

Linzer biol. Beitr.	34/1	771-777	30.8.2002
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## Description of a new *Omophron* species from Sichuan (Coleoptera, Carabidae, Omophronini)

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**A b s t r a c t :** *Omophron piceopictum* spec. nova from Sichuan (China) is described. Type locality: China, W.Sichuan (Ya'an Pref., Baoxing Co.), Jiajin Shan, riv. vall. 3 km S Qiaoqi, 78 km NNW Ya'an, 30°40'N/102°45'E, 1950 m. Comparisons are made to species from the Himalayas and northern India with elytral striae evanescent laterally or posteriorly (*O. oberthueri* GESTRO 1892, *O. chelys* ANDREWES 1929, *O. gemmeus* ANDREWES 1921, *O. bretteinghamea* PASCOE 1860 and *O. bicolor* ANDREWES 1919, and *O. parvum* TIAN & DEUVE 2000 (southern China). Illustrations of the habitus, the prosternal plate and the median lobe of the new species are presented.

**K e y w o r d s :** Coleoptera, Carabidae, Omophronini, *Omophron*, new species, Sichuan, China.

### Introduction

Recently, the Chinese species of the genus *Omophron* LATREILLE 1802 were revised (TIAN & DEUVE 2000). The authors recognized six species from China, described four of them as new and presented a key for the identification of the species occurring there. I regret very much that I, unfortunately, did not know of this project and therefore was not able to place at their disposal my material for this important revision. So this short article deals with the description of a further new species from China, increasing the number of the Chinese species to seven.

### Methods, Material and Acknowledgements

Total body length is measured from the tip of the mandibles to the apex of the right elytron; the width of the head (HW) as the maximum linear distance across the head, including the compound eyes; the length of the pronotum (PL) from the anterior to the posterior margin along the midline; the length of the elytra (EL) from the basal margin to the apex of the right elytron; the width of the pronotum (PW) and elytra (EW) at their broadest point.

These measurements, made at a magnification of 12.8X and using an ocular micrometer in a SM 20 stereobinocular microscope (Carl Zeiss Jena), were combined in ratios or added as follows:

BL: total body length;

PW/PL: width /length of pronotum;

PW/HW: width of pronotum /width of head;

EL/EW: length/width of elytra;

EW/PW: width of elytra/ width of pronotum.

Microsculpture was examined at a magnification of 100X.

Line drawings were prepared by using an ocular grid (15X15 squares) attached to a SM 20 stereobinocular microscope. Dissections were made with standard techniques; genitalia were preserved in Euparal on acetate labels, and pinned beneath the specimens from which they had been removed.

5?? and 5// of the new species were used for measurements to yield the above-mentioned ratios.

The study is based on examination of four specimens of *O. oberthueri* GESTRO, of six specimens of *O. gemmeus* ANDREWES and of four specimens of *O. bretteinghamea* PASCOE from Nepal in both sexes for comparisons (all in coll. Wrase), as well as 59 specimens of the new species described below.

I'm pleased to express my appreciation to Jiri Zidek (Prague) for the photograph and I'm very indebted to Dr. Robert Davidson (Pittsburgh), who was willing to read a previous draft of the manuscript on which this paper is based.

