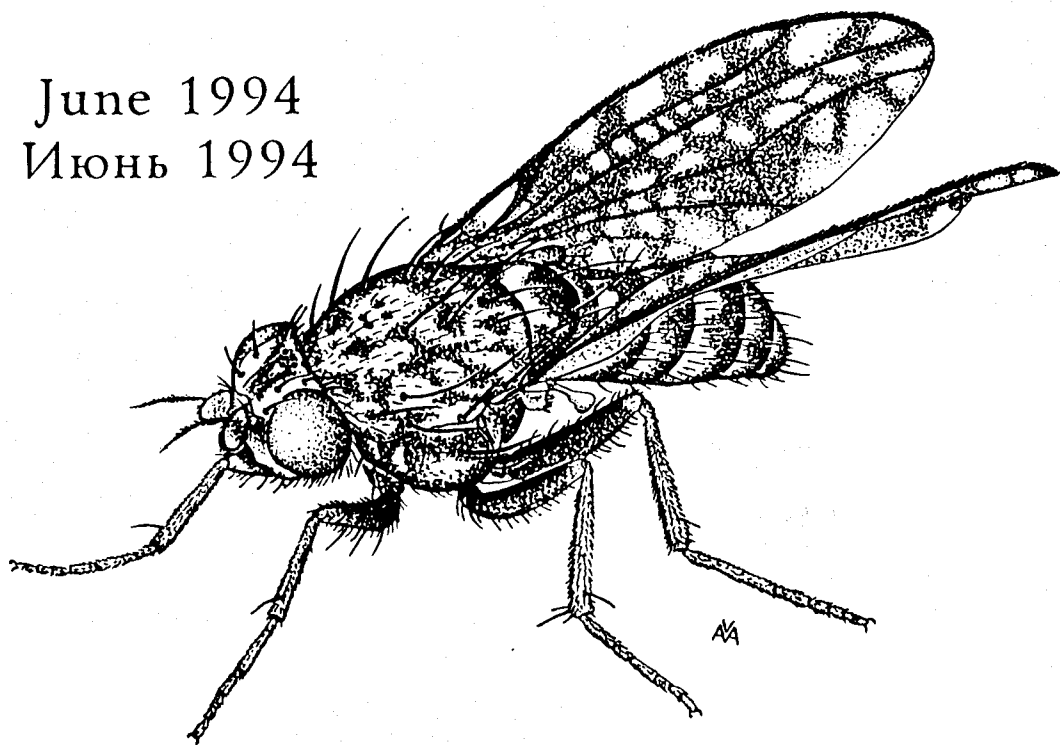


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**Four new species of the digger wasps genus *Trypoxylon* Latreille
(Hymenoptera, Sphecidae) of the Palaearctic and Oriental Regions, with
taxonomic notes on some others previously described**

**Четыре новых вида роющих ос рода *Trypoxylon* Latreille
(Hymenoptera, Sphecidae) Палеарктической и Ориентальной областей и
таксономические заметки о некоторых ранее описанных видах рода**

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KEY WORDS: systematics, Hymenoptera, Sphecidae, *Trypoxylon*, new species, synonymy.

КЛЮЧЕВЫЕ СЛОВА: систематика, Hymenoptera, Sphecidae, *Trypoxylon*, новые виды, синонимия.

ABSTRACT. Four new species of the digger wasps genus *Trypoxylon*: *T. guichardi* sp.n. from Turkey, *T. pseudoclavicerum* sp.n. from Morocco, and *T. papa* sp.n. and *T. gallopavo* from Sulawesi, Indonesia, are described. The male of *T. pendleburyi* Tsuneki is described for the first time. Furthermore, it is ascertained that the name *T. mediator* Nurse should be considered as a junior synonym of *T. albipes* Smith, *T. minahime* Tsuneki - of *T. nasale* Tsuneki, *T. bolouense* Tsuneki - of *T. scitulum* Tsuneki, *T. monticola* Tsuneki and *T. varipes nasutum* Tsuneki - of *T. varipes* Perez, and *T. mowchowense* Tsuneki - of *T. koreanum* Tsuneki. In the same time, the rank of *T. rufimaculatum* Antropov is elevated to the specific one.

РЕЗЮМЕ. Описаны 4 новых вида роющих ос рода *Trypoxylon*: *T. guichardi* sp.n. из Турции, *T. pseudoclavicerum* sp.n. из Марокко, а также *T. papa* sp.n. и *T. gallopavo* с о. Сулавеси, Индонезия. Впервые описан самец *T. pendleburyi* Tsuneki. Кроме того, установлено, что название *T. mediator* Nurse является младшим синонимом *T. albipes* Smith, *T. minahime* Tsuneki - *T. nasale* Tsuneki, *T. bolouense* Tsuneki - *T. scitulum* Tsuneki, *T. monticola* Tsuneki и *T. varipes nasutum* Tsuneki - *T. varipes* Perez, а *T. mowchowense* Tsuneki - *T. koreanum* Tsuneki, в то время как ранг *T. rufimaculatum* Antropov повышен до видового.

INTRODUCTION

The paper is devoted to the study of the digger wasps genus *Trypoxylon* in the Old World and includes the descriptions of four new species from the Palaearctic and Oriental Regions and also

taxonomic and nomenclative notes clearing the relations between the names of the species previously described from the Mediterranean region and eastern Asia.

The following institutions and colleagues lent the material for this study (abbreviations are used in the text):

AM - Dr. Alessandro Mochi. Rome, Italy.

BMNH - The Natural History Museum. London, England (Miss Laraine Ficken, Mr. Colin R. Vardy).

ELKU - Entomological Laboratory, Kyushu University. Fukuoka, Japan (Dr. Yoshihiro Hirashima). GP - Dr. Guido Pagliano. Torino, Italy.

HD - Dr. Hermann Dollfuss. Mank, Austria.

HNHM - Hungarian Natural History Museum. Budapest, Hungary (Dr. Jenő Papp). JG - Dr. Josef Gusenleitner. Linz, Austria.

MNCN - Museo Nacional de Ciencias Naturales. Madrid, Spain (Dr. Elvira Mingo Perez).

MNHN - Musée National d'Histoire Naturelle. Paris, France (Dr. Janine Casevitz Weulersse).

NHMW - Naturhistorisches Museum. 2. Zoologische Abteilung. Wien, Austria (Dr. Max Fischer).

NNHM - Nationaal Natuurhistorisch Museum. Leiden, Netherlands (Dr. C. van Achterberg).

