

# Notes on the genus *Kervillea* BERGEVIN 1918 (Hemiptera, Fulgoromorpha, Issidae)

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## Abstract

*Kervillea* BERGEVIN 1918 is redescribed. *Hysterella* LOGVINENKO 1977 and *Quadrastylum* DLABOLA 1979 are placed in synonymy with *Kervillea* BERGEVIN 1918. *Corymbius*, subgen. n. (type species *Quadrastylum tekirdagicum* DLABOLA 1982) is erected in the genus *Kervillea*. With 31 figures.

## Introduction

The genus *Kervillea* has been erected by BERGEVIN (1918) for one species, *Kervillea ancyrana* BERGEVIN 1918 from Turkey. After examination of the lectotype of *Hysteropterum placophorum* HORVÁTH 1905, DLABOLA (1980) placed *Kervillea ancyrana* BERGEVIN 1918 in synonymy with the last species. LOGVINENKO (1977) has described the monotypic genus *Hysterella* from Ukraine, and DLABOLA (1979) described the monotypic genus *Quadrastylum* from Turkey. Later on, DLABOLA (1984a) placed *Hysterella* LOGVINENKO in synonymy with *Quadrastylum* DLABOLA, but incorrectly, because the genus *Hysterella* was described two years earlier. Currently, 14 species are included in *Quadrastylum* and 3 species in *Kervillea* (DLABOLA 1980, 1982, 1983, 1984b, 1987a, 1989). Examination of the external morphology and the structure of the male and female genitalia (GNEZDILOV, in preparation) of species of the mentioned three genera allows treatment of *Hysterella* LOGVINENKO 1977 and *Quadrastylum* DLABOLA 1979 as junior synonyms of *Kervillea* BERGEVIN 1918. The center of speciation and, possibly, the center of origin of the genus *Kervillea* are situated in the East Mediterranean region, most species are distributed in Asia Minor and the Balkan Peninsula (HORVÁTH 1905; DLABOLA 1954, 1980, 1982, 1983, 1984a, 1984b, 1987a, 1987b, 1989, 1994; NAST 1987; DROSPOULOS 1990). During the present study, specimens of *Kervillea placophora* (HORVÁTH 1905), including a syntype of its synonym *Kervillea ancyrana* BERGEVIN 1918, the paratype of *Hysterella coronata* LOGVINENKO 1977, specimens of *Quadrastylum conspurcatum* (SPINOLA 1839) and *Q. tekirdagicum* DLABOLA 1982, and also the descriptions and figures of all other species of the genera *Kervillea* and *Quadrastylum* were examined. I subdivide the genus *Kervillea* into two subgenera: the nominotypical subgenus *Kervillea* and new subgenus *Corymbius* distinguished by the structure of the male genitalia.

This study is based on specimens deposited in the following collections: MNHN - Muséum National d'Histoire Naturelle, Paris, France; HNHM - Hungarian Natural History Museum, Budapest, Hungary; BIZ - Institute

of Zoology, Bulgarian Academy of Sciences, Sofia, Bulgaria; ZIN - Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.

All new combinations are for species currently placed in the genus *Quadrastylum* DLABOLA. The distribution is given for all species and the material examined is listed.

### Genus *Kervillea* BERGEVIN 1918

*Kervillea* BERGEVIN 1918: 104-105. Type species: *Kervillea ancyrana* BERGEVIN 1918: 105-108, junior synonym of *Hysteropterum placophorum* HORVÁTH 1905: 188.

*Hysterella* LOGVINENKO 1977: 852, syn. n. Type species: *Hysterella coronata* LOGVINENKO 1977: 853-854.

*Quadrastylum* DLABOLA 1979: 283, syn. n. Type species: *Quadrastylum campanuliforme* DLABOLA 1979: 283-284.

Metope with distinct median keel. Coryphe transverse, slightly concave, with median ruffle. Pronotum approximately as long as coryphe (both measured medially), with slight median keel. Scutellum about twice as long as pronotum, with slight median keel, weakly concave at apex. Fore wings without hypocoastal plate. R and M bifurcate or trifurcate. CuA simple. Hind wings reduced. Hind tibia with 2-3 lateral teeth (in addition to *Kervillea placophora*, the single examined specimen of *Hysterella coronata* also has 3 lateral setae on its right hind tibiae – 2 strong setae in distal part of tibia and 1 short seta at tibial base; left leg is missing in this specimen). Apex of hind tibia with 7-9 socle setae (including 5-7 setae in intermediate row). Apex of metatarsomere I with 4-9 setae.

