 anteroventral preapical seta, 1 posterior prearical seta and 1 posteroventral preapical seta. Mid tibia slightly inflexed, covered with setulae, with anteroventral row of 13–16 short, brown spinulae (api-

cal one longest), 1 anterior preapical seta, 1 posterior preapical seta, 1 posteroventral preapical seta and 2 anterodorsal setae. Hind femur covered with setulae (setulae of posteroventral row relatively long), with 1 anteroventral preapical seta. Hind tibia covered with setulae, with 2 dorsal setae, 1 anterodorsal preapical seta, 1 anterodorsal seta, 1 anterior preapical seta, 2 anterior setae and 2 anteroventral setae. Fore, mid and hind tarsomeres covered with setulae.



FIGURES 53–56. Male terminalia of *Chersodromia stenopsis* **sp. nov.** (holotype). **53**. Right epandrial lamella with right surstylus. **54**. Left surstylus. **55**. Left lateral view of terminalia. **56**. Right lateral view of terminalia. Scale in mm. lc: left cercus; ls: left surstylus; rc: right cercus; rel: right epandrial lamella; rs: right surstylus.

Preabdomen sparsely covered with whitish setulae; tergites and sternites brown in ground-colour and sparsely whitish pollinose; membrane pale brown in ground-colour and sparsely whitish pollinose. Tergites 1–7 each with 1 or 2 brown plaques laterally and 1 pair of small pits dorsolaterally. Eighth segment hidden.

Terminalia (Figs. 53–56). Coloration: right surstylus generally brown, partially shiny black; right epandrial lamella brown in ground-colour and sparsely whitish pollinose; cerci brown; left surstylus, left epandrial lamella and hypandrium shiny dark brown. Right surstylus being pointed lobe (Figs. 53, 55), boundary line between it and right epandrial lamella obscure. Right epandrial lamella with brown setulae (Fig. 53), with small setulae in dorsoapical part, which somewhat flattened (Fig. 55). Left surstylus composed of several lobes; outermost lobe large, bifurcate (Fig. 54). Right and left cerci weakly sclerotized, small (lengths of right and left cerci almost same), apically with some setulae (Fig. 56).

Female. Body length 1.37–1.39 mm; head width 0.34–0.35 mm; wing length 1.54–1.65 mm. Closely resembling males except in structure of mid tibia and terminalia. Mid tibia not inflexed, without anteroventral row of spinulae. Cercus brown.

Type material. HOLOTYPE ♂, labelled: Russian Far East, S. Primorye, Gamov Pen., Vityaz' Bay, 24.viii.2010, leg. T. Maeda (IBSS). **Paratypes**: 10 ♂, 13 ♀ (dried specimens), same data as holotype; 10 ♂, 9 ♀, same loc., 23.viii.2010. Other specimens examined (in alc.): 35 ♂, 60 ♀, Amur Bay, 3–5 km E. Tavrichanka, 22.viii.2010; 2 ♀, Zarubino, 25.viii.2010; 4 ♂, 4 ♀, Gamov Pen., Astaf'ev Bay (scrub zone), 26.viii.2010; 30 ♂, 34 ♀, Gamov Pen., Telyakovskiy Bay, 24.viii.2010; 5 ♂, 2 ♀, Pos'et, 25.viii.2010; 17 ♂, 20 ♀, Nazimov Cape, 28.viii.2010.

Type depository. Some paratypes are in FMNH, IBSS, NIAES, USNM, OUMNH and TMC.

Etymology. The specific epithet "*stenopsis*" is Latin meaning "narrow face".

Distribution. Russian Far East: southern part of Primorsk Territory.

Remarks. This species was found on different kinds of seashores, but appears generally to prefer habitats in the upper littoral zone on shores with abundant washed up debris, comprising mainly seaweeds. However, on the shore of Astaf'ev Bay (Fig. 3) it was very rare and only found in the scrub zone probably because *C. nubifera* occupied washed up debris.

It is very easy to distinguish *C. stenopsis* from the other species in the Russian Far East by its very narrow face.