OUM - Hope Entomological Collections, Oxford University Museum. Oxford, England (Mr. Christopher O'Toole).

TAU - Tel-Aviv University. Tel-Aviv, Israel (Dr. Amnon Freidberg).

USNM - U.S. National Museum. Washington, D.C., U.S.A. (Dr. Arnold S. Menke).

ZIN - Zoological Institute of the Russian Academy of Sciences. St.-Petersburg, Russia (Dr. V.I. Tobias).

The specimens from the collection of Zoological Museum of the Moscow Lomonosov State University, Moscow, Russia (ZMUM) were also studied.

The following abbreviations are used in the descriptions: A3,...13 - antennal segments 3,...13; A3 (13):AW - ratio of antennal segment 3 (13) length to its maximum width; ASR - antennal socket rim; G1:Ma:Mi - ratio of abdominal segment 1 length to its maximum (at apex) and minimum (at base) width (dorsal view); HF - hamular formula (number of hamuli in proximal and distal groups); IODs - ratio of minimum interocular distance at vertex to that below antennal sockets; OOD:OD:POD - ratio of oculo-ocellar distance to diameter of hindocellus and to interocellar distance; PAF - postantennal furrow (furrow between ASR and SAT); SAT - supraantennal tubercle (more or less prominent medial structure above antennal sockets).

TAXONOMIC PART

Trypoxylon koreanum Tsuneki

"*Trypoxylon varipes* Perez": Gussakovskij, 1932: 12 (Ussuri region); 1936: 664 (East Siberia, China, excepting Japanese material), non *varipes* sensu Perez, 1905: 157.

Trypoxylon koreanum Tsuneki, 1956: 32. Holotype, ♀: Korea (coll. Tsuneki).

Trypoxylon koreanum: Kazenas, 1980: 90 (Ussuri region).

Trypoxylon mowchowense Tsuneki, 1981a: 71. Holotype, ♀: China (USNM). Examined. *syn.nov.*

Trypoxylon okeanskayanum Tsuneki, 1981a: 86. Holotype, ♂: Siberia (USNM). Examined and synonymized by Antropov, 1986b: 90.

MATERIAL. CHINA: 1♀, Szechuen, Mowchow. VII.1924 (D.C.Graham) (USNM). RUSSIA, Primorskiy Kray: 1♂, Okeanskaya, VIII.1923 (Cockerell); 1♀, 1♂, Kongaus, VIII.1923 (Cockerell) (USNM). 2♀, 2♂, 32 km SE from Ussuriysk, 25.VII, 6, 7.VIII.1948 (V.Gussakovskij); 1♀, Okeanskaya, environs of Vladivostok, 4.VII.1950 (A.Zagulyaev); 9♀, 15♂, 40 km SE from Ussuriysk, 30.VII.1982, 13, 19, 21.VIII.1983, 2, 4, 17, 27.VIII.1984, 10, 13, 23.VIII.1985, 17.IX.1987 (A.Antropov); 1♀, 15 km SE from Lazo, 10.VII.1986 (A.Antropov); 2♀, 24♂, Lazo, 70 km ENE from Partizansk, 30.VII, 1, 2, 4, 28.VIII.1986 (A.Antropov) (ZMUM).

DISTRIBUTION. Continental part of East Palaearctic (China, Korea, and Russian Far East).

REMARKS. This species was reported for the first time by Gussakovskij [1932] from the R.Malaise's material collected in Ussuri region, but it was misidentified as "*varipes*". It was also included under this name into the Gussakovskij's [1936] key for the Palaearctic species of the genus. The valid name was given by Tsuneki [1956] for the male specimens from Korea, but it was not included into his last key of the East Palaearctic species of *Trypoxylon* [Tsuneki, 1981b]. However several months earlier Tsuneki [1981a] had described two

other species from Ussuri region and China (these species were not included into the key either). After the study of the type specimens of *okeanskayanum* and *mowchowense* in comparison with a lot of material from Ussuri region I have come to conclusion that they were conspecific with *koreanum*. The female type of *mowchowense* is somewhat larger than that of *okeanskayanum*, but its size is also within the intraspecific range of variation of *koreanum*. In the same time, both *mowchowense* and *okeanskayanum* completely agree with the original description of *koreanum* in nonsexual features, and I am sure that *mowchowense* should be also synonymized with *koreanum*.

Trypoxylon varipes Perez

Trypoxylon varipes Perez, 1905: 157. Holotype, ♀: Japan (MNHN). Examined.

Trypoxylon monticola Tsuneki, 1956: 34. Holotype, ♀: Japan (coll. Tsuneki), non Antropov, 1986b: 90. *syn.nov.*

Trypoxylon varipes nasutum Tsuneki, 1974: 365. Holotype, ♀: Korea (HNHM), non *nasutum* Tsuneki, 1979: 37. Examined. *syn.nov.*

MATERIAL. JAPAN: holotype of *varipes*, ♀, "Nippon moyen, env. de Tokyo et alpes de Nikko, 1901 (J.Harmand)" (MNHN); 1♀, Aomori, Mt.Iwaki, 27.VIII.1986 (H.Matsuura) (ZMUM). KOREA: holotype of *varipes nasutum*, ♀, "Korea, Kaesong, Mts. Pakyon, Pakyon popo 27 km NE from Kaesong, 10-12.IX.1971 (S.Horvatovich, J.Papp)" (HNHM).

DISTRIBUTION. East Palaearctic (Korea and Japan).

REMARKS. Tsuneki [1956, 1981b] in his diagnoses of *varipes* Perez determined this species by the obliquely inclined lateral sides of SAT and somewhat brightly colored trochanters. The holotype of *varipes* has dark trochanters and also the lateral sides of SAT almost perpendicular to the frontal surface. This completely agrees with the type specimen of *varipes nasutum* and the original description and studied material of *monticola*. Thus, two last names should be considered as junior synonyms of *varipes*. In the same time, all mentions of *varipes* by Tsuneki and Japanese authors should be attributed to the form of *rufimaculatum* Antropov having dark-colored abdomen.

Trypoxylon rufimaculatum Antropov, 1987, *stat.nov.*

Trypoxylon varipes rufimaculatum Antropov, 1987: 57. Holotype, ♀: Ussuri region (ZMUM).

"*Trypoxylon varipes* Perez": Gussakovskij (1932, 1936 - only Japanese material) and also Tsuneki and Japanese authors (1956-1981), non *varipes* sensu Perez, 1905: 157.

