

**ASIACERCOPIS, A NEW GENUS OF ORIENTAL CERCOPIDAE
(HOMOPTERA)**

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ABSTRACT. The new Oriental spittlebug genus *Asiacercopis* is described and placed in the tribe Rhinaulacini of the subfamily Cercopinae to accommodate three species: *A. hainanensis*, sp. nov. (the type-species); *Aufidus niger* Lallemand, 1927; and *Aufidus nilgiriensis* Lallemand, 1927. The latter two species are new combinations under *Asiacercopis*. Keys for the identification of the 6 known genera of the Oriental Rhinaulacini and species of *Asiacercopis* are also included.

Introduction

An ongoing study of Oriental Cercopidae has revealed one new and two known species in an undescribed genus of the tribe Rhinaulacini of the subfamily Cercopinae. In the present paper a new genus *Asiacercopis* is described and followed by descriptions of the included species, *A. hainanensis*, sp. nov. (the type-species); *A. niger* (Lallemand), comb. nov.; and *A. nilgiriensis* (Lallemand), comb. nov. The latter two species are transferred from *Aufidus*. *Asiacercopis* is the sixth genus in the tribe in the Oriental Region. A key to the genera is given.

The abbreviations used to indicate the institutions where the specimens are deposited are: BMNH - The Natural History Museum, London, U.K.; BPBM - Bernice P. Bishop Museum, Honolulu, Hawaii, U.S.A.; and IZAS - Institute of Zoology, Academia Sinica, Beijing, China.

The terminology followed is that of Lallemand (1949), Evans (1966) (wing venation) and Metcalf & Horton (1934) and Evans (1966) for genitalic parts.

Key to the Genera of Oriental Rhinaulacini

1. Fore tibiae sulcated. **Aufidus**
- Fore tibiae not sulcated. 2
2. Hind wings with 1 closed apical cell; M united with unbranched Cu near mid-length. **Eoscarta**
- Hind wings with 4 apical cells; M connected to branched Cu by a cross-vein. 3
3. Small species, length less than 5.5 mm. **Sounama**
- Larger species, length more than 6.5 mm. 4
4. Aedeagal shaft (Figs. 4, 8, 12) with a pair of apical, long, needle-like spines. **Asiacercopis**
- Aedeagal shaft without apical spines. 5
5. Hind wings with cross-vein m-cu meeting Cu_{1a} well after furcation Cu_{1a}/Cu_{1b} ; basal half of Cu_{1b} strongly arched against Cu_2 **Paracercopis**

- Hind wings with cross-vein m-cu meeting Cu_{1a} just before furcation Cu_{1a}/Cu_{1b} in males or well before furcation Cu_{1a}/Cu_{1b} in females; Cu_{1b} nearly straight and more remote from Cu_2 .

Paracercopoides

Asiacercopis, gen. nov.

Type-species: *Asiacercopis hainanensis*, sp. nov.

Diagnosis: Members of the genus *Asiacercopis* can be distinguished from all other Oriental cercopid genera by the following combination of characters: Medium-sized, elongate, fore wings nearly parallel-sided; postclypeus centrally longitudinally sulcate with the sulcate area bordered laterally by ridges; hind wings with 4 apical cells, Cu_{1a} and Cu_{1b} on relatively long stalk, cross-vein m-cu meeting Cu_2 well before furcation of Cu_{1a}/Cu_{1b} , the fourth apical cell short and small; fore tibiae normal, not sulcated; hind tibiae with one lateral spur; male genitalia (Figs. 1-12), especially the subgenital plate (Figs. 1-2, 5-6, 9-10) with long, incurved apical process and aedeagal shaft (Figs. 4, 8, 12) very elongate, curved dorsally with a pair of apical, long, needle-like spines.

The new genus is easily recognized by the aedeagus which has a pair of apical, long, needle-like spines. It may be distinguished from all other genera in the Rhinaulacini in the Oriental Region by the characters given in the key above.

Description: Medium-sized, elongate, nearly parallel-sided, slightly pubescent spittlebugs, length 8.6-13.4 mm.

Head (including face), pronotum and scutellum shining black (scutellum luteous in *hainanensis*, sp. nov.), fore wings blackish fuscous with outer edges (excluding apical part) pale ochraceous in *niger* (Lallemand), or luteous with the apical third black in *hainanensis*, sp. nov., or mostly hyaline with the base, veins and the inner and outer edges fuscous in *nilgiriensis* (Lallemand).