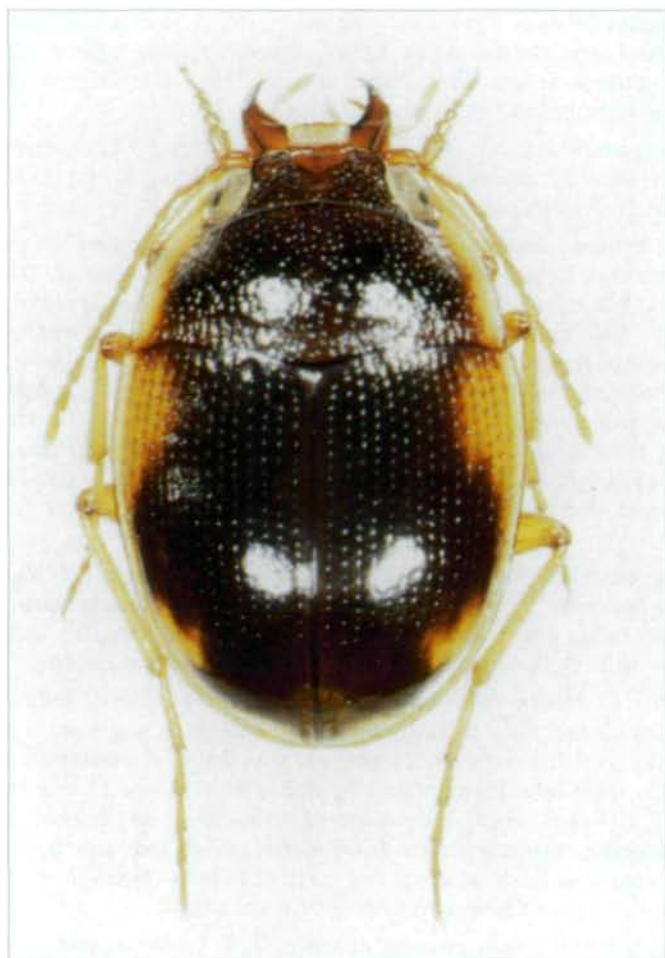
## Results

### *Omophron piceopictum* spec. nova

**Type material:** Holotypus ♂: "CHINA W.Sichuan (Ya'an Pref., Baoxing Co.) Jiajin Shan, riv. vall. 3 km S Qiaoqi, 78 km NNW Ya'an, 30°40N/102°45E, 1950 m (riv. bank) 11.VII.1999 D.W.Wrase" (Coll. Wrase, Berlin, Germany). Paratypes: 29♂♂ and 27♀♀ with the same datas as the holotype (Coll. Wrase; Coll. M. Baehr, Munich, Germany; Coll. I. Belousov, St. Petersburg, Russia; Coll. A. Dostal, Vienna, Austria; Coll. M. Hartmann, Erfurt, Germany; Coll. I. Kabak, Almaty, Kazakhstan; Coll. J. Schmidt, Rostock, Germany; Coll. J. Zidek, Prague, Czech Republic; Museum für Naturkunde der Humboldt-Universität, Berlin, Germany; Muséum National d'Histoire Naturelle, Laboratoire d'Entomologie, Paris, France; Oberösterreichisches Landesmuseum, Linz, Austria; The Carnegie Museum of Natural History, Pittsburgh, U.S.A.; Naturhistorisches Museum, Vienna, Austria; Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia). Paratype: 1♂: "CHINA (C Sichuan) Qincheng Shan NW Chengdu 600 m (river bank) 33.55 N /103.30 E, 3./4.VI.1997 Wrase" (Coll. Wrase). Paratype: 1♂: "CHINA W.Sichuan (Ganzi, Tibet. Aut. Pref., Luding Co.), tributary of Dadu He, 7 km S Luding (river bank) 29°53 N/102°13E, 1250 m 21.VI.1999 D.W. Wrase" (Coll. Wrase).

**D i a g n o s i s :** A small species with piceous elytra and a testaceous pattern and with contour hardly broken at junction of prothorax and elytra (in dorsal or ventral view). Elytra with 15 striae, stria 13 and 14 reaching from base to more than half of elytral length, then becoming evanescent; remaining inner striae becoming evanescent at about two-thirds from base (stria 15 complete). Habitus see fig. 1. For data on variation in some values of ratios see table 1.

**D e s c r i p t i o n :** Body length 4.5-5.7 mm; width 2.8-3.5 mm (holotype 5.1 mm and 3.1 mm, respectively).



**Figs. 1:** *Omophron piceopictum* spec. nova, habitus (paratype, locus typicus).

**Table 1.** Data on Variation in some Values among *Omophron piceopictum* spec. nova

	ex	BL	PW/P L		PW/H W		EL/E W		PW/E W	
		mm	Min- Max	Ø	Min- Max	Ø	Min- Max	Ø	Min- Max	Ø
♂♂	5	4.5-5.3	2.00- 2.24	2.16	1.55- 1.70	1.64	1.00- 1.02	1.01	0.92- 0.95	0.94
♀♀ holotype	5	5.0-5.7 5.1	2.02- 2.21 2.24	2.15	1.63- 1.69 1.66	1.65	1.02- 1.05 1.01	1.03	0.90- 0.93 0.94	0.91

Colour: Dark reddish piceous (without a green metallic tinge), shiny. Sternum and first abdominal sternites piceous, last sternite rather lighter. Clypeus reddish brown and labrum testaceous with greenish golden tinge. Palpi, antennae, legs, side margins of prothorax and elytra testaceous (the last two mostly with a greenish golden tinge).

The testaceous margin of the elytra with a very irregular inner edge, extending at base to stria 10 or 11, contracting midway to 15, expanding sharply to 8, contracting again to 10, and reaching apex by an irregular curved line.

Head fairly flat, coarsely punctate laterally and posteriorly, more sparsely on middle of frons, the punctures sometimes longitudinally confluent, sides distinctly bordered, the border somewhat dilated and reflexed. Clypeus smooth, bisetose, broadly bordered, broadly emarginate, suture with angle at middle. Mentum with rounded lobes and with an acute tooth, epilobes sharp and projecting at apex. Labrum slightly emarginate. Subocular ridge well developed, sinuate, strongly rugose-punctate. Penultimate segment of maxillary palpi about two thirds as long as last segment, with some short setae medially and some long setae apically on inner margin. Penultimate segment of labial palpi about as long as last segment, with about 4-6 setae along inner margin. First segment of antennae unisetose at apex, third and fourth segments without longer setae along outer margin.