Male genitalia. Apical angles of anal tube usually protruded (lateral view). Hind margin of pygofer arched, without any processes. Hind margin of style with deep concavity at the base of capitulum, which is flattened dorsoventrally, with rounded apex (from above) and distinct subapical tooth (lateral view). Apical angles of suspensorium protruding like short lobes. Phallosome with a pair of distinct (subgenus *Kervillea*) or indistinct (subgenus *Corymbius*) ventral folds. Ventral side of phallosome sometimes with small teeth, dorsal side sometimes swollen before apex (lateral view). Aedeagus with two flattened dorso-

ventrally or laterally, arched or bent at obtuse angle (lateral view) apical processes and with two short lateral lobes (ventral and lateral view) at the base of apical processes, without hooks (subgenus *Kervillea*) or with a pair of short hooks on the lateral lobes (subgenus *Corymbius*).

#### Subgenus *Kervillea* BERGEVIN 1918

Metope with median keel only. Phallosome with distinct ventral folds. Ventral lobe of phallosome narrowing to apex. Aedeagus without hooks. Hind margin of female abdominal sternum VII with wide median concavity.

The following 3 species of the nominotypical subgenus have been examined.

#### *Kervillea placophora* (HORVÁTH 1905) (Figs 1-10).

Material examined. Turkey: 3♂♂, 1♀, As. [ia] Min. [or], Angora, 26.V.1925 (Biró) (HMNH); 1♂ (not dissected), Angora, Collection E. de Bergevin, syntype of *Kervillea ancyrana* (MNHN).

Distribution. Turkey.

Record from Macedonia (JANKOVIĆ 1971) was based on misidentification of *Bubastia ludviki* DLABOLA, 1979, as proved by examination of specimens in the Natural History Museum of Beograd.

#### *Kervillea conspurcata* (SPINOLA 1839), comb. n. (Figs 15-21).

Material examined. 1♂, 1♀, Yugoslavia, Desert Deliblát, Banat (Holtz) (ZIN); Bulgaria: 2♂♂, 5 km NW Kyustinbrod, Beledie khan village, ~600 m, 18.VII.2000 (V. M. Gnezdilov); 2♂♂, Vlahina Mt., near Boboshevo village, ~700 m, 15.VI.2001 (A. F. Emeljanov) (ZIN).

Distribution. Yugoslavia, Slovakia, Hungary, Bulgaria, Romania.

#### *Kervillea coronata* (LOGVINENKO 1977), comb. n. (Figs 11-14).

Material examined. 1♂, paratype, Ukraine, Nikolaevskaya Prov., Vladimirskaia Experimental Forest Station of the Kharkov State University, 12.V.1949 (ZIN).

Distribution. Ukraine.

The following species are included in the subgenus on the basis of literary data only: *Kervillea parvissima* (DLABOLA 1957) (Turkey), the species was transferred to *Kervillea* by DLABOLA

(1980); *Kervillea campanuliformis* (DLABOLA 1979), comb. n. (Turkey); *Kervillea basiniger* (DLABOLA 1982), comb. n. (Greece, Turkey); *Kervillea scoleogramma* (FIEBER 1877), comb. n. (Greece, Turkey); *Kervillea jahjai* (DLABOLA 1983), comb. n. (Turkey); *Kervillea aylae* (DLABOLA 1987), comb. n. (Turkey); *Kervillea beysehirica* (DLABOLA 1983), comb. n. (Turkey); *Kervillea lodosica* (DLABOLA 1980), comb. n. (Turkey); *Kervillea syriaca* (MELICHAR 1906), comb. n. (Greece, Syria).

#### Subgenus *Corymbius* subgen. n.

Type species: *Quadrastylum tekirdagicum* DLABOLA 1982: 141.

