

**A new species of *Geodromicus* REDTENBACHER, 1857,
with iridescent elytral maculae from China
(Insecta: Coleoptera: Staphylinidae)¹**

G. de Rougemont* & H. Schillhammer**

Abstract

Geodromicus cupreostigma sp.n. from China is described and illustrated. Its remarkable elytral color pattern is discussed.

Zusammenfassung

Geodromicus cupreostigma sp.n. von China wird beschrieben und abgebildet, sowie die bemerkenswerte Färbung der Elytren diskutiert.

Key words: Insecta, Coleoptera, Staphylinidae, Omaliinae, *Geodromicus*, China, new species.

Introduction

As more than ninety species attributable to the genus *Geodromicus* REDTENBACHER or to *Hygodromicus* TRONQUET, mostly based on isolated descriptions and published without figures of the sexual characters have been recorded from mainland Asia, it would seem inadvisable to describe more new forms before the entire group has been revised. However the new species described below can be immediately distinguished from all known members of these genera by its colour alone, so its description should not add to the difficulties faced by a reviser. The hitherto described species of *Geodromicus* are either black, fuscous or brown, or (in three species from Japan and northeast China, and frequently in one species from the Alps) with a reddish or testaceous macula on the anterior part of each elytron. The main purpose of this paper is to show that the combination of iridescent, metallic colour and coarsely rugose or sub-rugose sculpture often found in other groups of Staphylinidae that live in wet moss in cascades (*Dianous*, *Quedius* of the *intricatus* group, and a species of *Lesteva*), also occurs in *Geodromicus*, as does the structure described as “lamellar appendage” by CAMERON (1930: 161), and as tarsal “sole” or “shoe” in *Dianous* (ROUGEMONT 1980, footnote p. 171, 1985, footnote p. 171, and 2000, p. 147).

Units of measurements, other than that given in mm, were made using an eye-piece micrometer at 80 x and are therefore equivalent to 12.5 μ .

¹ Rougemont: 46th contribution to the knowledge of Staphylinidae.

Guillaume de Rougemont, 37 Ormiston Grove, London W12 0JR, England.

Harald Schillhammer, Naturhistorisches Museum, Burgring 7, A-1010 Wien, Austria. – harald.schillhammer@nhm-wien.ac.at

Geodromicus cupreostigma sp.n.

MATERIAL: ♂ **Holotype**, 1 ♂ and 3 ♀♀ **Paratypes:** CHINA, Shaanxi, Qinling Shan above Houzhenzi, 115 km WSW Xi'an, 1450 m, 35°50'N 107°47'E, 5.VII.2001, A. Smetana (C95a). (holotype and 2 paratypes in coll. Smetana, Ottawa; paratypes in coll. Rougemont, London and in Naturhistorisches Museum Wien).

Description (habitus, Fig. 1): body, first antennomeres, tibia and femora black with a bluish metallic reflex in most parts; antennomeres II-XI black to fuscous; palpi fuscous, paler at apices; tarsi fuscous to dark brown. Each elytron with a reddish coppery metallic macula on posterior margin occupying about 2/5th the length of elytron, the coppery centre haloed by greenish brassy metallic reflex. Pubescence pale, erect or semi-erect, longer on fore-body, shorter on abdomen where it is more evident on lateral parts of tergites and on paratergites. Habitus: Fig 1.