Pronotum very transverse, moderately convex, sides evenly rounded at about middle and faintly sinuate or straight before the right or somewhat acute hind angles. Base bisinuate on each side. Punctuation rather coarse and not very close, somewhat irregular, with some small impunctate areas. Reflexed margin wide and smooth. Median line obsolete.

Elytra short-oval, moderately convex, base unbordered, sides hardly widened behind shoulders, lateral contour in dorsal view is hardly broken at junction of pronotum and elytra, with reflexed border, near base only a little narrower than that of pronotum, then becoming much narrower posteriorly. Elytra with 15 punctate striae, striae 13 and 14 reaching more than half of elytral length, then becoming evanescent, and remaining inner stria becoming evanescent at about two-thirds from base, toward apex only traces of rows visible, stria 15 complete. Striae at apical two thirds shallow with punctures of about the same dimensions as those on pronotum, intervals flat and smooth.

Prosternal plate (fig. 4) big, pentagonal, coarsely and irregularly punctate, distinctly broadly bordered at sides, hind margin angularly excavated and in part with a very fine, often interrupted border.

Sterna and episterna coarsely, somewhat irregularly punctate. Mesosternum (if pronotum in normal position to hindbody) almost invisible. Metepisternum a little shorter than wide. Metacoxae bisetose, abdominal sternites 4-6 bisetose. Segments 1 and 2 of male protarsi moderately dilated, segment 1 of mesotarsi not distinctly dilated.

Microsculpture consisting of a reticulation of reduced isodiametric or slightly transverse meshes on head and pronotum, somewhat irregular, weakly engraved and running into one another; distinct isodiametric meshes on elytra. Microsculpture in females a little more strongly engraved.

Medianlobe see figs. 2, 3.

**C o m p a r i s o n s :** The new species belongs to the group of species with the elytral striae evanescent laterally or posteriorly (with exception of last outer stria) and here to a subgroup of species with 15 striae on elytra and striae 1-14 evanescent toward apex: *O.*

*oberthueri* GESTRO 1892 and *O. chelys* ANDREWES 1929 (both from the Himalayas and northern India). But *O. oberthueri* (Gestro used in the description the name *oberthurii*) is a very small species (length 3.5-4.25 mm, width 2.4-2.6 mm, according to ANDREWES 1929), without microsculpture, the 14<sup>th</sup> elytral stria disappears at one fifth from the base. *O. chelys* is a remarkable species, according to Andrewes' description, in that the first segment of the male protarsi "is in the form of an enormous oblong plate, practically as long as 2-5 together, and twice as wide as the tibia." The 14<sup>th</sup> elytral stria disappears at one fifth from the base, striae 3-4 and 7-8 at a third from apex. It also lacks microsculpture. Beside these differences in comparison to *O. piceopictum* spec. nova the species mentioned here have a different elytral pattern and a different median lobe.

