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***Franzorphius franzi* gen. et sp.n. from China** (Coleoptera: Zopheridae: Colydiinae)

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Abstract

Franzorphius gen.n. *franzi* sp.n. (Coleoptera: Zopheridae: Colydiinae) from southern China (Yünnan) is described and figured.

Key words: Coleoptera, Zopheridae, Colydiinae, *Franzorphius*, new genus, new species, taxonomy, China, Yünnan.

Introduction

The Colydiinae fauna of China is one of the least known in East Asia. DAJOZ (1977) recorded two genera and two species from China. Further notes about Chinese Colydiinae with species descriptions and faunistic data were published by SLIPINSKI (1985), summing up the species known from this country to a total of 6 genera and 8 species.

A new genus and species was collected recently in Yünnan and is described in this paper.

Methods and Abbreviations

Head width (HW): Across maximum width.

Head length (HL): Along mid line from anterior margin of clypeus to the line connecting the posterior margins of the eyes; the surface of the head has to be in a plane perpendicular to the optical axis.

Total length (TL): From apical margin of clypeus to apex of elytra.

Pronotal width (PW): Across maximum width (excluding denticulations).

Pronotal length (PL): Along mid line from anterior to posterior margin, the surface of the pronotum has to be in a plane perpendicular to the optical axis.

Elytral width (EW): Across maximum joint width.

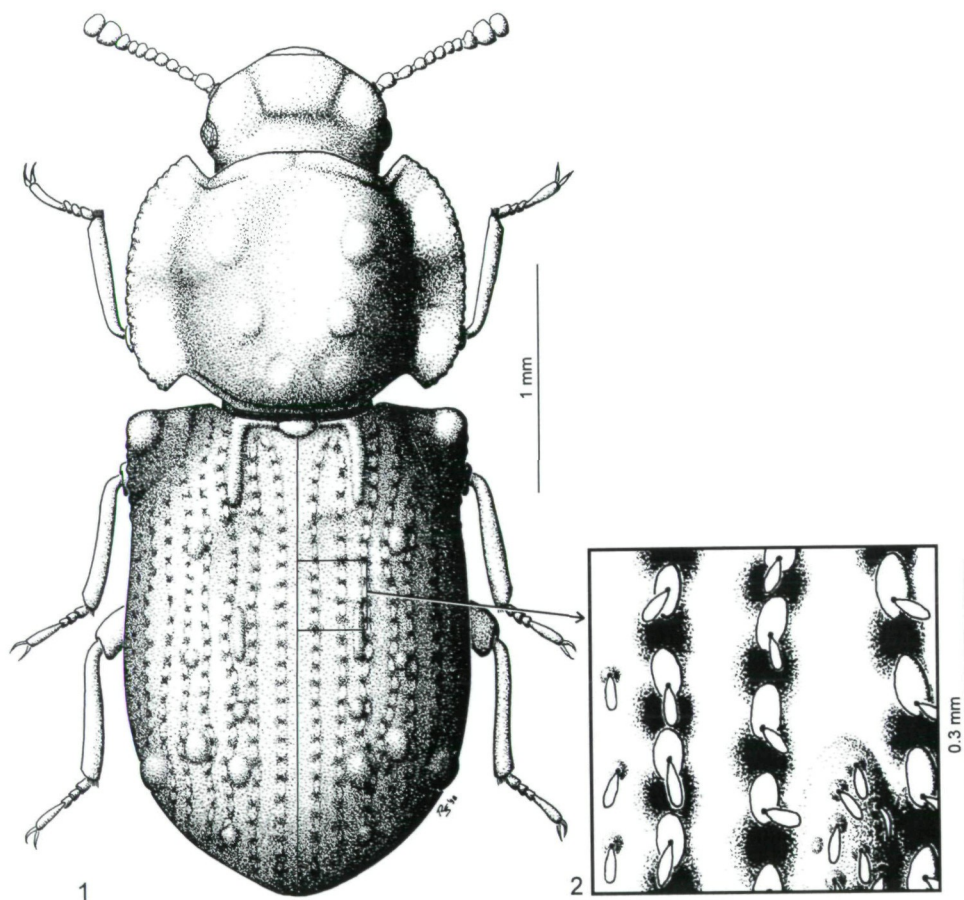
Elytral length (EL): Along the suture including scutellum.

CSK Coll. Schuh, Katzelsdorf

NMB Naturhistorisches Museum, Basel (M. Brancucci)

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Figs. 1 - 2: *Franzorphius franzi*, 1) habitus, 2) details of elytral structure at the position marked by a square in Fig. 1.