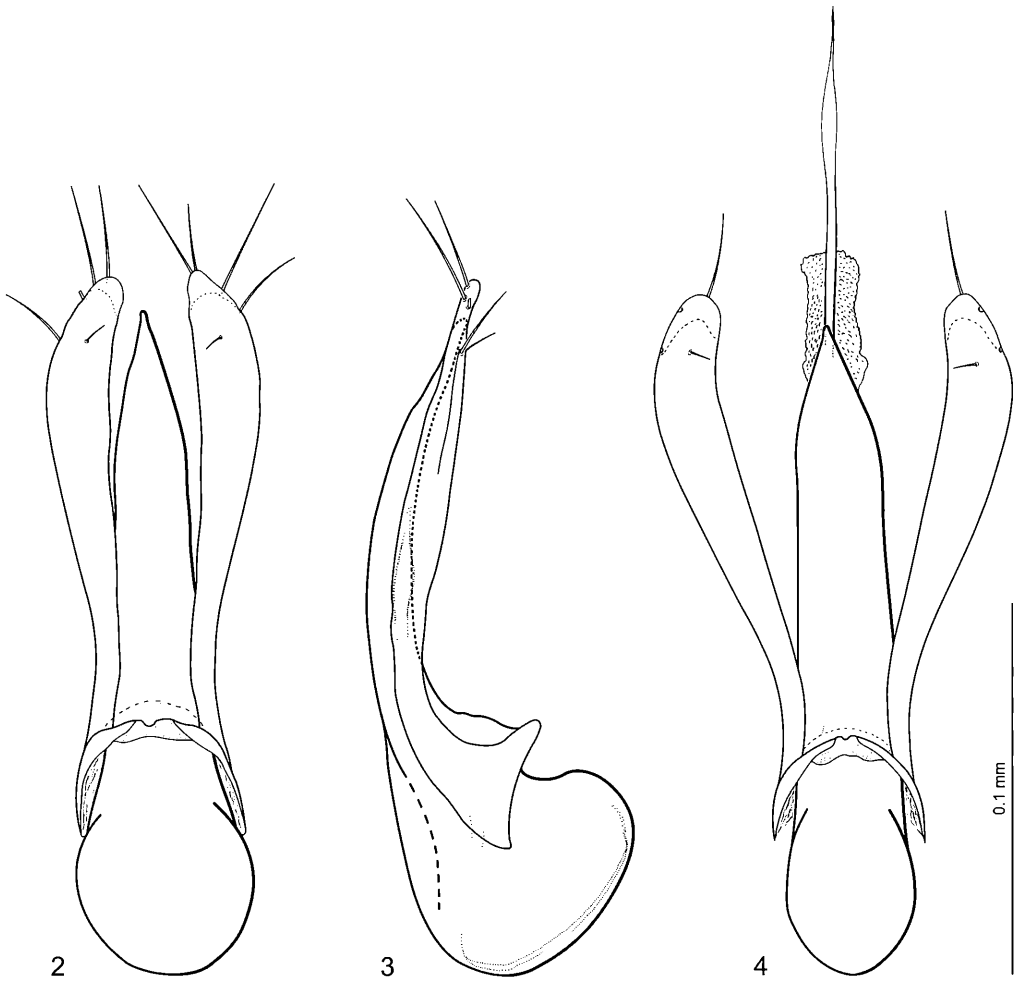
Proportions of holotype: length 5.2 mm. Length of head: 40; breadth of head including eyes: 62; antennomeres: I: 20; II: 12; III: 17; IV: 12; V: 12; VI: 13; VII: 13; VIII: 14; IX: 13; X: 12; XI: 22; length of pronotum: 60; breadth of pronotum: 68; length of elytron: 117; breadth of elytra: 105; metatarsus: 35.

Clypeus impunctate. Eyes large and prominent. Puncturation of head, pronotum and elytra very coarse and close, sub-rugose on parts of head and pronotum. Median depression of vertex narrow at base, strongly widened anteriorly. Pronotum transverse, the sides not sinuate, narrowed to base in straight lines, the disc with a broad longitudinal median impression and a transverse median impression at base, the two joined by a furrow which in some exx. is broadened so that the two impressions appear a single mid-longitudinal impression; on either side of the anterior impression but slightly posterior to it are two more rounded impressions extending towards but not reaching the median basal impression. Elytra broadened distally, with a juxta-sutural impression leaving the suture appear as a narrow salient keel; the elytra bear another impression on either side near the anterior border, closer to the humeral angles than to the scutellum. Abdomen very finely and moderately closely punctate; the second exposed tergite alone bears a pair of fairly large transverse tomentose patches. Tarsi short; all 4th tarsomeres bear a conspicuous broad, tapering tarsal sole 1/3 to 1/2 the length of onychium, extended apically by a brush of long fine setae that reach the apex of the onychium. Aedeagus (Figs. 2-4) long (70) and slender, the median lobe in lateral view not curved evenly, but abruptly declivous at about 1/3rd from base; the asymmetrically widened parameres extend beyond the apex of the median lobe, each lobe weakly sclerotised apically, bearing 3-4 long terminal setae (mostly broken off in Fig. 4) and a small subapical seta situated on the ventral surface.