MATERIAL. RUSSIA, Primorskiy Kray: 2♀, 40 km SE from Ussuriysk, 9.VIII.1982, 14.VIII.1985 (Antropov); 1♂, Gornotayozhnoje, 20 km SE from Ussuriysk,

30.VIII.1978 (Kasparyan); 1♂, Evseevka, 28.VI.1985 (Belokobylskij); 2♀, 1♂, environs of Spassk, 10, 12.VII.1993 (Belokobylskij); Khabarovskiy Kray: 1♀, 1♂, Khabarovsk, Khlekhtsy, 18th km, 4, 23.VII.1983 (Kasparyan) (ZIN, ZMUM). JAPAN: 1♀, Kobe, 18.VII.1937 (N.Zhenzhurist) (ZMUM).

DISTRIBUTION. East Palaearctic (Russian Far East and Japan).

REMARKS. I have described *rufimaculatum* as a subspecies of *varipes*, basing only on the original description and the Tsuneki's [1956, 1981b] diagnoses, but without studying the type. After examination of the Perez's type specimen I have realized that these species distinctly differ by the form of SAT and also by the color of trochanters and female abdomen. Females of the continental form of *rufimaculatum* have reddish markings on the abdominal segments (usually on tergites 1-4), just as females of the Japanese form, and all males have completely black abdominal segments. In spite of these differences, I do not see sufficient reasons for separating them even as subspecies, because similar forms differing by the abdominal color are known for the resembling species *pacificum* Gussakovskij, 1936, though in the latter case red-marked females are found in Japan not the continent. Thus, all mentions of *varipes* by Tsuneki and Japanese authors (1956-1981) and also the Japanese material of Gussakovskij (1936) should be attributed to the dark-coloured form of *rufimaculatum*.

Trypoxylon albipes F.Smith

Trypoxylon albipes F.Smith, 1856: 377. Lectotype, ♀: Albania (OUM). Designated by O.W.Richards: Antropov, 1986a: 627. Examined.

Trypoxylon sulcifrons Gussakovskij, 1936: 654. Lectotype, ♂: Turkmenistan, Farab (ZIN). Designated and synonymized by Antropov, 1986a: 627.

Trypoxylon mediator Nurse, 1903: 8. Lectotype, ♀: Pakistan, Quetta (BMNH). Designated and redescribed by Tsuneki, 1978: 63. Examined. **syn.nov.**

MATERIAL. ITALY: 1♀, Sardegna, Domusnovas, 11.VIII.1993 (G.Pagliano) (GP); SPAIN: 1♀, Alicante, 22.VIII.1911 (Mercet); 1♀, Maracena (MNCN); 1♂, Merida, 20.VI.1961 (NNHM); 2♀, 2♂, Sevilla, 1900 (R.DuBuysson) (MNHN). ALGERIA: 2♀, 1♂, Oran, 30.VI, 2.VII.1960 (J.Barbier) (MNHN). EGYPT: 6♀, Meadi, 30.V, 28.VI, 29.VI, 10.VII, 21.X.1930 (I.Priesner); 1♂, Cairo (I.Priesner) (NIIMW); 1♂, Cairo, 6.VII.1936 (AM). SYRIA: 1♀, Akbes, V.1898 (MNCN). ISRAEL: 2♂, Jerusalem, 15.VII.1971 (Bytinski-Salz) (TAU). TURKEY: 1♂, Van, 13.VII.1987 (R.Hensen) (JH); 1♂, Pr. Hakkari, Habur Deresi-Tai, S.Beytisebap, 10.VIII.1983 (W.Schacht) (HD); 1♀, Urfa, 1.VI.1968 (J.Gusenleitner) (JG). ARMENIA: 1♂, Asni, 28.VI.1969 (Richter) (ZIN). PAKISTAN: 10♂, 4♂, Quetta, V.1902, VIII.1902, V.1903, VI.1903, VII.1903, VIII.1903, V.1904 (BMNH). TAJIKISTAN: 12♂, Kondara, 8, 26, 28, 29, 30.VII, 3.VIII, 8.IX.1946 (Gussakovskij) (ZIN).

DISTRIBUTION. Mediterranean region, Middle and Central Asia (Greece, Albania, Syria, Azerbaijan, Uzbekistan, Turkmenistan, Tajikistan [Antropov, 1986a], Italy, Spain, Algeria, Israel, Turkey, Armenia, Pakistan).

REMARKS. All studied materials, including the type series of *mediator* as well as its redescription and illustration by Tsuneki [1978], completely agree with the type of *albipes*. Thus, the name *mediator* Nurse should be considered as a junior synonym of *albipes* Smith.

Trypoxylon nasale Tsuneki

Trypoxylon nasale Tsuneki, 1980: 2. New name for *nasutum* Tsuneki, 1979: 37 (holotype, ♀: Malaya (BMNH)), non *varipes nasutum* Tsuneki, 1974: 365 (holotype, ♀: Korea (HMNH)).

Trypoxylon minahime Tsuneki, 1992: 54. New name for *nasutum* Tsuneki, 1979: 37, non *varipes nasutum* Tsuneki, 1974: 365. **syn.nov.**

REMARKS. The name *minahime* Tsuneki, 1992 was erroneously given for the second time to *nasutum* Tsuneki, 1979 because of its homonymy [Tsuneki, 1974], which had been already removed [Tsuneki, 1980]. Thus, the name *nasale* Tsuneki, 1980 must be attached to the species.

Trypoxylon scitulum Tsuneki

Trypoxylon scitulum Tsuneki, 1980: 2. New name for *venustum* Tsuneki, 1979: 63 (holotype, ♂: Laos (BPBM)), non *venustum* Tsuneki, 1977: 8 (holotype, ♂: Taiwan (coll. Tsuneki)).

Trypoxylon bolouense Tsuneki, 1992: 54. New name for *venustum* Tsuneki, 1979: 63, non *venustum* Tsuneki, 1977: 8. **syn.nov.**

REMARKS. As in the previous case, the name *bolouense* Tsuneki, 1992 was given for the second time to *venustum* Tsuneki, 1979 because of its homonymy [Tsuneki, 1977], which had been already removed [Tsuneki, 1980]. Thus, the name *scitulum* Tsuneki, 1980 must be attached to the species.