Head short and broad, distinctly narrower than pronotum, forwardly reclined; vertex transversely impressed in front of eyes, posterior disk convex; ocelli placed rather close together, a little nearer to each other than to eyes; anterior margin of vertex between antennal ledges narrowly transversely grooved; postclypeus inflated, strongly laterally compressed, upper 0.75 nearly vertical, very broadly longitudinally sulcate with the sulcate area bordered laterally by ridges, its lateral areas transversely striate, the ventral fourth obliquely directed downwards; rostrum short, not passing middle coxae. Pronotum large and broad, very finely punctate and obscurely transversely wrinkled, anterior lateral areas much depressed, transversely foveate on each side near anterior margin, anterior field sloping to the depressed vertex, anterior lateral margins reflexed, posterior margins concave. Scutellum centrally foveate; the apex strongly depressed. Fore wings elongate, nearly parallel-sided, densely and finely punctate, costal margins strongly reflexed; hind wings with four closed apical cells, Cu_1 branched, Cu_{1a} and Cu_{1b} on relatively long stalk, cross-vein m-cu meeting Cu_{1a} well before furcation Cu_{1a}/Cu_{1b} , Cu_{1b} straight, fourth apical cell short and small. Hind tibiae with one strong lateral spur on the apical 0.33.

Male genitalia: Pygofer short, posterior margins in lateral view without caudodorsal processes; anal segments and anal style very short and small. Subgenital plates

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(Figs. 1-2, 5-6, 9-10) short and broad, with long, incurved apical process. Styles (Figs. 3, 7, 11) long and broad, bifid apically, the dorsal apical process acuminate. Aedeagus (Figs. 4, 8, 12) with shaft very elongate, slender, curved dorsally with a pair of apical, long, needle-like spines.

Etymology: From the Greek *Asio* (Asia) + *cercopis*, referring to the occurrence of the included species in Asia; masculine.

Distribution: ?India (Nilgiri Hills), China (Hainan Province), Laos and Viet Nam (northern part).

Lallemand (1927) reported *nilgiriensis* from Nilgiri Hills, South India. The "Nilgiri Hills" type locality seems erroneous (see discussion under *A. nilgiriensis* (Lallemand)).

Discussion: I am placing *Asiacercopis* in the tribe Rhinaulacini of the subfamily Cercopinae because of its sulcate postclypeus, hind tibiae with one lateral spur, and because of the structure of the male genitalia.

Key to the species of *Asiacercopis*

1. Fore wings mostly hyaline, base, veins, and inner and outer edges fuscous, a spot in costal margin near to apical 0.33 carmine red, head (including face), pronotum and scutellum smoky black; male genitalia as in figures 9-12; ?India (Nilgiri Hills) and Viet Nam (Tonkin).. 3. *nilgiriensis* (Lallemand)
- . Fore wings not hyaline; coloration of dorsum not as above. 2
2. Fore wings luteous with apical third blackish fuscous to black, head (including face) and pronotum shining black; male genitalia as in figures 1-4; China (Hainan Province). 1. *hainanensis*, sp. nov.
- . Fore wings blackish fuscous, outer costal margins broadly pale ochraceous at basal 0.5, a large spot just next to pale ochraceous costal band in costal margin near apical 0.33 greyish white and semihyaline; head (including face), pronotum and scutellum shining black; male genitalia as in figures 5-8; Laos (southern part) and Viet Nam. 2. *niger* (Lallemand)

1. *Asiacercopis hainanensis*, sp. nov. (Figs. 1-4)

Diagnosis: *Asiacercopis hainanensis* can be distinguished from all other species of *Asiacercopis* by its relatively large size, shining black head and pronotum, the luteous fore wings with the blackish fuscous to black apical 0.33, and the shape of the male genitalia (Figs. 1-4).

Description: Male: Relatively large, elongate, nearly parallel-sided, length 12.80-13.00 mm. Head (including face), lora, genal lobes, antennal ledges, antennal sockets and basal antennal segments shining black, anteclypeus with lower half pale yellow. Eyes black, ocelli yellowish brown. Rostrum yellow. Pronotum shining black with posterior area marginally luteous. Scutellum black or luteous with blackish markings. Fore wings luteous, apical third blackish fuscous to black; hind wings very pale fuliginous and dull hyaline, veins much darker, extreme base and basal 0.6x of costal margin and radius (R) reddish. Thorax beneath yellow to luteous. Legs yellow to luteous, claws, fore tibiae, fore and middle tarsi and the apices of hind tarsi, tips of

the lateral spurs and apical spines on hind tibiae and tarsi blackish fuscous or black. Abdomen luteous, pygofer (excluding base), subgenital plate (excluding apical process) and styles fuscous.

Body surface and legs densely greyish-pilose. Head short and broad, distinctly narrower than pronotum, reclined forwards; vertex transversely impressed in front of eyes, posterior disk convex; anterior margin of vertex between antennal ledges narrowly transversely grooved; postclypeus inflated, strongly laterally compressed, longitudinally broadly and deeply sulcate on its upper 0.75, sulcate area bordered laterally by ridges, its lateral areas strongly transversely striate. Pronotum large and broad, moderately inflated, anterior field sloping to depressed vertex, very finely punctate and obscurely transversely wrinkled, anterior lateral areas strongly depressed, anterior lateral margins reflexed, posterior margins concave. Scutellum centrally foveate; apex strongly depressed.