The colour pattern of this *Geodromicus* recalls that of *Dianous gemmosus* PUTHZ, 2000. Apart from the colour, *G. cupreostigma* sp.n. is distinctively characterised by the pattern of deep impressions of the pronotum, and the long soles borne by the tarsomeres are particularly noticeable in this new species. This structure was mentioned by CAMERON (1930: 161) and illustrated and called "sole" in ROUGEMONT 1985, and "tarsal shoe" by PUTHZ (2000 and in other publications) in the genus *Dianous*. In *Geodromicus* and in most *Dianous* species it consists of a single tapering lamella apically fringed by long fine setae attached to the ventral side of the tarsomere, but in other species of *Dianous* may be expanded to partly envelope the base of the tarsomere, or become tubular, com-



Fig. 1: *Geodromicus cupreostigma* sp.n., habitus.



Figs. 2–4: *Geodromicus cupreostigma* sp.n.; 2) aedeagus, ventral view; 3) aedeagus, lateral view; 4) aedeagus with internal sac everted.

pletely encasing the onychium almost to its apex. In *Dianous* moreover tarsomeres I–III also frequently bear shorter soles. The structure is thought to be an adaptation to the hazards of life at the edge of cascades, the habitat of most *Geodromicus* and *Dianous*, by increasing the tarsus' resistance to the surface tension of water and better enabling the insect to remain afloat if it is accidentally swept into the stream (ROUGEMONT 1985, footnote p. 136).

Acknowledgements

The authors are indebted to Aleš Smetana for the opportunity of studying this material and for the gift of paratypes. G. de Rougemont is an honorary research assistant at the Oxford University Museum of Natural History.

References

- CAMERON M., 1930: The Fauna of British India including Ceylon and Burma. Coleoptera. Staphylinidae. Vol. 1: 1–471. – London: Taylor & Francis.
- COIFFAIT H., 1981: *Hygodromicus*, nouveau genre de Staphylinidae de la region Himalayenne. – Nouvelle Revue d'Entomologie 11(3): 257–260.
- HERMAN L., 2001: Catalog of the Staphylinidae (Insecta: Coleoptera). 1758 to the end of the second millennium. – Bulletin of the American Museum of Natural History no. 265: vol. 1: 1–650.
- PUTHZ V., 2000: The genus *Dianous* in China (Coleoptera, Staphylinidae). 261. Contribution to the knowledge of Steninae. – Revue Suisse de Zoologie 107 (3): 419–559.
- ROUGEMONT G. de, 1980: Stenine beetles from Nepal. – Entomologica Basiliensia 5: 170–186.
- ROUGEMONT G. de, 1985: In the footsteps of H. G. Champion: New *Dianous* species from the Himalaya (Coleoptera, Staphylinidae). – Entomologica Basiliensia 10: 123–144.
- ROUGEMONT G. de, 2000: New species of *Lesteva* LATREILLE, 1796 from China (Insecta: Coleoptera: Staphylinidae). – Ann. Naturhist. Mus. Wien, B, 102: 147–169.
- WATANABE, Y. 1990, A Taxonomic Study on the Subfamily Omaliinae from Japan (Coleoptera, Staphylinidae). – Memoirs of the Tokyo University of Agriculture, 31: 55–391.