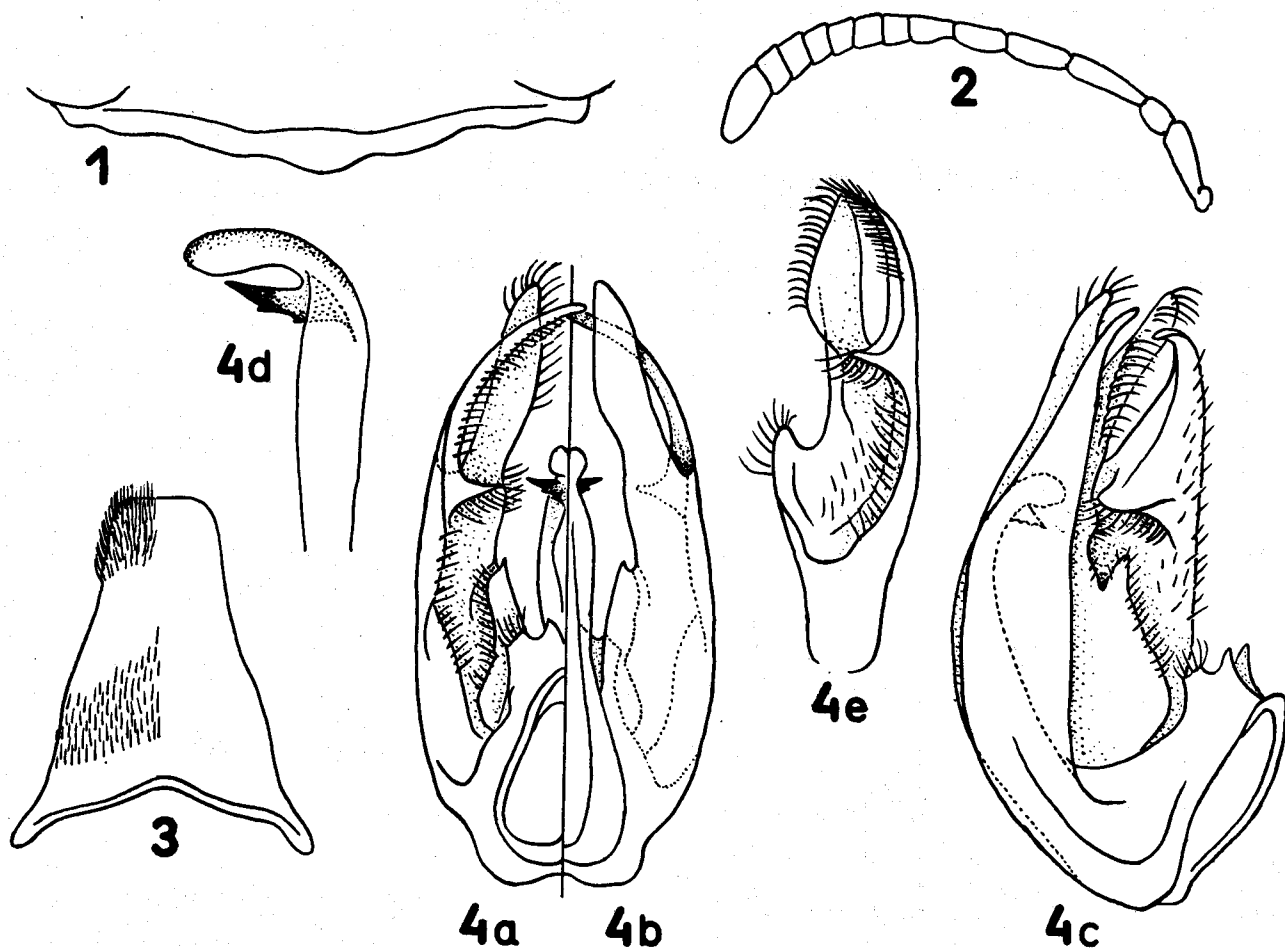
Trypoxylon pendleburyi Tsuneki

Figs. 1-4.

Trypoxylon pendleburyi Tsuneki, 1979: 36. Holotype, ♀: Malaya (BMNH).

MATERIAL. 2♀: Nepal, Kakani, 13-30.VII.1984 (M.G.Allen) (BMNH); 11♀, 2♂: Nepal, Kathmandu, VI.1982, IX.1982, IX.1983, V.1984, VI.1984 (M.G.Allen) (BMNH, ZMUM).

DESCRIPTION. MALE (previously unknown). Mainly corresponds to the original description of the female in external features except those connected with the sex: clypeus (Fig.1) with median triangular prominence and lateral angles; **IODs=30:22; OOD:OD:POD=4:7:13; A5** slightly convex posteriorly, basal half of A6 concave and its



Figs. 1-4. *Trypoxylon pendleburyi* Tsuneki, ♂: 1 - clypeus, frontal view; 2 - antenna; 3 - abdominal sternite 8, ventral view; 4 - genitalia (a - ventral view, b - dorsal view, c - right ventrolateral view, d - apical part of penis valve, e - left paramere from inner side).

apical half convex posteriorly (Fig.2), A5 and concave part of A6 with shiny longitudinal carenulae; A13:AW-22:10. G1:Ma:Mi-100:31:17. Abdomen completely black, with middle segments slightly brownish laterally. Abdominal sternite 8 (Fig.3) trapeziform, truncate apically, without notch and lateral projections. Genitalia (Fig.4): penis valve with rounded apical part curved ventrally and with acute preapical sickle, but without preapical lateral widening ("shoulder" in Tsuneki, 1981c); paramere deeply bifurcate apically, with split between apical lobes reaching level of preapical sickle of penis valve, with inner prominence transverse, almost flat, rounded apically, and inner lobe of basiparamere distinctly detached, acute apically; dorsal apical lobe of paramere flat and rounded apically, ventral one distinctly slender and sharp apically; volsella slightly bilobed apically, with acute, bare ventral lobe and truncate, densely setose dorsal one.

Body length 7.0 mm, forewing length 4.1 mm.