Metope with distinct median keel and weak sublateral keels. Ventral lobe of phallosome massive, with widely rounded apex. Ventral folds of phallosome indistinct. Aedeagus with a pair of short hooks. Hind margin of female abdominal sternum VII with median projection.

Etymology. The subgeneric name is formed from the Latin noun of Greek origin *Corymbus* (κορυμβος) - branch of ivy.

#### *Kervillea (Corymbius) tekirdagica* (DLABOLA 1982), comb. n. (Figs 22-31).

Material examined. 7♂♂, 2♀♀, Bulgaria, Perla, 27.V.1973 (V. Bairamova) (BIZ).

Distribution. Turkey, Bulgaria.

Perhaps, the following species (not examined) also belong to the subgenus: *Kervillea insulana* (DLABOLA 1982), comb. n. (Greece, Turkey); *Kervillea kulaica* (DLABOLA 1982), comb. n. (Turkey); *Kervillea tarsusana* (DLABOLA 1989), comb. n. (Turkey); *Kervillea tubulata* (DLABOLA 1989), comb. n. (Turkey).

Species incertae sedis: *Kervillea gaziantepica* DLABOLA 1984 (Turkey). This species possibly does not belong to the genus *Kervillea*.

## Acknowledgements

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## Zusammenfassung

Die Gattung *Kervillea* BERGEVIN 1918 wird wiederbeschrieben. *Hysterella* LOGVINENKO 1977 und *Quadrastylum* DLABOLA 1979 sind Synonyme von *Kervillea* BERGEVIN 1918. Eine neue Untergattung, *Corymbius* subgen. n., wird errichtet (Typusart: *Quadrastylum tekirdagicum* DLABOLA 1982).

