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Two New Histerids (Coleoptera: Histeridae) from China【Research report】

中國產閻魔蟲科 (Coleoptera: Histeridae) 兩新種【研究報告】

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Abstract

Two new species of histerids (Coleoptera: Histeridae) are described and illustrated from China: Cryptomalus mingh sp. nov. from Yunnan Province and Platysoma sichuanum sp. nov. from Sichuan and Yunnan Provinces. A key to all known species from China is provided in this paper.

摘要

本文描述中國產閻魔蟲科兩新種：雲南產Cryptomalus mingh Mazur sp. nov.；四川及雲南產 Platysoma sichuanum Mazur sp. nov.。文中並附此兩屬之檢索表。

Key words: Cryptomalus mingh, Platysoma sichuanum, Histeridae, new species, China
關鍵詞: 閻魔蟲科、Cryptomalus mingh、Platysoma sichuanum、新種、中國。

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Two New Histerids (Coleoptera: Histeridae) from China

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ABSTRACT

Two new species of histerids (Coleoptera: Histeridae) are described and illustrated from China: *Cryptomalus mingh* sp. nov. from Yunnan Province and *Platysoma sichuanum* sp. nov. from Sichuan and Yunnan Provinces. A key to all known species from China is provided in this paper.

Key words: *Cryptomalus mingh, Platysoma sichuanum,* Histeridae, new species, China

Introduction

The vast territory of China seems to be one of the most important centers of evolution and dispersion of the histerids (Coleoptera: Histeridae) having the peculiarities of both, the Oriental and Palearctic Regions. Unfortunately, the Chinese histerids fauna is still not completely explored. The description of new species clearly shows how important it is to recognize the Chinese histerids as far as possible, including species composition and their detailed distributions.

This paper is based on materials from the collections of the Entomologické Oddělení Narodního Muzea and the Zoölogisch Museum Amsterdam as well as from the collection of Fabio Penati.

Abbreviations: EONM, Entomologické Oddělení Narodního Muzea, Praha, Čech Republic; ZMAN, Zoölogisch Museum, University of Amsterdam, Amsterdam, the Netherlands; CHSM, S. Mazur collection, Warszawa, Poland; CHFP, F. Penati collection, Morbegno, Italy.

General remarks

The genus *Cryptomalus* Mazur was erected by Mazur (1993) as a separate genus to include all intermediate species between *Platylomalus* Cooman and *Pachylomalus* Schmidt. Species belonging here differ from those of *Platylomalus* by the convex body and by marginal mesosternal stria narrowly interrupted anteriorly, and from those of *Pachylomalus* by a lack of transverse stria on the propygidium.

Previously, the species classified here were treated as members of the genus *Australomalus* Mazur (1991).

The genus *Platysoma* Leach, as defined lately (Mazur, 1999) is comprised of species with the pronotum punctured at the sides and with the post mesocoxal stria parallel to the lateral metasternal stria. Species belonging here are still

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insufficiently recognized. The genus is usually divided into three subgenera which are not so clearly separated (Ôhara & Mazur, 2002). The author checked and listed (Mazur, 1999) 18 species from the subgenus *Platysoma* s. str., distributed in the Holarctic, Oriental and Australian Regions.

No Oriental species of *Platysoma* s. str. is known to occur in China, so the new species has been compared with Palearctic species that are included in the key.

Systematic account

***Cryptomalus mingh* sp. nov.**

Body (Fig. 1) oval, convex, shiny. Color pitch-black, legs, mouthparts and antennae reddish- brown.

Head a little depressed behind complete clypeofrontal stria, very finely and sparsely punctulate, interspace among punctures with alutaceous miscrosculptures.

Pronotum narrowed anteriorly, its anterior angles jutting. Marginal stria complete, progressively diverging from margin laterally. Pronotal punctuation distinct and dense (width 0.5-1.0 punctures), uniformly distributed. Interspace among punctures alutaceous, basal row of punctures weakly marked.

Elytra alutaceous, broadest at humeri, more coarsely but as densely punctured as pronotum, except scutellar area, punctuation becoming finer apically. Dorsal striae marked only as indistinct, oblique traces on basal 1/2, the 2nd of them reaching nearly to apex. Elytral marginal stria strongly impressed and carinate on basal half, angulate medially and prolongated at the elytral apex as an apical stria extending a little along suture, reaching 1/4 of elytral length. Epipleural marginal stria fine and complete.

Propygidium and pygidium convex, alutaceous. Propygidium densely but not too coarsely covered by round punctures (width 0.5-1.0 punctures), except for a narrow basal band.