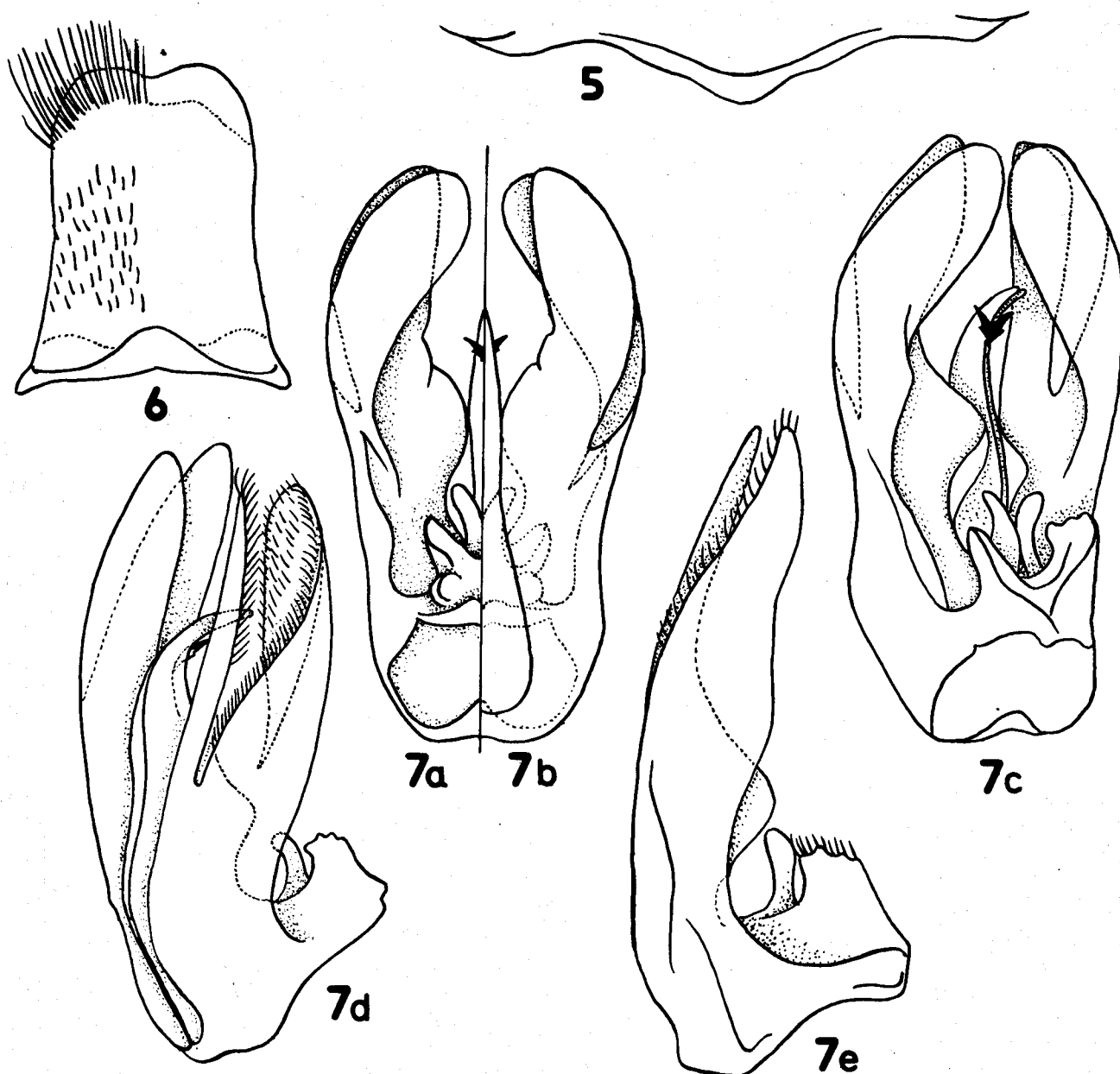
DIAGNOSIS. In the form of its genitalia the male of *pendleburyi* resembles some Oriental and East Palaearctic species of the genus, included by Tsuneki [1981c] into the species-groups *varipes* (sensu Tsuneki, non Perez) and *pacificum*, bearing a prominence on the inner side of their paramere (*rufimaculatum*, *pacificum*, *varipes*, *kodamanum* Tsuneki, 1972, *sextum* Tsuneki, 1979, *tengmen* Tsuneki, 1981, and *fenchihuense* Tsuneki, 1967). It may be easily distinguished from all these species by the following combination of genital features: inner prominence of paramere transverse, shelf-like (as in *fenchihuense*), basiparamere with detached inner lobe (as only in *pacificum* and *varipes*), dorsal apical lobe of paramere flat and rounded apically (as only in *kodamanum* and *sextum*), volsella with slightly detached and densely setose dorsal lobe (almost as in *sextum* and *fenchihuense*).

Trypoxylon guichardi Antropov, sp.n.
Figs. 5-7.

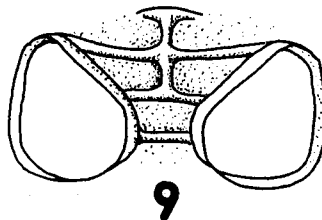
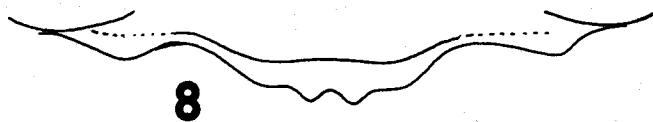
MATERIAL. Holotype, ♂: "Turkey, Karahana, 1700 m, 23.VI.1991 (K.Guichard)" (KG).

DESCRIPTION. MALE. Head in frontal view rounded, slightly transverse. Clypeus (Fig.5) with

obtusely convex apical margin and almost flat surface. Supraclypeal sclerite transversely triangular. **SAT** and **PAF** undeveloped; **ASR** narrow. Front convex, with oval pit (c. 1/3 of midocellar diameter) and broad indistinct medial impression in upper half. **IODs**=100:63; **OOD:OD:POD**=-5:10:15. Antennal segments simple; **A7-12** convex ventrally; **A13:AW**=100:64. Pronotal collar with



Figs. 5-7. *Trypoxylon guichardi* sp.n., ♂: 5 - clypeus, frontal view; 6 - abdominal sternite 8, ventral view; 7 - genitalia (a - ventral view, b - dorsal view, c - left ventrolateral view, d - left dorsolateral view, e - left lateral view).



Figs. 8-9. *Trypoxylon pseudoclavicerum* sp.n., ♀: 8 - clypeus, frontal view; 9 - supraantennal tubercle, ventral view.

rounded medial prominence and broad, opaque posterior band. Propodeal dorsal area not enclosed by furrows, with broad medial impression; lateral carina distinct, reaching propodeal spiracle anteriorly. **HF**=4/4. **G1** clavate, weakly widened posteriorly, with almost parallel lateral sides; **G1:Ma:Mi**=100:41:33. Abdominal sternite 8 (Fig.6) rounded and slightly incised apically. Genitalia (Figs.7): penis valve without preapical widening, with preapical sickle and thin apical part; paramere deeply (up to the roundish-triangular inner lobe of basiparamere) divided into two lobes of approximately same width; volsella bilobed, outer lobe wide and short, setose, inner one comparatively long and thin, bare.