Male genitalia: Pygofer in lateral view without processes on caudodorsal margins; anal segments and anal style very short and small. Subgenital plate (Figs. 1, 2) very short and broad, with long, incurved apical process. Style as in Fig. 3. Aedeagus (Fig. 4) with shaft very elongate, slender, curved dorsally with a pair of apical, long, needle-like spines.

Female: Similar to male, body larger, length 13.4 mm. Abdomen (including pygofer and genitalia) uniformly luteous. Anterior margin of vertex between antennal ledges indistinctly transversely grooved; postclypeus shallowly sulcate on its upper 0.75, sulcate area bordered laterally by indistinct ridges.

Etymology: Named for its occurrence in the Hainan Province, China.

Holotype: Male, CHINA: Hainan Province: Jianfengling: Tianchi, 750m, 23.iii.1980, Coll. S.Y. Wang (IZAS). *Paratypes:* CHINA: Hainan Province, 1 male, no definite locality, 3.iv.1934, Coll. C. Ho; 1 female, Jianfengling, 900 m, 11.iv.1980, Coll. F.J. Pu (both in IZAS).

Distribution: China (Hainan Province).

2. *Asiacercopis niger* (Lallemand), comb. nov. (Figs. 5-8)

Aufidus niger Lallemand, 1927: 112; Metcalf & Horton, 1934: 380; Lallemand, 1949: 101; Metcalf, 1961: 358. Holotype: Male, INDO-CHINA [LAOS]: Haut Mékong, Nam Tiene, 14.iv.1918, Coll. R. V. de Salvaza (BMNH). [Examined by M. D. Webb on author's behalf.]

Diagnosis: *Asiacercopis niger* (Lallemand) is distinguished from other *Asiacercopis* by the shining black head (including face), pronotum and scutellum, blackish fuscous fore wings with outer costal margins broadly pale ochraceous at basal half and a large spot just next to pale ochraceous costal band in costal margin near apical third greyish white and semihyaline; and shape of male genitalia (Figs. 5-8).

Description: Male: Body elongate, nearly parallel-sided, length 9.6-10.0 mm. Head (including face), pronotum and scutellum shining black. Eyes black, ocelli yellowish brown. Antennal ledges brown, antennal segments one and two black, segment three yellowish brown. Rostrum yellow. Fore wings blackish fuscous, outer costal margins broadly pale ochraceous at basal 0.5, a large spot just next to pale ochraceous cos-

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tal band in costal margin near apical 0.33 greyish white and semihyaline; hind wings very pale fuliginous and dull hyaline, the veins much darker. Thorax beneath yellow, propleura black. Legs yellow, fore tibiae dark brown to fuscous, claws, apices of hind tarsi and tips of lateral spurs and apical spines on hind tibiae and tarsi blackish fuscous or black. Abdomen above and beneath yellowish brown.

Body surface and legs densely greyish-pilose. Head short and broad, distinctly narrower than pronotum, reclined forwards; vertex transversely impressed in front of eyes, posterior disk convex; anterior margin of vertex between antennal ledges narrowly transversely grooved; postclypeus inflated, strongly laterally compressed, longitudinally broadly and deeply sulcate on its upper 0.75, sulcate area bordered laterally by ridges, its lateral areas strongly transversely striate. Pronotum large and broad, moderately inflated, anterior field sloping to depressed vertex, very finely punctate and obscurely transversely wrinkled, anterior lateral areas much depressed, anterior lateral margins reflexed, posterior margins concave. Scutellum centrally foveate; apex strongly depressed.

Male genitalia: Pygofer in lateral view without processes on caudodorsal margins; anal segments and anal style very short and small. Subgenital plate (Figs. 5, 6) short and broad, with very long, incurved apical process. Style (Fig. 7) with dorsal apical process excavated at apex. Aedeagus (Fig. 8) with shaft elongate, slender, curved dorsally with a pair of apical, long, needle-like spines.

Female: Similar to male, length 9.8-10.2 mm. Anterior margin of vertex between antennal ledges not transversely grooved; postclypeus indistinctly sulcate on its upper 0.75, sulcate area not bordered laterally by ridges.

The above description is based on the original description and the specimens that I have examined.

Specimens examined: LAOS: Sayaboury Province: Sayaboury, 1 male, 30.ix.1966 (native collector, Rondon); Vientiane Province: Ban Van Eue, 2 males, 2 females, malaise trap, 31.v & 15.viii.1966 and 15.v & 30.vi.1967 (native collector, Rondon) (BPBM; IZAS). VIET NAM: Dak Song, 76 km S.W. of Ban Me Thuot, 870 m, 1 female, 19-21.v.1960, Coll. S. Quate or L.M. Quate (BPBM).

Distribution: Laos; Viet Nam.