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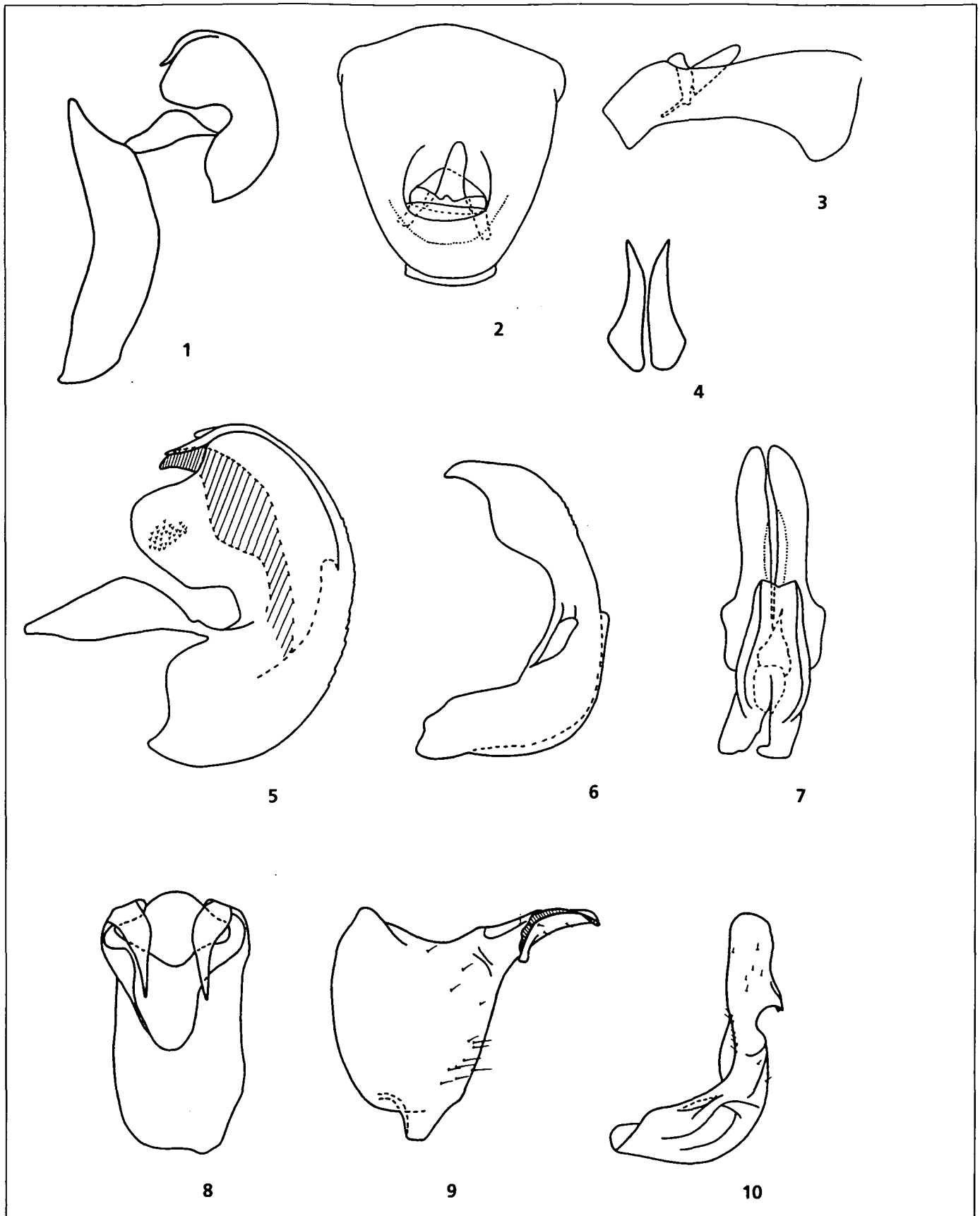
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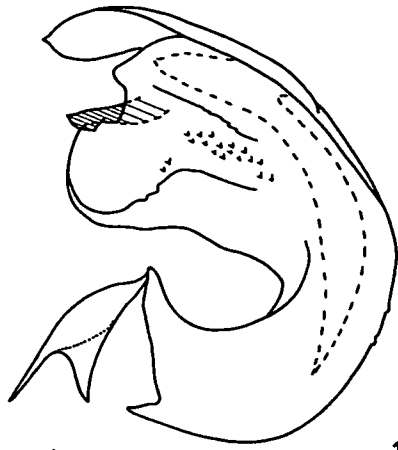
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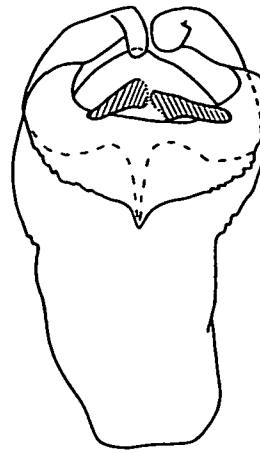
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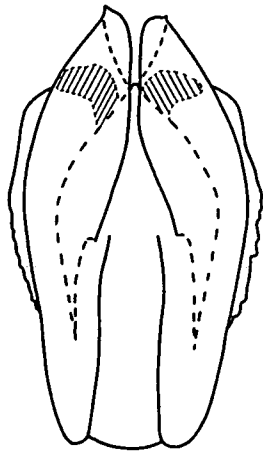
Figs 1-10. *Kervillea (Kervillea) placophora* (HORVÁTH), ♂ (Turkey, Ankara): 1 - pygofer and penis, lateral view; 2 - anal tube, dorsal view; 3 - anal tube, lateral view; 4 - apical processes of aedeagus, ventro-apical view; 5 - penis, lateral view; 6 - aedeagus, lateral view; 7 - aedeagus, ventral view; 8 - phallosome, dorso-caudal view; 9 - stylus, lateral view; 10 - stylus, dorsal view.