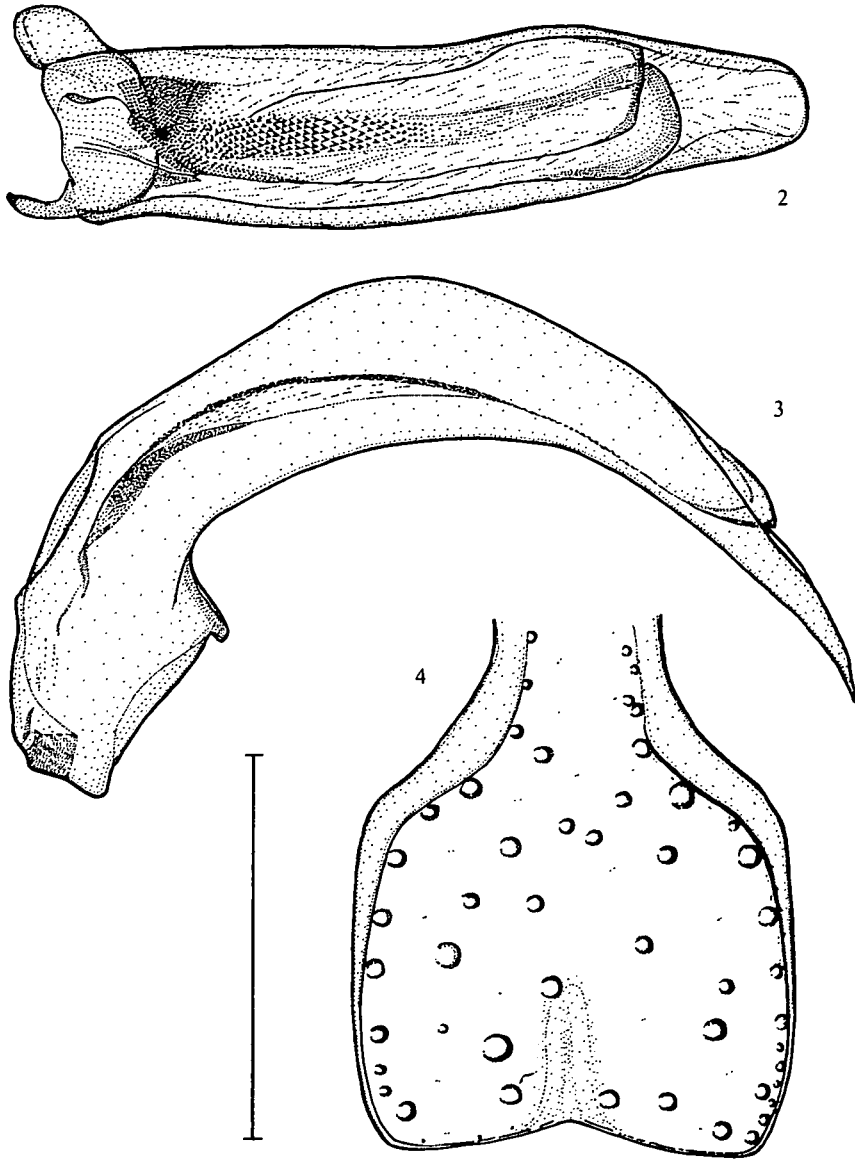
There is another small group of species from the the Himalayas and northern India with elytral striae evanescent laterally or posteriorly with exception of last stria (*O. gemmeus* ANDREWES 1921, *O. bretinghamea* PASCOE 1860, *O. bicolor* ANDREWES 1919), and the recently described *O. parvum* TIAN & DEUVE 2000 (from southern China), forming another subgroup, but in these species only 13 elytral striae exist (including the complete stria 15), stria 1-12 clearly marked at base, 13-14 obsolete, only represented by 1 or 2 punctures close to base, or traces only of the normal 13-14 visible near base. *O. parvum* seems to be similar to the species described here, but it differs by its smaller body size (according to TIAN & DEUVE 2000, length 4.1-4.3 mm, width 2.9-3.0 mm), the 13<sup>th</sup> and 14<sup>th</sup> elytral striae are obsolete and appear only at the base. The species lacks microsculpture, the prosternal plate is small and unbordered, and the front margin of the clypeus is narrowly but strongly bordered. Additionally there are differences in the elytral pattern, coloration and construction of the median lobe of all species of this subgroup, so *O. piceopictum* spec. nova cannot be referred to these species (*O. parvum* cannot be compared concerning the last character as only females are known up to now).

*O. piceopictum* spec. nova is the second species of the species group from China with elytral striae evanescent laterally or posteriorly.

**Etymology:** The name refers to the dark coloration of the body, which is piceous without a green metallic tinge, instead of the normal metallic green coloration in members of *Omophron* (latin: piceus = piceous; latin: pictus = painted).

**Distribution:** Up to now only known from three localities in the Chinese province of Sichuan (but surely with a wider distribution).

**Habitat:** As usual for *Omophron* species, the specimens were found on river banks near the water. The single specimen from the locality near Chengdu was found at the bank of a small and quickly running river under a stone at a distance of about 30 cm from water. The other single specimen from the locality near Luding was discovered under a big piece of wood lying in fine sand-about 3 m far from water. The specimens from the type locality lived in burrows in fine sand along some small tributaries, which had only a minimum of water or were almost dry, and at some distance to the main stream. They came out very quickly after "treading" the sand soil.



**Figs 2-4:** *Omophron piceopictum* spec. nova (paratype, locus typicus). 2 – median lobe, dorsal. 3 – median lobe, lateral. 4 – prosternal plate. Scale bars 0.5 mm.

### Zusammenfassung

Aus der chinesischen Provinz Sichuan wird *Omophron piceopictum* spec. nova beschrieben. Locus typicus: China, W.Sichuan (Ya'an Pref., Baoxing Co.) Jiajin Shan, riv. vall. 3 km S Qiaoqi, 78 km NNW Ya'an, 30°40N/102°45E, 1950 m. Neben der Differentialdiagnose zu den Arten mit nach hinten oder seitlich erlöschenden Flügeldeckenstreifen (*O. oberthueri* GESTRO 1892, *O. chelys* ANDREWES 1929, *O. gemmeus* ANDREWES 1921, *O. bretteinghamea* PASCOE 1860 und *O. bicolor* ANDREWES 1919 aus dem Himalaya und Nordindien und *O. parvum* TIAN & DEUVE 2000 (Südchina) werden eine Abbildung des Habitus, der Prosternalplatte und des Medianlobus der neuen Art gegeben.

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