Franzorphius gen.n.

Type species: *Franzorphius franzi* sp.n.

Description: Size small (TL: 3.5 - 3.7 mm); body broadly oval (TL/EW = 2.45 - 2.55), strongly convex transversally. Vestiture of dorsal surface consisting of scales of similar length.

Head scarcely constricted behind eyes, temples absent. Eyes entire, interfacetal setae absent. Antennal grooves well developed, broad, reaching hind margin of eye.

Antennae 11-segmented, shorter than HW; antennomere 1 stout, antennomere 2 of same width, but longer, antennomere 3 narrower, 1.4 times as long as wide, antennomeres 4 to 9 slightly wider than long, subsequently becoming wider, club 2-segmented, apical antennomere truncate.

Mouthparts (Figs. 3 - 5). Mentum wider than long; labium wider than long, its apex nearly straight; labial palpi 3-segmented; maxillary palpi 4-segmented; galea of normal type; lacinia with sclerotized hook at its inner edge; mandibles bidentate.

Pronotum transverse, convex; disc flattened, shallowly concave in middle, with 4 slightly convex admedian gibbosities; lateral margins explanate and crenulate; anterior and posterior angles prominent and rectangular.

Ventral side of prothorax (Fig. 6): Proepisternum with antennal cavities shallow and not clearly delimited; prosternal process as wide as procoxal cavity, apex truncate, apicolaterally with two pointed appendices; procoxal cavities externally open.

Scutellum present. Elytra with 9 rows of punctures, scutellary striole absent; intervals without costae, but with gibbosities on intervals 3, 5 and 7; lateral margins not explanate; humeral angle rectangular, bent upwards and marked by a gibbosity; humeral callus absent. Alae absent. Epipleura incomplete apically.

Ventral side of pterothorax (Fig. 6): Mesocoxae separated by 0.5 their diameter; metasternum shorter than ventrite 1. Abdomen with all segments similarly articulated; intercoxal process of ventrite 1 narrow and rounded; ventrite 5 concave, with shallow preapical groove.

Legs short; femora hardly surpassing lateral margins of body; outer apical angle of tibiae rounded, without spines; tarsi 4-segmented, segments 1 to 3 of equal length, segment 4 as long as the 3 preceding together; claws simple.

Aedeagus well sclerotized, except for ventral side of phallobasis; basal piece about half of total length; parameres of elongated conical shape, distinctly separated at ventral side, dorsally separated by a sclerotized triangular lamella, which hides median lobe from above; median lobe short, parallel-sided, narrowing apicad to thin tip, only weakly sclerotized. Position of aedeagus in abdomen: convex side dorsal.

Differential Diagnosis: *Franzorphius* belongs to the tribe *Synchitini* as defined by SLIPINSKI & BURAKOWSKI (1988). Within this tribe it shows affinities to the west Palearctic *Tarphius* ERICHSON and the Oriental *Tarphiosoma* WOLLASTON, but can be easily distinguished from both by its narrowly separated procoxae and metacoxae. It is closely related to *Namunaria* REITTER, which contains 6 species in the transition zone between the east Palearctic and the Oriental Region (Schuh, unpublished data), but differs from that genus by the procoxal cavities externally widely open. At first glance, three more genera look similar but do not seem to be related to this new genus: *Megataphrus* CASEY from North America can be distinguished by its costate elytra and more clearly delimited antennal cavities on proepisterna. *Paratarphius* DAJOZ from Mauritius differs by its 3-segmented tarsi and by the number of elytral striae. *Heterargus* SHARP from New Zealand is one of the few genera without labial palpi.

Etymology: The generic name is a combination of "Franz-", in honor of Prof. DI DDr. h.c. Herbert Franz, first revisor of the genus *Tarphius*, and the ending "-orphius" as an arbitrary combination of letters reminding of the name *Tarphius*.

Franzorphius franzi sp.n.

Type material: **Holotype** ♂ (NMB): "YUNNAN, 30 May - 3 Jun 1993, JIZU MTS., 25.58N 100.21E, Bolm lgt., 2800m". **Paratype** ♂ (CSK): 1 ex., same data as holotype.

Description: TL: 3.7 mm (holotype), 3.5 mm (paratype). Broadly oval (TL/EW: holotype: 2.47; paratype: 2.54), subparallel, transversally strongly convex, dark brown to piceous; habitus as in Fig. 1. Dorsal sculpture with small gibbosities and shallow depressions; surface covered uniformly with short, yellow, squamiform setae.