3. *Asiacercopis nilgiriensis* (Lallemand), comb. nov. (Figs. 9-12)

Aufidus nilgiriensis Lallemand, 1927: 112; Metcalf & Horton, 1934: 380; Lallemand, 1949: 101; Metcalf, 1961: 359. Holotype: Female, ?INDIA: 'Nilgiri Hills', no date and collector (BMNH). [Examined by Mr. M. D. Webb on author's behalf.]

Diagnosis: *Asiacercopis nilgiriensis* (Lallemand) is distinguished from other *Asiacercopis* species by the smoky black head, pronotum and scutellum, mostly hyaline fore wings with base, veins, and inner and outer edges fuscous and a carmine red spot in the costal margin near the apical 0.33, and the shape of the male genitalia (Figs. 9-12).

Description: Male: Body elongate, nearly parallel-sided, length 8.6-8.8 mm. Head (including face), pronotum and scutellum shining black. Eyes greyish black, ocelli yellowish brown. Antennae with basal segments blackish. Rostrum brownish yellow. Fore wings mostly hyaline, base, veins, and inner and outer edges fuscous, spot in cos-

tal margin near to apical 0.33 carmine red; hind wings very pale fuliginous and dull hyaline, veins much darker, extreme base dull red. Throax beneath dark brown to fuscous, metapleura and metasterna sanguineous. Fore and middle legs blackish fuscous to black, hind legs fuscous, the bases and femora sanguineous. Abdomen sanguineous, pygofer (including subgenital plates and styles) and preceding segment fuscous.

Body surface and legs densely greyish-pilose. Head short and broad, distinctly narrower than pronotum, forwardly reclined; vertex transversely impressed in front of eyes, posterior disk convex; anterior margin of vertex between antennal ledges narrowly transversely grooved; postclypeus inflated, strongly laterally compressed, longitudinally broadly and deeply sulcate on its upper 0.75, sulcate area bordered laterally by ridges, its lateral areas strongly transversely striate. Pronotum large and broad, moderately inflated, anterior field sloping to depressed vertex, very finely punctate and obscurely transversely wrinkled, anterior lateral areas much depressed, anterior lateral margins reflexed, posterior margins concave. Scutellum centrally foveate; apex strongly depressed.

Male genitalia: Pygofer in lateral view without processes on caudodorsal margins; anal segments and anal style very short and small. Subgenital plate (Figs. 9, 10) short and broad, with long, incurved apical process. Style as in Fig. 11. Aedeagus (Fig. 12) with shaft elongate, slender, curved dorsally with a pair of apical, long, needle-like spines.

Female: Unknown.

Discussion: Lallemand (1927) described *A. nilgiriensis* from a single female bearing a label, "Nilgiri Hills". Mr. Webb who kindly examined the holotype of this species for me writes, "The *nilgiriensis* label saying "Nilgiri Hills" is unusual in that it is handwritten in a style that is unfamiliar to me. I agree that the locality may be erroneous. The identifications are correct." I have two males from Tonkin, Viet Nam which essentially agree with Lallemand's original description. This species is, however, quite evidently an *Asiacercopis* and not an *Aufidus*. I have examined a large number of specimens of Indian Cercopidae but no specimen of *nilgiriensis* has turned up from Nilgiri Hills or from other parts of India. It appears that Lallemand's specimen was mislabelled and the type locality "Nilgiri Hills" mentioned in the description is erroneous.

Specimens examined: VIET NAM: Tonkin, Hoa-Binh, 2 males, vii.1940, Coll. A. de Cooman (IZAS).

Distribution: ?India (Nilgiri Hills), Viet Nam (northern part).