Prosternal lobe (Fig. 2) relatively long, finely and sparsely punctulate, rounded anteriorly, its marginal stria broadly interrupted, marked on sides only. Prosternum flat, alutaceous but without punctuation. Carinal striae straight, nearly parallel, a little convergent anteriorly. Mesosternum deeply emarginate at middle, its marginal stria carinate and nearly complete, narrowly interrupted medially. Mesosternal disc sparsely covered with fine punctures. Median stria complete, distinctly tripartite, its median part sinuous. Mesometasternal suture and median metasternal line not marked. Metasternum covered with large, oblong punctures laterally (width 1-3 punctures), punctures becoming finer medially, interspace among punctures with alutaceous microsculpture. Lateral metasternal stria extending obliquely and posteriorly, reaching metasternal-metepisternal suture.

Intercoxal disc of 1st abdominal sternum sparsely covered with coarse punctures (width 2-5 punctures).

Protibiae (Fig. 3) dilated, with 4(+1) spinules at outer margin, middle ones with 3(+2) spinules and some setae and hind tibiae with 1-2 spinules at outer margin.

Male genitalia as figured (Figs. 5-7).

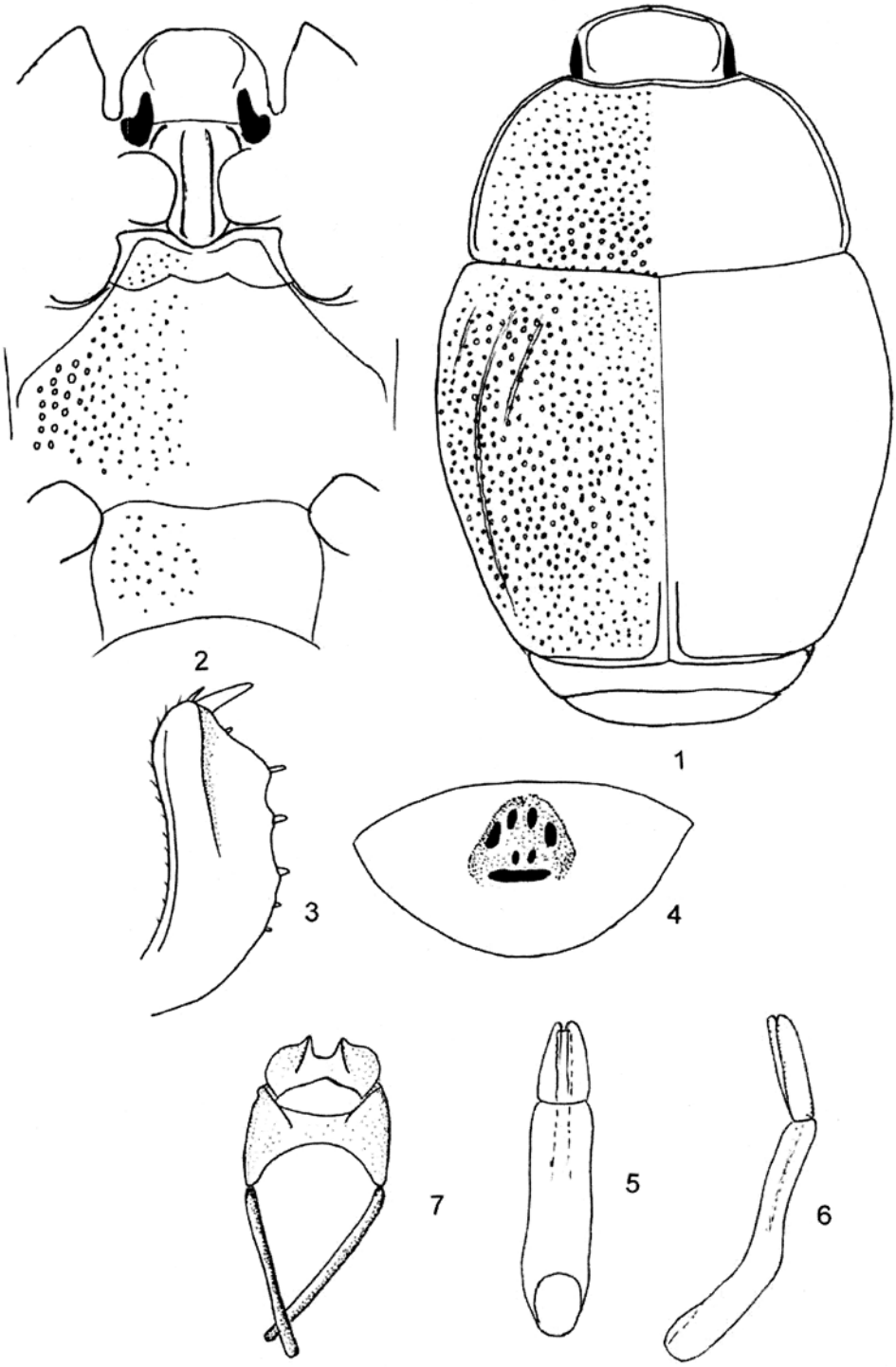
Sexual dimorphism. Female (Fig. 4): pygidium with triangular, deep depression at middle, on bottom of which there are some foveiform incisions and a transverse ridge at base of depression.