Head transverse (HW/HL: holotype: 1.52; paratype: 1.70), broadest at eyes, converging apicad to insertions of antennae, from there still more convergent to apicolateral angles of clypeus; apical margin of clypeus straight; dorsal side of head strongly convex above the antennal insertions; frons slightly convex; clypeus slightly convex, separated from frons at the base by a

transverse impression, laterally by two apico-laterally directed sulci; frons and basal quarter of clypeus densely covered with flat-topped granules, each bearing an apicad directed squamule; granules largest at transverse frontoclypeal depression and apical part of frons; eyes slightly convex, facets large; antennae short, 0.9 times as long as HW; antennomere 1 short, not longer than wide; antennomere 2 of same width, 1.15 times as long as wide; antennomere 3 narrower, 1.4 times as long as wide; antennomeres 4 to 9 increasingly shorter and wider (width to length ratios: 4: 1.1; 5: 1.1; 6: 1.2; 7: 1.3; 8: 1.3; 9: 1.7); antennomere 9 asymmetric, sharply angled internally; antennomere 10 and 11 forming a 2-segmented club (width to length ratios: 10: 1.5; 11: 1.2); antennomere 11 apically truncate; antennomeres 2 to 9 each with a ring of fine long hairs, antennomeres 10 and 11 irregularly set with long hairs; antennomere 11 additionally with dense, fine, short pubescence apically.

Pronotum transverse (PW/PL: holotype: 1.35; paratype: 1.43), transversally convex; about twice as wide as head and of same width as elytra, widest in middle, margins convex basally and apically, subparallel in middle; apical margin convex medially, sinuate near prominent, rectangular anterior angles; pronotal base strongly rounded medially, deeply sinuate laterally near prominent, rectangular basal angles; disc shallowly impressed, impression flanked at each side by two indistinct gibbosities and basally by a flat elevation; lateral margins explanate, indistinctly crenulate, with condensed squamulation, in lateral aspect bisinuate and very thick (about the width of protibiae); sculpture and setation similar to that on head, squamules irregularly directed.

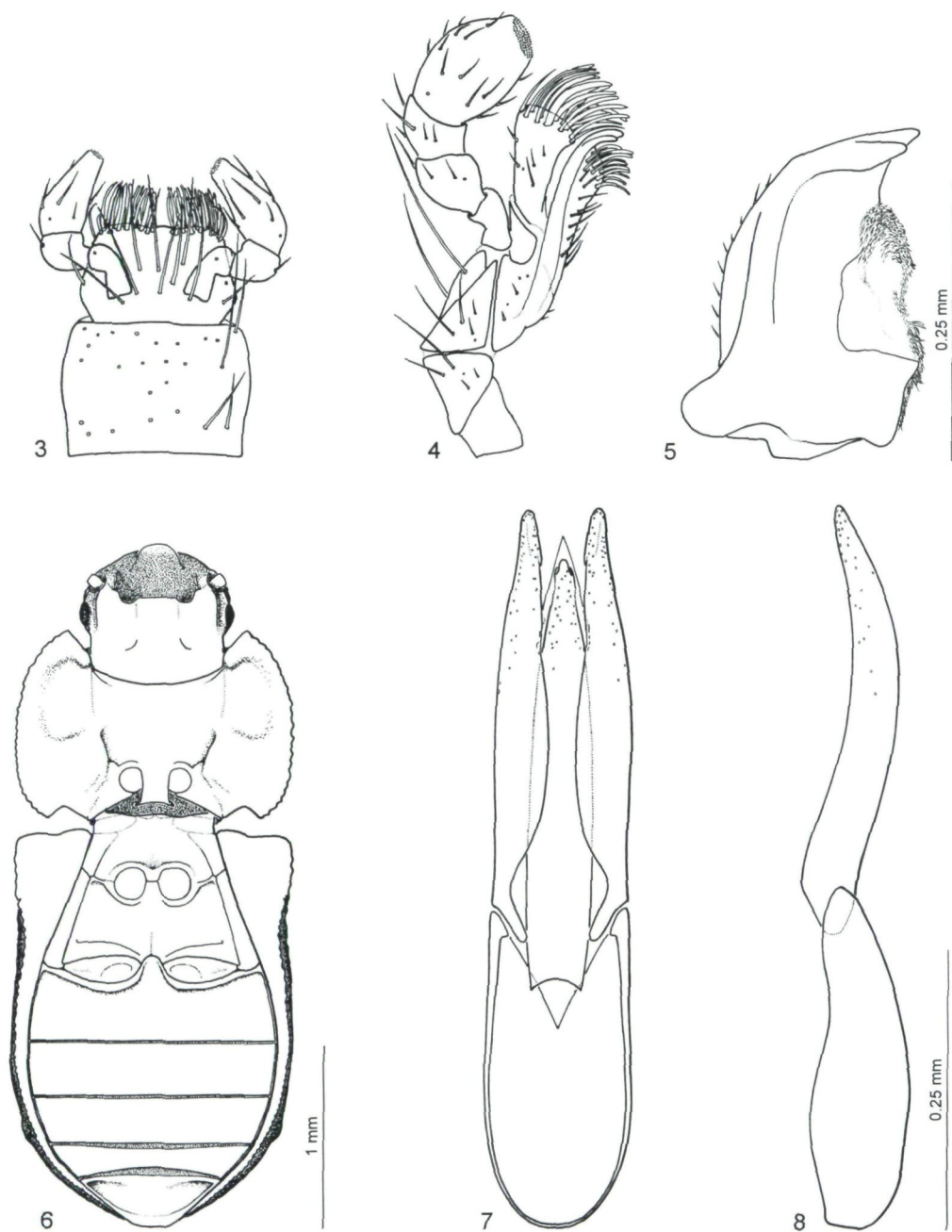
Prosternum and proepisterna sculptured as on dorsal side, granules becoming less distinct laterally; antennal cavities shallow, nearly smooth, not clearly delimited.