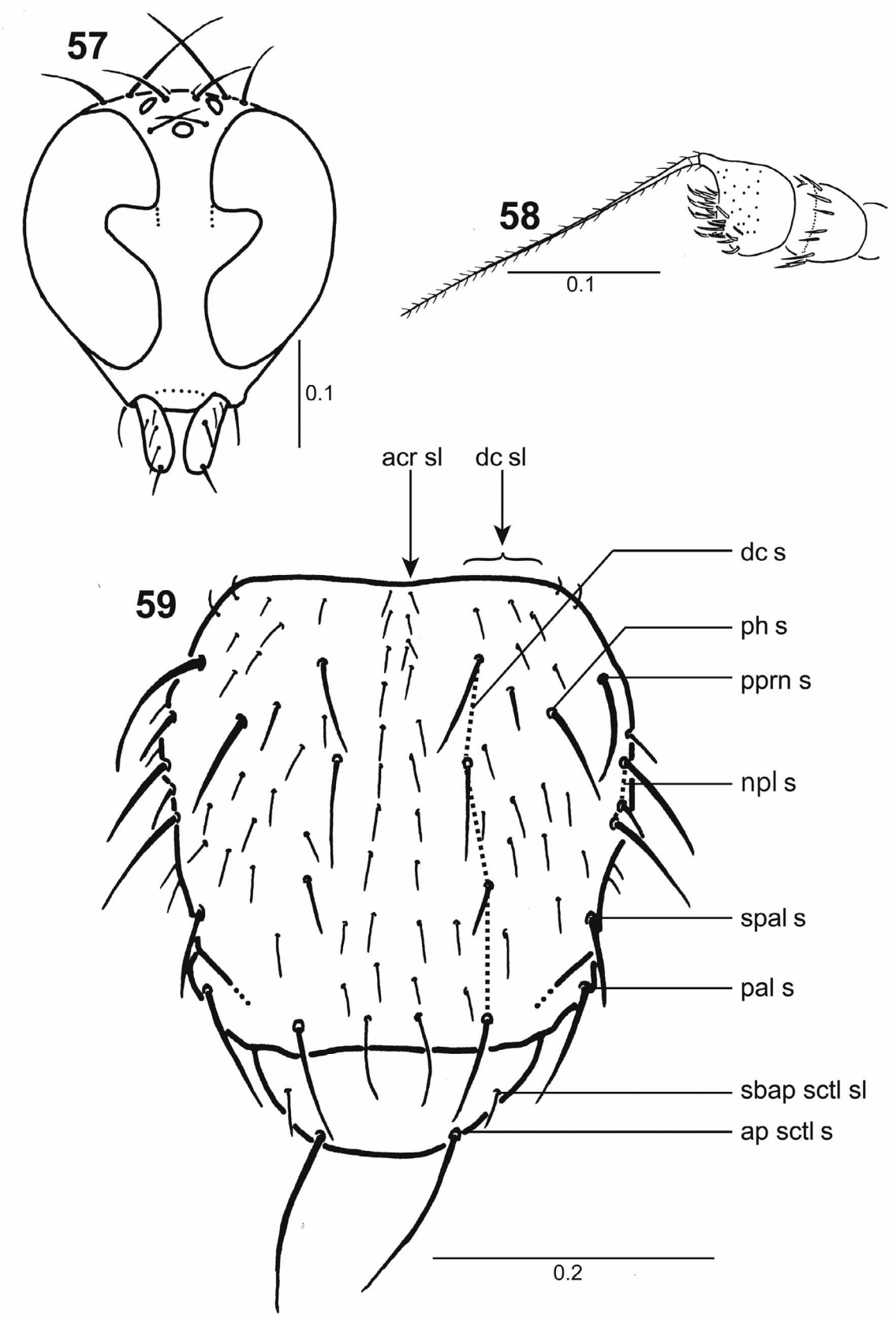
Chersodromia yamanei sp. nov.