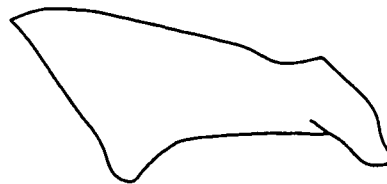
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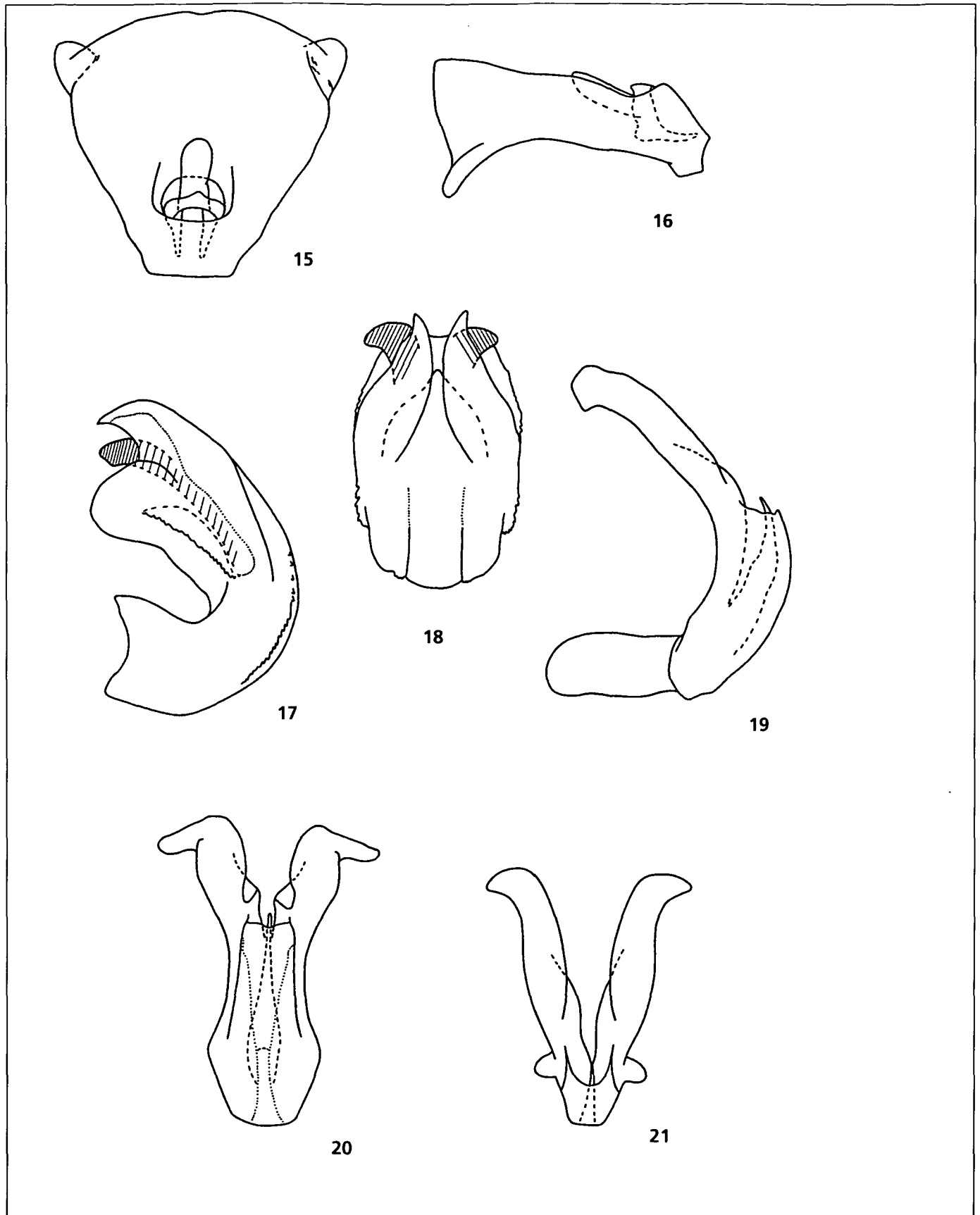


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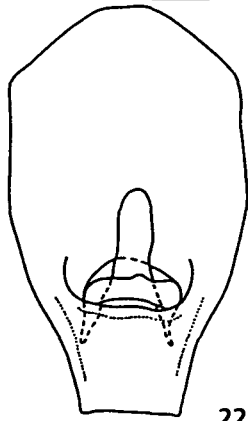


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Figs 11-14. *Kervillea (Kervillea) coronata* (LOGVINENKO), ♂ (Ukraine, Nikolaevskaya Prov.): 11 - penis, lateral view; 12 - penis, dorso-caudal view; 13 - penis, ventral view; 14 - anal tube, lateral view (anal column is missing).