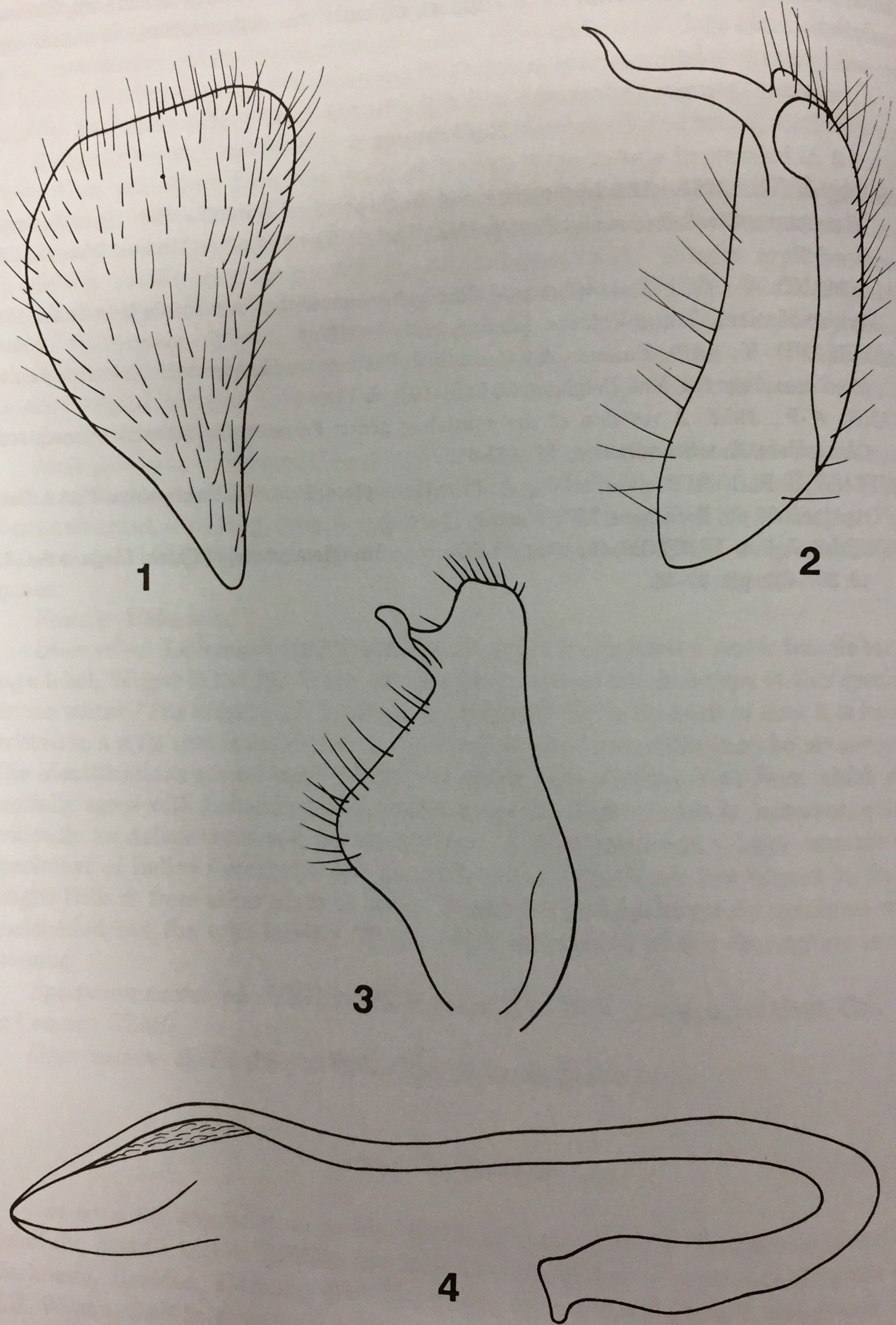
Acknowledgments

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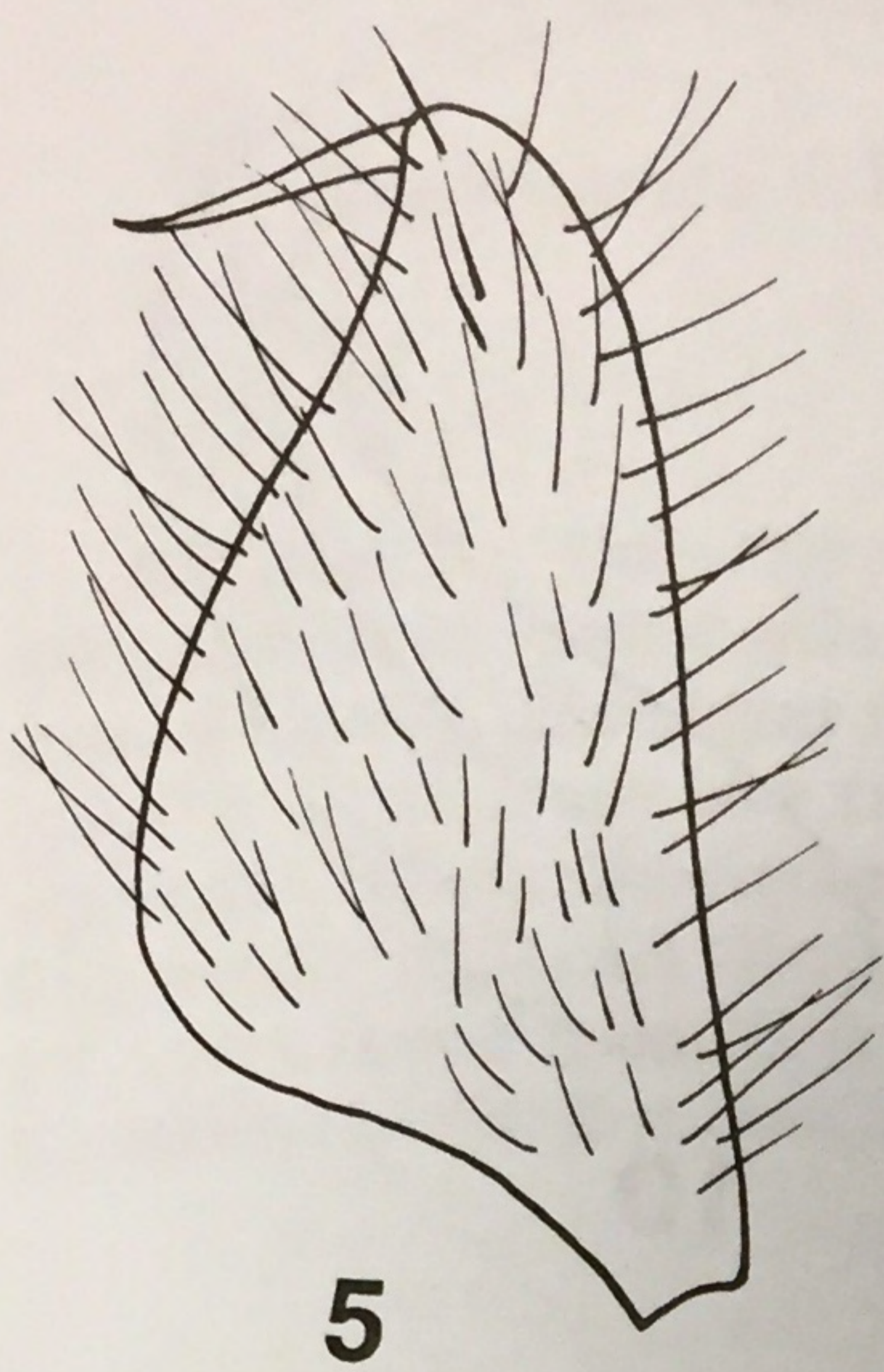
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