(Figs. 11, 18, 57–63)

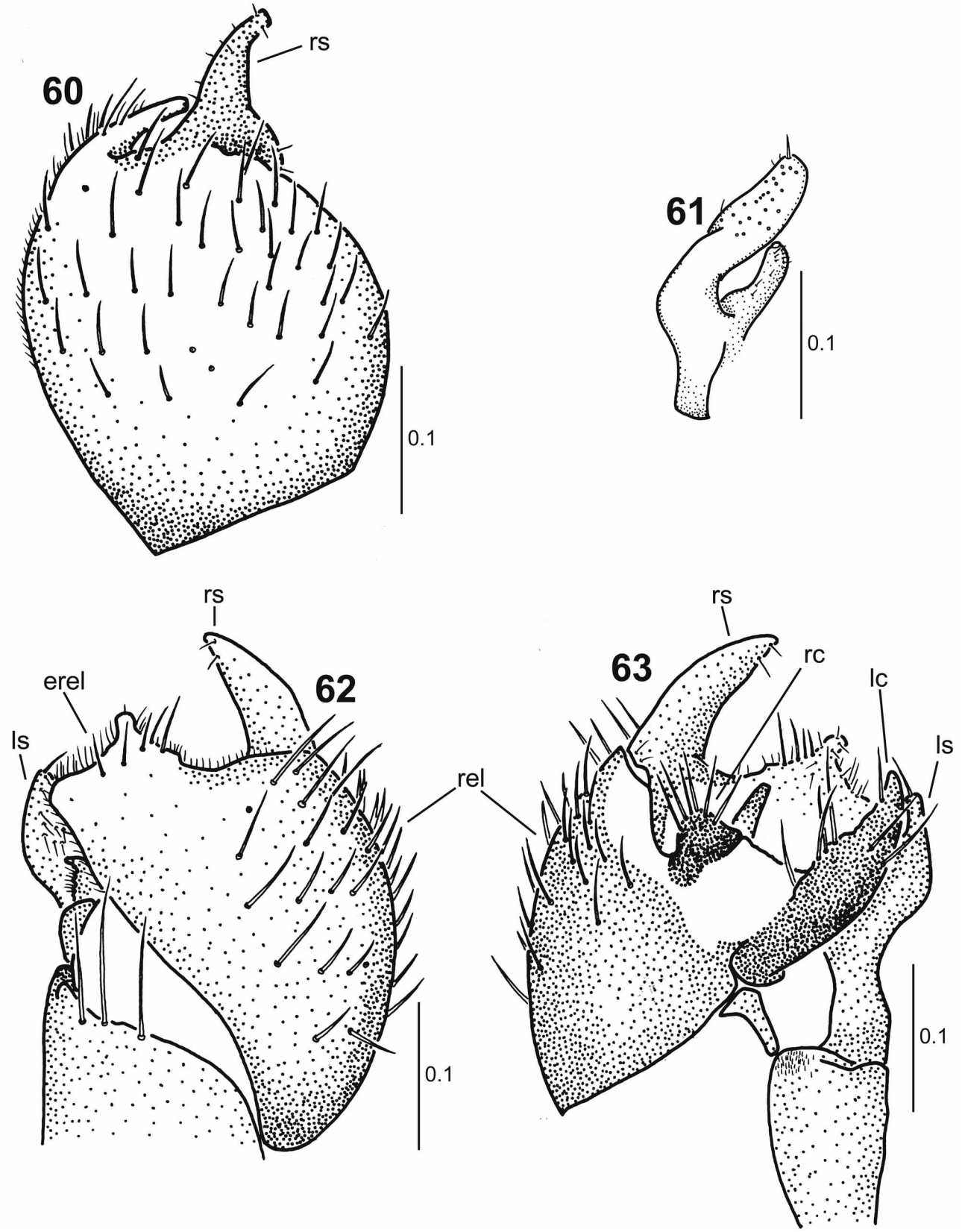
Diagnosis. A small species measuring less than 1.5 mm, with narrow gena. Stylus relatively short. Katepisternum largely polished. Wings normally developed. Male terminalia: left cercus sclerotized, large and elongate; right cercus sclerotized, small; right surstylus heavily sclerotized, prominent, with tip somewhat pointed; right epandrial lamella with large expansion dorsoapically; outermost lobe of left surstylus simple, elongate. Head and thorax with black/dark brown setae. Vertical setae (2 pairs) and posthumeral setae present.