Scutellum strongly transverse. Elytra oblong (EL/EW: holotype: 1.43; paratype: 1.51), widest just behind middle, transversally strongly convex, slightly flattened on top; humeral calli absent; humeral angles nearly rectangular, narrowly rounded, marked by a large gibbosity, bent upwards in lateral aspect, separated from rest of elytra by a smooth, oblique sulcus; lateral margins not explanate, slightly crenulate, not visible from above in apical three quarters of their length; elytra punctate striate; striae punctures deep, separated from each other longitudinally by an elongated, flat-topped granule bearing a short, yellow squamule (Fig. 2); intervals of variable width, 0.5 to 1.0 times as wide as striae, usually widened at positions of gibbosities; each elytron with up to 9 dorsal gibbosities of variable extent, some of them indistinct; five gibbosities on third interval (i.e. a ridge-like gibbosity on base, two indistinct ones in median third, a round one at beginning of apical declivity and another one on apical declivity); three gibbosities on fifth interval (i.e. two indistinct ones in median third and a round one at beginning of apical declivity, the longitudinal positions of all three a little in front of the corresponding gibbosities on interval 3); seventh interval with one gibbosity at beginning of apical declivity at the longitudinal position of the corresponding gibbosities on interval 3; sutural interval with a single row of squamules similar to those on striae, each squamule separated longitudinally by two times its length; all other intervals smooth, except surface of gibbosities and humeral angle, where squamules are more or less condensed, depending on the extent of the particular gibbosity.

Metasternum shorter than ventrite 1; sculpture similar to that of frons. Ventrites 2, 3 and 5 of same length, shorter than ventrite 1 and twice as long as ventrite 4, their sculpture consisting of flattened, round granules separated by 0.3 to 0.6 their diameter.

Legs short; external side of tibia with broadened hairs, internal, anterior and posterior sides with fine hairs.

Aedeagus (Figs. 7, 8): 0.62 mm long, 4.6 times as long as wide; phallobasis 0.4 times as long as total length; parameres of elongated conical shape, slightly converging from the middle towards apex, becoming parallel-sided again shortly before reaching apex, in lateral aspect bent ventrad in a regular curve; median lobe short, 0.65 times as long as total length of aedeagus, parallel-sided, narrowing apicad to thin tip, only weakly sclerotized.



Figs. 3 - 8: *Franzorphius franzi*, 3) labium, setae on mentum partly omitted, 4) maxilla, 5) mandible, 6) ventral side, 7) aedeagus, dorsal aspect, 8) same, lateral aspect.

Biology: No data available.

Etymology: Named in honor of Prof. DI DDr. h.c. Herbert Franz.

Zusammenfassung

Eine neue Gattung und Art aus der Familie Zopheridae (Colydiinae), *Franzorphius franzi*, aus China (Yünnan) wird beschrieben und abgebildet. Die Unterscheidungsmerkmale zu allen verwandten und zu habituell ähnlichen Gattungen werden beschrieben.

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