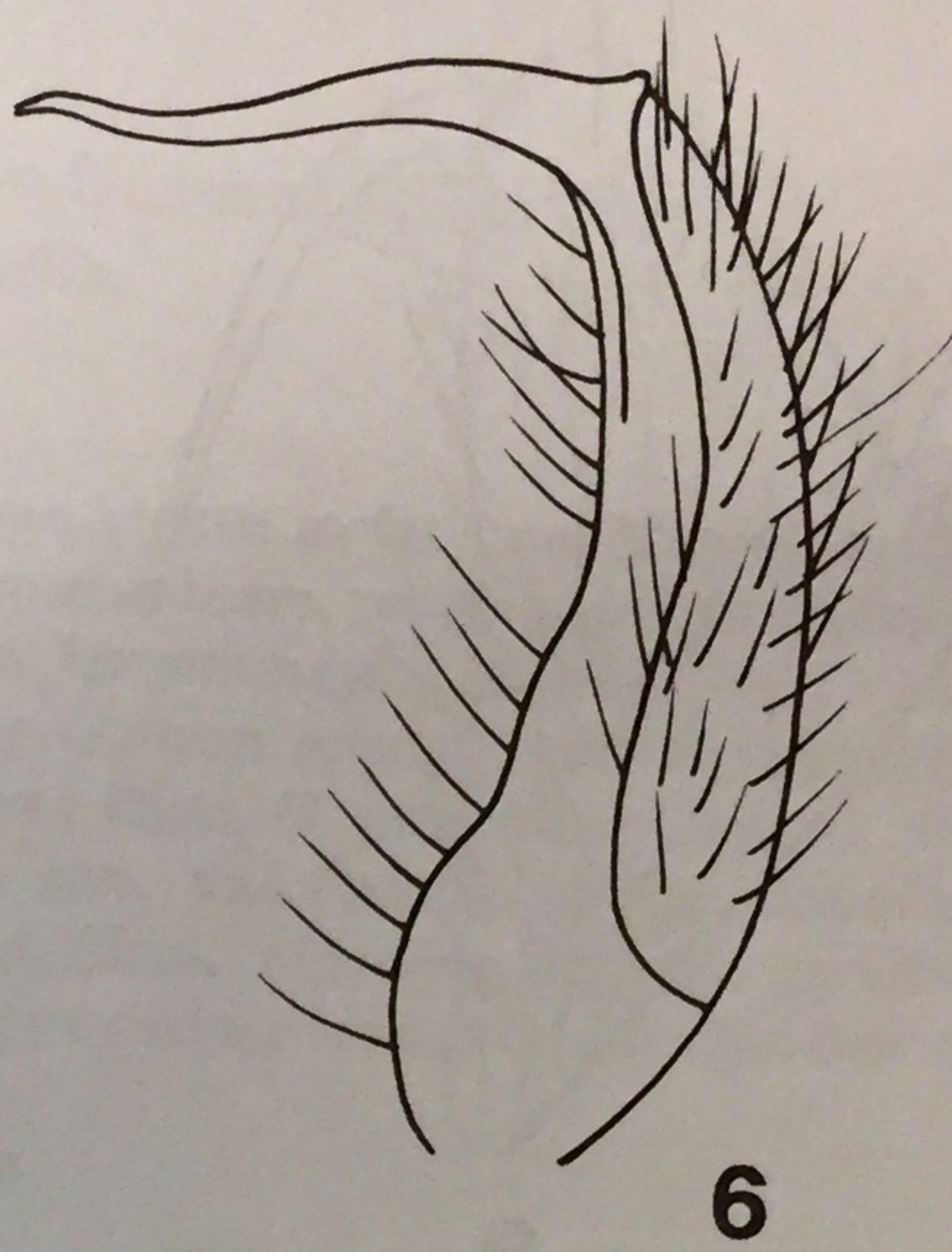


Figs. 1-4. *Asiacercopis hainanensis*: 1, left subgenital plate, ventral view; 2, left subgenital plate, dorsal view; 3, left style, lateral view; 4, aedeagal shaft, lateral view.