Description. Male (Fig. 11). Body length 1.15–1.19 mm; head width 0.25–0.30 mm; wing length 1.32–1.44 mm. Head (Fig. 57) black in ground-colour and greyish pollinose; palpus whitish pollinose; proboscis brown; antenna brown/dark brown; setae and setulae on head black/dark brown. Frons relatively wide; in frontal view face below antennal sockets slightly narrower than frons. Ocellar setae (2 pairs) moderate in length, as long as scape, pedicel and postpedicel combined. Vertical setae (2 pairs) as long as ocellar setae. In frontal view gena narrow, 1/7 as wide as maximum eye height. Occiput with setulae. Antenna (Fig. 58): postpedicel round and slightly higher than pedicel in lateral view, bearing setulae on anterior margin; extension of postpedicel present dorsoapically; stylus short, 2 times as long as pedicel and postpedicel combined. Palpus with 6–8 setulae; sensory pit obscure even with preparation on slide.

Thorax (Fig. 59) black in ground-colour and greyish pollinose; katepisternum largely polished; all setae and setulae black. Vestiture on thorax: 1 setula on each proepisternum; 1 pair of long, inflected postpronotal setae; 1 pair of distinct posthumeral setae; 2–3 pairs of notopleural setae; 1 pair of supra-alar setae; 1 pair of long, inflected postalar setae; 4 pair of dorsocentral setae near median line (one long pair near scutellum); some dorsocentral setulae in multiple rows; 1 pair of incomplete rows of acrostichal setulae; 1 pair of long, inflected apically scutellar setae; 1 pair of subapical scutellar setulae.



FIGURES 57–59. Male of *Chersodromia yamanei* **sp. nov. 57**. Head (paratype). **58**. Antenna (holotype). **59**. Thorax (paratype). Scale in mm. acr sl: acrostichal setula; ap sctl s: apical scutellar seta; dc s: dorsocentral seta; dc sl: dorsocentral setula; npl s: notopleural seta; pal s: postalar seta; ph s: posthumeral seta; pprn s: postpronotal seta; sbap sctl sl: subapical scutellar setula; spal s: supra-alar seta.



FIGURES 60–63. Male terminalia of *Chersodromia yamanei* **sp. nov.** (holotype). **60**. Right epandrial lamella with right surstylus. **61**. Left surstylus. **62**. Left lateral view of terminalia. **63**. Right lateral view of terminalia. Scale in mm. erel: expansion of right epandrial lamella; lc: left cercus; ls: left surstylus; rc: right cercus; rel: right epandrial lamella; rs: right surstylus.

Wing (Fig. 18) normally developed, clear, with pale brown veins. Basicosta with 1 long, black seta; costa with many dark brown setulae along anterior margin, ending at connection with vein M_{1+2}; subcosta absent; R_1 meeting costa at midway of wing; radial sector moderate in length; CuA_1 indistinctly connected to wing margin; anal vein reduced to pale, fold-like line. Calypter minute, whitish with brown tinge. Halter pale brown, large.