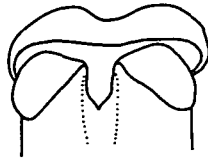
Figs 15-21. *Kervillea (Kervillea) conspurcata* (SPINOLA), ♂ (Yugoslavia, Desert Deliblát): 15 - anal tube, dorsal view; 16 - anal tube, lateral view; 17 - penis, lateral view; 18 - penis, ventral view; 19 - aedeagus, lateral view; 20 - aedeagus, ventral view; 21 - aedeagus, ventro-apical view.



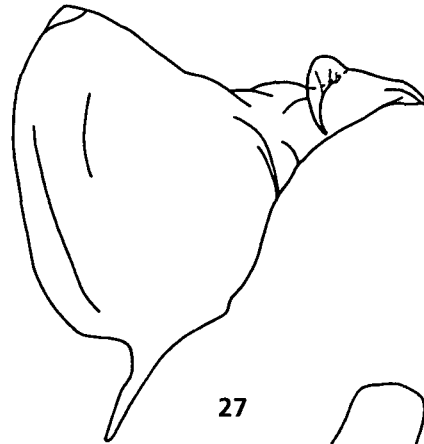
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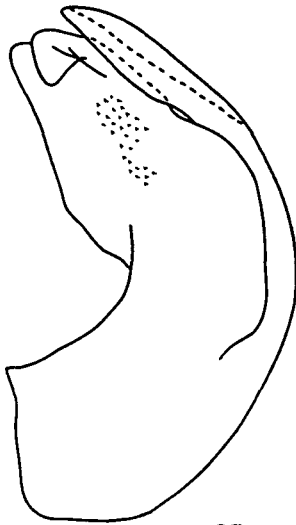
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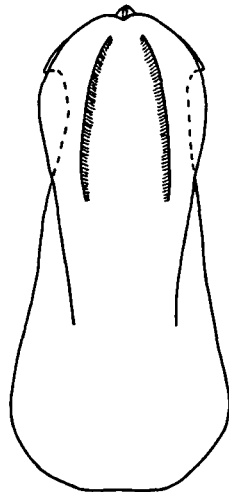
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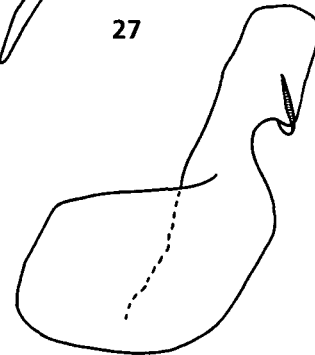
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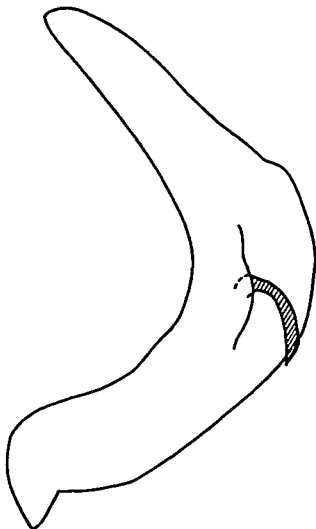
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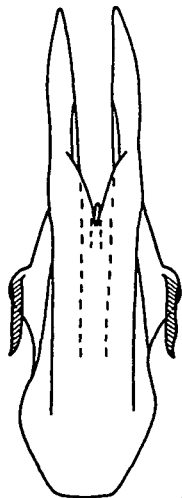
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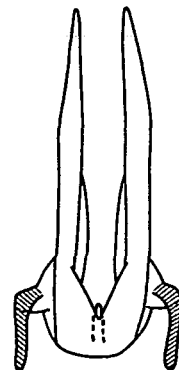
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Figs 22-31. *Kervillea* (*Corymbius*) *tekirdagica* (DLABOLA), ♂ (Bulgaria, Perla):

- 22 - anal tube, dorsal view;
- 23 - anal tube, lateral view;
- 24 - phallosome (without aedeagus), dorso-caudal view;
- 25 - penis, lateral view;
- 26 - penis, ventral view;
- 27 - stylus, lateral view;
- 28 - stylus, dorsal view;
- 29 - aedeagus, lateral view;
- 30 - aedeagus, ventral view;
- 31 - aedeagus, ventro-apical view