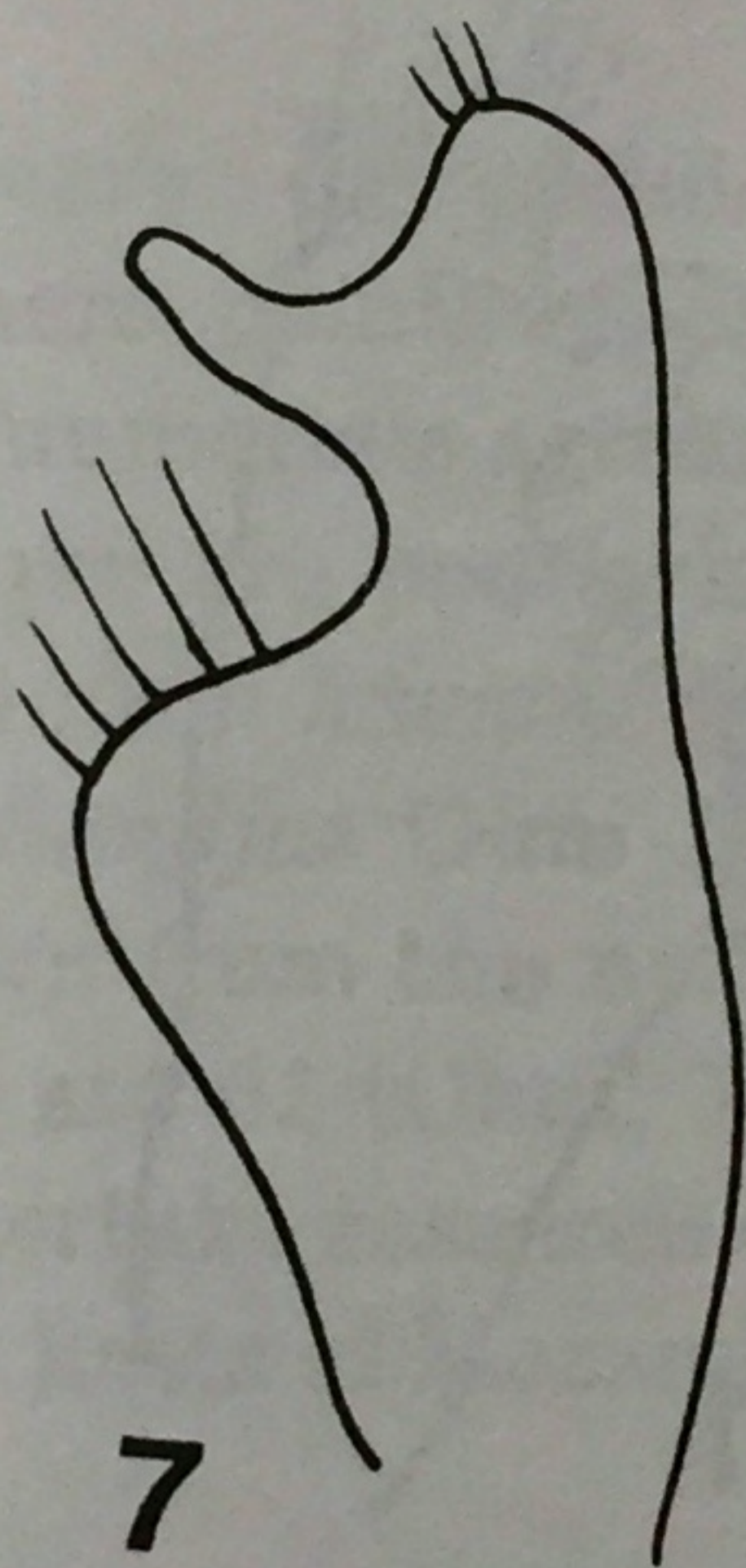
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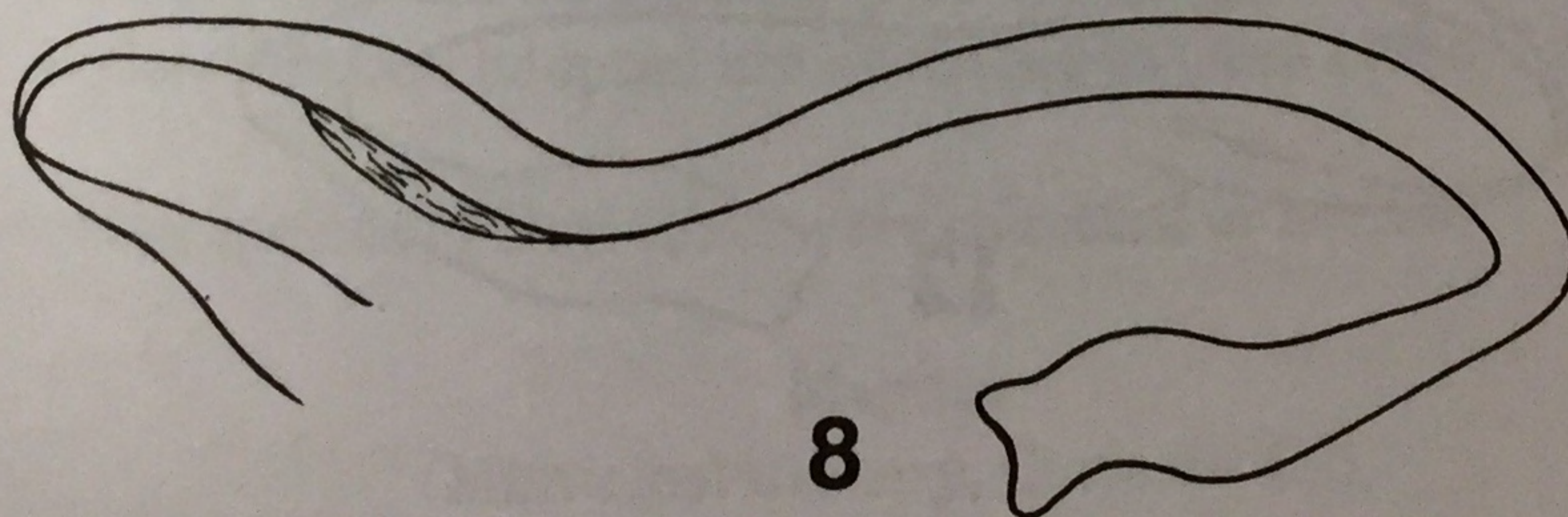
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Figs. 5-8. *Asiacercopis niger*: 5, left subgenital plate, ventral view; 6, left subgenital plate, dorsal view; 7, left style, lateral view; 8, aedeagal shaft, lateral view.