Front mainly densely punctate (punctures ca. one diameter apart from each other), densely microsculptured, dull. Vertex and front dorsally more weakly microsculptured, semidull. Scutum and scutellum slightly more sparsely punctate (punctures 1.5-2 diameters apart), also densely microsculptured, semidull. Mesopleuron very delicately and sparsely sculptured dorsally, shiny, rest of its surface sculptured like scutum. Propodeal dorsum striato-cellulate basally and along lateral carinae. Propodeal dorsal area obliquely at base, on the rest of surface transversely delicately carinate. Propodeal lateral sides completely obliquely densely and delicately striate. Abdominal tergites transversely microstriate.

Pubescence weak, short, silvery, mainly developed on clypeus and along ventral half of inner eye orbits.

Black; ventral prominences of **A8-12** apically and **A13** ventrally, mandibular apical half, palpal apices, fore- and midtarsi partly reddish-brown; tibial spurs whitish-testaceous.

Body length 5.2 mm, forewing length 2.8 mm.

FEMALE unknown.

DIAGNOSIS. This species is similar to *planifrons* Tsuneki, 1977 and *testaceicorne* Cameron, 1907 in

the structure of parameres, differing from them by the form of basiparameres, penis valves, and especially by bilobed volsellae. The last feature is characteristic for the species of the group *nodosicorne* Turner, 1917 [Tsuneki, 1981c], which differ in having sickleless penis valves, simple parameres, and also by distinctly developed **SAT**, **ASR**, and **PAF**.

ETYMOLOGY. This species is dedicated to the British collector and wasp investigator Mr. Kenneth Guichard.

Trypoxylon pseudoclavicerum Antropov, **sp.n.**
Figs. 8-9.

MATERIAL. Holotype, ♀: "Morocco, Tizi Mil., 1600 m, 25.V.1983 (K.Guichard)" (KG).

DESCRIPTION. FEMALE. Head in frontal view rounded, with almost equal height and width. Clypeus (Fig.8) with convex basal surface and distinct apical border, bearing a pair of small medial teeth. Supraclypeal sclerite longer than wide. **SAT** tuberiform, with weak medial carina not reaching its apex, coarsely rugose above apex, with weak and almost straight transverse apical carina, connected ventrally by a short medial carenula with another transverse carina between narrow **ASR** (Fig.9). **PAF** undeveloped. Front convex, flat-concave medially, broadly impressed above in medial part. **IODs**=100:50; **OOD:OD:POD**=4:10:9. Antennal segments simple; **A3:AW**=100:35. Occipital carina thin, with ventral ends divided by distance exceeding foretibial width, and almost connected with hypostomal carina. Pronotal collar narrow, slightly wider than its translucent posterior band. Propodeal dorsal area enclosed laterally by wide and deep furrows, with medial furrow (its width equal to hindocellar diameter); lateral carina distinct, coarsely outlined dorsally, reaching propodeal spiracle anteriorly. **HF**=4/3-4. Hindcoxal organs oval, pit-shaped, distinctly margined posteromedially, plac-

ing almost on coxal middle. G1 clavate, moderately widened posteriorly; **G1:Ma:Mi**=100:49:24. Pygidium uniformly tapered apically, ridgeless.

Front densely punctate (punctures 0.5-1 diameters apart), densely (especially medially) microsculptured, dull. Vertex more delicately punctate, semidull. Scutum like frontal middle densely punctate and microsculptured, dull. Scutellum punctate more delicately than scutum, semidull. Mesopleuron dorsally and posteriorly shiny, almost impunctate, moderately (punctures 2-4 diameters apart) punctate, microsculptured, semidull. Propodeal dorsal area with complete, coarse transverse ridges, crossing lateral furrows and reaching lateral carinae. Propodeal hind side delicately transversely rugose. Propodeal lateral sides completely obliquely densely striate.

Pubescence silvery, short (mainly not longer than hindocellar diameter), erect or semierect, most dense on clypeus.

Black; mandibular apical half, foretibiae from within, translucent posterior border of pronotal collar, and tegulae reddish-brown.

Body length 7.3 mm, forewing length 4.5 mm.

MALE unknown.

DIAGNOSIS. This species resembles *clavicerum* Lep. et Serv., differing in having more prominent medial clypeal lobe, comparatively weak apical transverse carina of **SAT** connected with a lower parallel one by a longitudinal carenula, and especially coarsely and completely transversely ridged propodeal dorsal area.

ETYMOLOGY. The species name is derived from the Greek prefix "pseudo-" (-false) and the name of the resembling species *clavicerum* Lepeletier et Serville.

Trypoxylon gallopavo Antropov, sp.n.

Figs. 10-12.

MATERIAL. Holotype, ♀: Indonesia: "N.Sulawesi, Dumoga Bone N.P., Toraut R3, alt.m. 245, 31.V-8.VI.1985, Malaise trap (multistr. evergreen forest) (J.Huijbregts et al.)" (NNHM). Paratype, ♀: same location, 20.VI-3.VII.1985 (J.Huijbregts et al.) (ZMUM).

DESCRIPTION. FEMALE. Head in frontal view rounded, slightly narrowed below. Clypeus (Fig.10) with moderately convex basal surface and distinct, curved forward, wide (medially wider than hindocellar diameter), bare apical band; medial lobe with rounded angles and broad apical prominence, with weak medial incision. Supraclypeal sclerite longer than wide. **SAT** (Figs.11-12) very high, consisting of three separate parts: basal part with a pair of chink-like depressions, truncate dorsally, acutely carinate medially, and strongly squeezed

basally; middle part strongly erect, significantly swollen and longitudinally carinate laterally; apical part strongly narrowed laterally and distinctly concave at front. ASR expanded, with 3 concentric ridges. **PAF** deep, U-shaped. Front with a pair of high, smooth, oval swellings, comparatively weakly diverging below. Inner surface of ocellar triangle and vertex behind hindocelli distinctly convex. **IODs**=100:53; **OOD:OD:POD**=4:10:8. Completely circular occipital carina and hypostomal carina situated forefemoral thickness diameter apart from each other. **A3:AW**=100:24. Pronotal collar concave and transversely striate anteriorly, with wide (ca. hindocellar diameter) opaque posterior band. Anterior pronotal lamina acute, thorn-like. Propodeal dorsal area with medial furrow widened posteriorly, enclosed with distinct furrows; lateral carina distinct, reaching propodeal spiracle anteriorly. **HF**=5/3-4. Hindcoxal organ like small truncated cone, bearing a fascicle of light curved hairs inside its orifice. G1 flask-shaped; **G1:Ma:Mi**=100:24:6. Pygidium with shiny medial ridge.