Legs yellowish brown, stout. All setae on legs black; setulae on legs brown/pale brown. Fore femur sparsely covered with setulae (setulae of anteroventral and posteroventral rows long; some preapical setulae strong; 2 subbasal setulae long). Fore tibia covered with setulae (especially dense on anterior surface), with 1 anteroventral preapical seta and 1 posteroventral preapical seta. Fore tibial gland indistinct. Mid femur covered with setulae, with anteroventral row of 6–9 setae, posteroventral row of 6–10 setae, 1 anterior preapical seta, 1 anteroventral preapical seta, 1 posterior prearical seta and 1 posteroventral preapical seta. Mid tibia slightly inflexed, stout, covered with setulae, with anteroventral row of 11–14 strong, black spinulae (gradual shift of length of spinulae from basal to preapical present), 1 anterior preapical seta and 1 posteroventral preapical seta. Hind femur covered with setulae, with 1 anterior preapical seta and 1 anteroventral preapical seta. Hind tibia covered with setulae, with dorsal row of 3 setae, 1 anterodorsal preapical seta, 1 anterodorsal seta, 1 anterior preapical seta, anterior row of 2 setae, anteroventral row of 2 setae and 1 ventral preapical seta. Fore, mid and hind tarsomeres densely covered with setulae.

Preabdomen sparsely covered with whitish setulae; tergites and sternites dark brown in ground-colour and sparsely greyish pollinose; membrane pale brown in ground-colour, sparsely whitish pollinose. Tergites 1–7 each with 1 or 2 indistinct, black plaques laterally and 1 pair of small pits dorsolaterally. Tergite 7 with some long setae along posterior margin. Eighth segment hidden, with some setae along posterior margin.

Terminalia (Figs. 60–63). Coloration: right surstylus shiny black; right epandrial lamella and cerci dark brown in ground-colour and entirely whitish pollinose; left surstylus, left epandrial lamella and hypandrium shiny pale brown. Right surstylus being pointed lobe (Figs. 60, 62, 63), boundary line between it and right epandrial lamella somewhat obscure. Right epandrial lamella with black setae (Fig. 60), with conspicuously developed dorsoapical expansion with apical and dorsal processes (Fig. 62). Left surstylus composed of several lobes; outermost lobe simple, slender, bearing 1 short setula at apex (Fig. 61). Left cercus slender, bearing some setae; right cercus small, apically with some setae (Fig. 63).

Female. Body length 1.27–1.39 mm; head width 0.38–0.38 mm; wing length 1.32–1.59 mm. Closely resembling males except in structure of mid tibia and terminalia. Mid tibia not inflexed, without anteroventral row of spinulae, with 2 anterodorsal setae, 1 anterior preapical seta, 1 ventral preapical seta and 1 posterior preapical seta, sparsely with setulae. Cercus dark brown in ground-colour and sparsely greyish pollinose.

Type material. HOLOTYPE ♂, labelled: Russian Far East, S. Primorye, Gamov Pen., Astaf'ev Bay, 26.viii.2010, leg. T. Maeda (IBSS). **Paratypes**: 17 ♂, 14 ♀, same data as holotype. Other specimens examined (in alc.): 1 ♀, Amur Bay, 3–5 km E. Tavrichanka, 22.viii.2010; 1 ♂, Andreevka, Risovaya Bay, 23.viii.2010.

Type depository. Two paratypes (male and female) are deposited in IBSS; some paratypes are in FMNH, NIAES and TMC.

Etymology. The specific epithet is dedicated to the ant taxonomist, Prof. Seiki Yamane, of Kagoshima University, Japan.

Distribution. Russian Far East: southern part of Primorsk Territory.

Remarks. This species was collected only on sandy shores (Fig. 3) and was relatively rare in every locality surveyed.

Discussion

Several species reported in this paper have palpal sensory pits. These pits were first reported in Oriental species of *Chersodromia* (*C. nigripennis* Shamshev & Grootaert and *C. singaporensis* Shamshev & Grootaert) (Shamshev and Grootaert 2005). Their suggestion that the character may have been overlooked by authors is supported by my observation on the species from the Russian Far East, and the character is probably widespread in the genus.

Two species, *C. nubifera* and *C. mohican* have distinct fore tibial glands (Fig. 19). This character may be important for dividing this genus into species groups, because these two species belong to the *hirta* species group established by Chvála (1978). Other species have only indistinct fore tibial glands, and appear to be assigned to

other species groups. In a more comprehensive paper I will discuss species groups in this genus, covering all Palaearctic and Oriental species.

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