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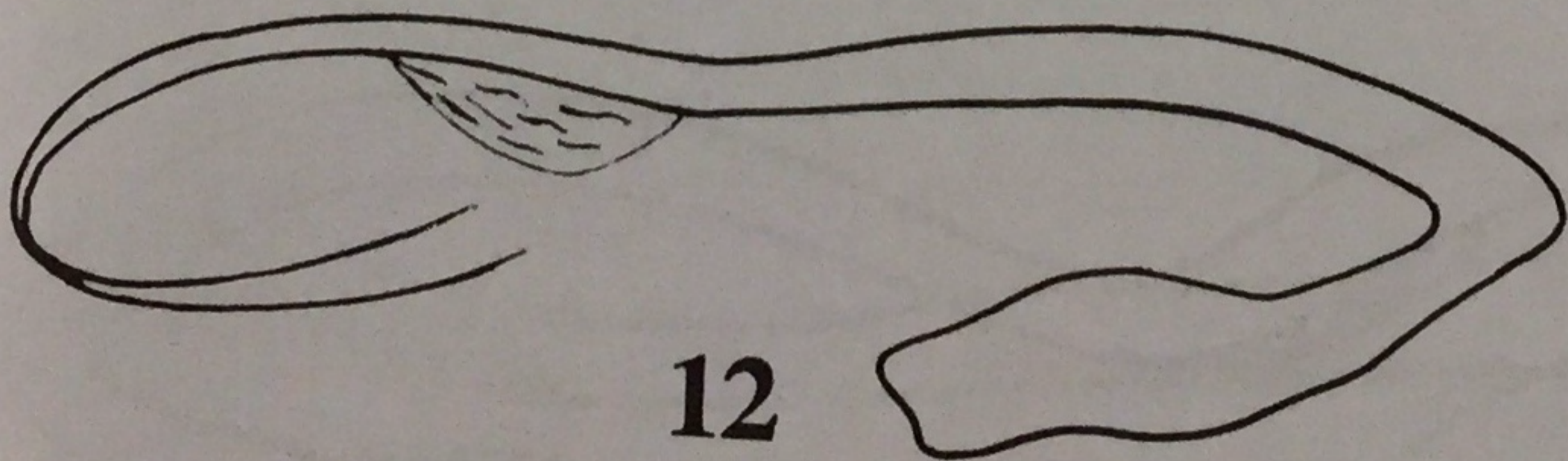
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Figs. 9-12. *Asiacercopis nilgiriensis*: 9, left subgenital plate, ventral view; 10, left subgenital plate, dorsal view; 11, left style, lateral view; 12, aedeagal shaft, lateral view.

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