Head sparsely and irregularly punctate, delicately cellularly microsculptured, semidull, with frontal swellings somewhat more shiny. Thorax delicately and very sparsely (punctures more than 5 diameters apart) punctate, shiny. Medial furrow of almost smooth propodeal dorsal area transversely ridged. Propodeal hind side and surface between lateral furrows of dorsal area and lateral carinae delicately transversely striate. Propodeal lateral sides smooth and shiny anteriorly, punctate posteriorly (punctures 2-3 diameters apart), and obliquely striate near orifice.

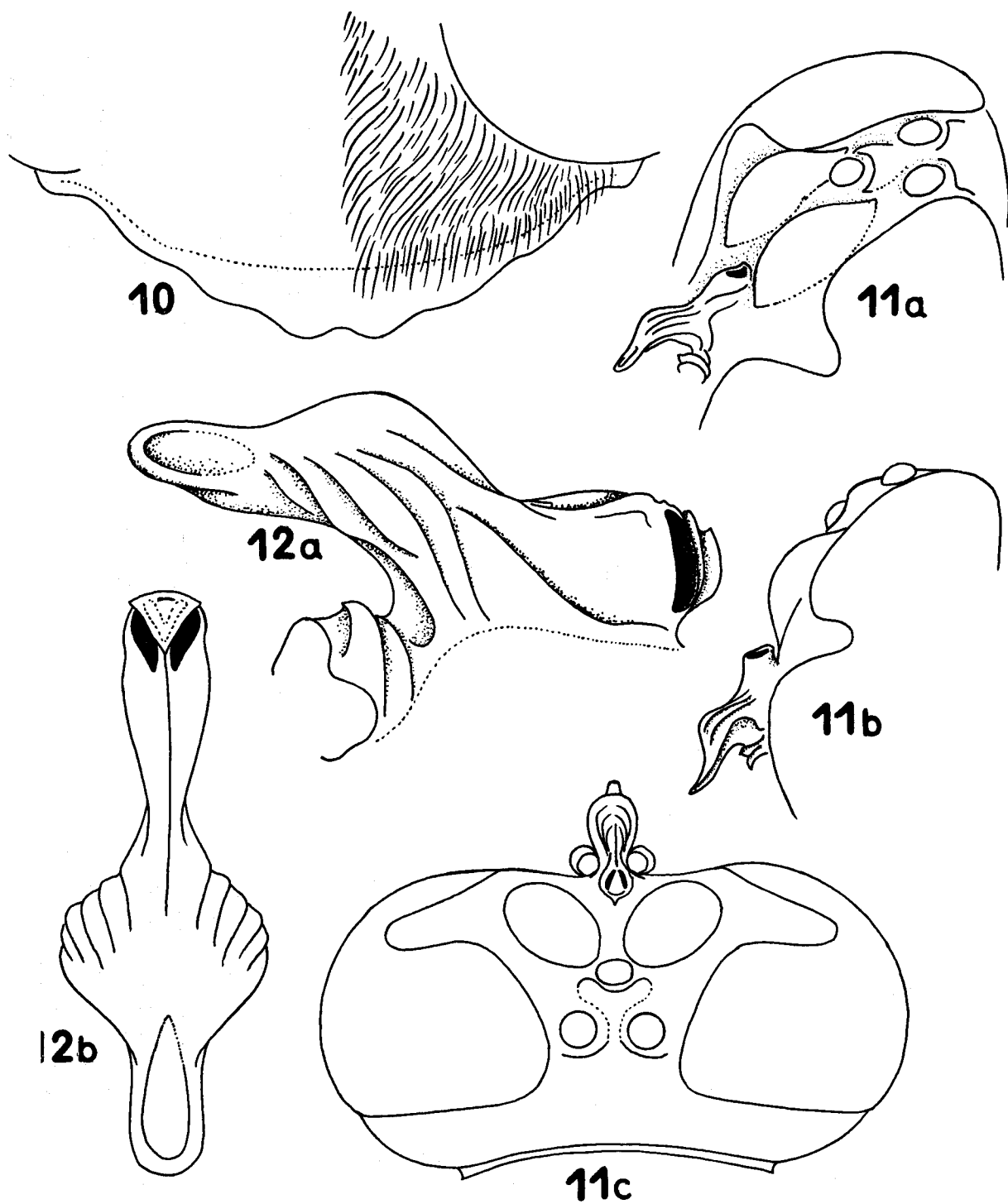
Pubescence mainly sparse (only on clypeal basal part covering sculpture), silvery, on head (except clypeal base) and thorax long (hairs about as long as one hindocellar diameter on scutum and longer than 2 hindocellar diameters on temples and mesopleurae), erect or semierect, on abdominal tergites and preapical triangles of sternites 2-5 very short and appressed. Hairs of clypeal base directed to its medial line.

Black; palpi, foretarsus completely, mid basitarsus mainly, and mid and hind tibial spurs whitish-yellow; mandible basally, foretibia mainly, mid- and hindtibiae basally, and hindtibial spurs reddish-yellow; mandible apically, tegula, and abdominal sternites 2-4 partly reddish-brown.

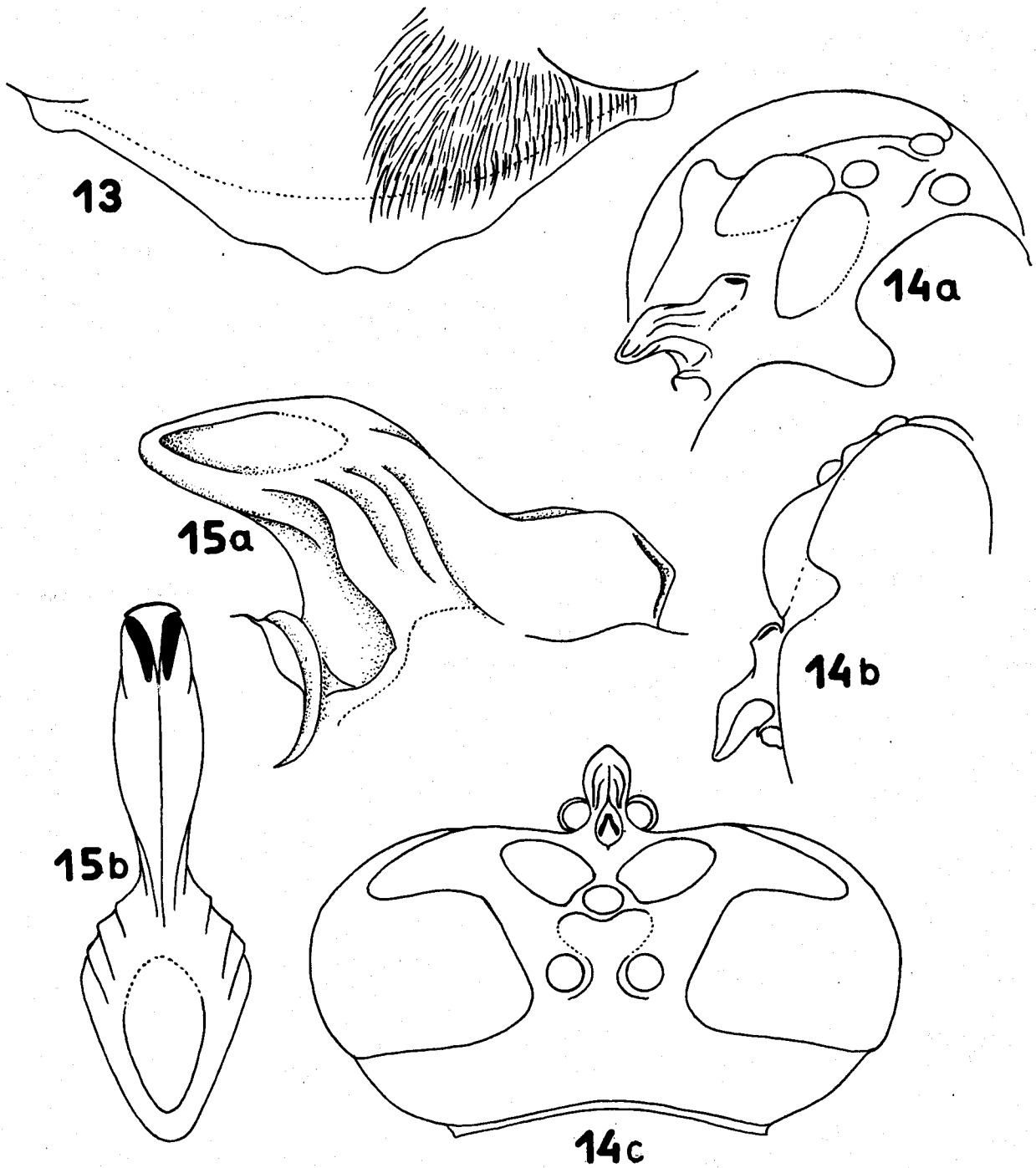
Body length 12.5 mm, forewing length 6.3 mm (12.5 and 6.1 mm in paratype).

MALE unknown.

DIAGNOSIS. *Trypoxylon gallopavo* sp.n. and the following species may be easily differed from all known Old World species by the form of their



Figs. 10-12. *Trypoxylon gallopavo* sp.n., ♀: 10 - clypeus, frontal view; 11 - head (a - left dorsolateral view, b - lateral view, c - dorsal view); 12 - supraantennal tubercle (a - left dorsolateral view, b - frontal view).



Figs. 13-15. *Trypoxylon papa* sp. n., ♀: 13 - clypeus, frontal view; 14 - head (a - left dorsolateral view, b - lateral view, c - dorsal view); 15 - supraantennal tubercle (a - left dorsolateral view, b - frontal view).

highly erect, beak-shaped SAT, and a pair of high oval frontal swellings. It differs from *papa* sp.n. in having higher SAT bearing a narrow apical lobe, and also mainly smooth propodeal dorsal area.

ETYMOLOGY. The species name is derived from the name of Turkey cock (*Meleagris gallopavo* L.) and emphasizes the long and comparatively slender SAT of the species.

Trypoxylon papa Antropov, sp.n.

Figs. 13-15.

MATERIAL. Holotype, ♀: "Indonesia: N.Sulawesi, Dumoga Bone N.P., ca. 220 m. Maze Toraut R., 0°34'N 123°54'E, 16-23.XI.1985, Malaise trap (C.V. Achterberg)" (NNHM). Paratype, ♀: Indonesia: "N.Sulawesi, Dumoga Bone N.P., Toraut R3, alt.m. 245, 8-15.VI.1985, Malaise trap (multistr. evergreen forest) (J.Huijbregts et al.)" (ZMUM).

DESCRIPTION. FEMALE. Head in frontal view rounded, slightly narrowed below. Clypeus (Fig.13) elongated, with moderately convex basal surface and distinct, curved forward, wide (ca. 1.5 hindocellar diameters), bare apical band; medial lobe with rounded angles and wide, oval apical prominence, bearing weak, obtuse medial incision. Supraclypeal sclerite longer than wide. SAT (Figs.14-15) very high, consisting of two separate parts: basal part with a pair of chink-like depressions, truncate dorsally, acutely carinate medially, and strongly squeezed basally; apical part strongly erect, moderately swollen and longitudinally carinate laterally, uniformly tapered apically, and broadly, distinctly concave at front. ASR expanded, with 3 incomplete concentric ridges. PAF U-shaped, shallow, with flat bottom. Front with a pair of high, smooth, oval swellings diverging below. Inner surface of ocellar triangle and vertex behind hindocelli distinctly convex. IODs=100:64; OOD:OD:POD=5:10:12. Completely circular occipital carina and hypostomal carina situated one foretibial thickness diameter apart from each other. A3:AW=100:22.

Pronotal collar flat and transversely striate anteriorly, distinctly curved posteriorly; with wide (wider than hindocellar diameter) opaque posterior band. Anterior pronotal lamina acutely angled. Propodeal dorsal area with medial furrow widened posteriorly, enclosed with wide, distinct furrows; lateral carina distinct, reaching propodeal spiracle anteriorly. HF=5-6/5. Hindcoxal organ like small truncated cone, bearing a fascicle of light curved hairs inside its orifice. G1 flask-shaped; G1:Ma:Mi=100:27:9. Pygidium with shiny medial ridge.

Sculpture, pubescence, and color similar to those of *gallopavo* sp.n., except distinctly transversely ridged surface of propodeal dorsal area.

Body length 14.0 mm, forewing length 7.4 mm (11.7 and 6.0 mm in paratype).

MALE unknown.

ETYMOLOGY. The species name is derived from the name of King Vulture (*Sarcophagophus papa* L.) and emphasizes the form of SAT, which is distinctly shorter and thicker than that of the previous species.

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