Length: total: 3.0-3.2 mm; PE: 2.7-2.8 mm. Width: 1.7 mm.

Materials examined:

Holotype: male, CHINA. YUNNAN: VII-1993, leg. Weibaoshan, (ZMAN).

Paratypes: 4 males labeled as holotype; CHINA. YUNNAN: 1-19-VII-1992, (one of them in the author's collection, CHSM), Heishui, 27°13'N 100°19'S, 18-VI-4-VII-1993, 35 km N of Lijiang, legit. S. Bečvář,



Figs. 1-7. *Cryptomalus mingh.* 1, Upper side; 2, under side; 3, protibia; 4, pygidium of female; 5, 6, aedeagus; 5, ventral view; 6, lateral view; 7, 9th and 10th tergites, dorsal view.

(1♂1♀, ZMAN; 1♂2♀, CHFP).

Key to the known species of *Cryptomalus* Mazur

1. Marginal mesosternal stria widely interrupted anteriorly, replaced by a median stria ---------- 2.
-. Marginal mesosternal stria narrowly interrupted, not replaced by a median stria ---------- 4.
2. Upper body surface micro-reticulate. Vietnam. ------*C. torquisulcus* (Cooman).
-. Upper body surface glabrous ---------- 3.
3. Pronotal punctuation uniform, the punctures oval. Nepal. ---------- ---------- *C. schawalleri* (Mazur).
-. Pronotal punctuation fine and sparse anteriorly, the pronotal base with irregular rows of coarse and slightly elongate punctures. Fiji. ---------- ----------*C. kuscheli* (Mazur).
4. Marginal stria of prosternal lobe widely interrupted. China: Yunnan. ---- ---------- *C. mingh* sp. nov.
-. Prosternal lobe completely margined - 5.
5. Pronotal base with a striiform crenulation. Head, pronotum and pygidiujm alutaceous. Japan. ----------*C. montivagus* (Lewis).
-. Pronotal base only with a row of punctures. Head, pronotum and pygidium glabrous. Nepal. ------*C. sherpa* (Mazur).

***Platysoma sichuanum* sp. nov.**

Body (Fig. 8) oblong, black, shiny; antennae and legs reddish-brown. Antennal club with V-shaped sutures, sutures interrupted medially. Ratio of width of pronotum to head 2.23-2.31. Frons slightly excavated; surface finely but rather densely punctulate (width 2-3 punctures), only several coarse punctures distributed along base. Frontal stria of head complete and impressed. Orbital stria present along eyes only. Epistoma excavated, as punctulate as that of frons. Labrum relatively wide, concave, widely emarginated anteriorly. Mandibles convex, finely punctulate, their outer edge with 1 dent.

Pronotal sides weakly arcuate and convergent on basal 2/3, thence acutely convergent forwardly. Marginal pronotal stria complete laterally. Outer pronotal well impressed, united with apical pronotal stria, last one a little carinate. Disc sparsely covered with fine ground punctulation, almost smooth at middle. Lateral 1/4 of pronotum rarely covered with elongate, shallow punctures, separated by 0.5-3.0 times their diameters. A narrow, lateral band outside of outer pronotal stria only with ground punctulation. Pronotal base at sides with some coarse punctures.

Epipleura of elytra even and smooth. Epipleural marginal and elytral marginal stria complete and impressed, their ventral edge carinate. Elytral marginal stria sinuate medially. Sometimes an irregular row of punctures present along both these striae. Oblique and fine humeral stria present on basal 1/5. Subhumeral striae absent. First to 3rd dorsal stria complete and impressed, the 3rd one slightly bisinuous. Fourth and fifth dorsal stria abbreviated basally, the 4th present on apical 1/4-1/5, the 5th on apical 1/6-1/8. Sutural stria absent. Surface of elytra evenly covered with very fine punctulation.

Propygidium slightly incised at sides, irregularly covered with large, oval and ocelloid punctures, separated by 0.5-5.0 times their diameters. Interspaces among large punctures smooth, only with some small punctures, sparsely distributed. Pygidium covered with smaller punctures as those of propygidium, rather regularly distributed (width 0.5-2.0 punctures), punctures becoming finer apically.

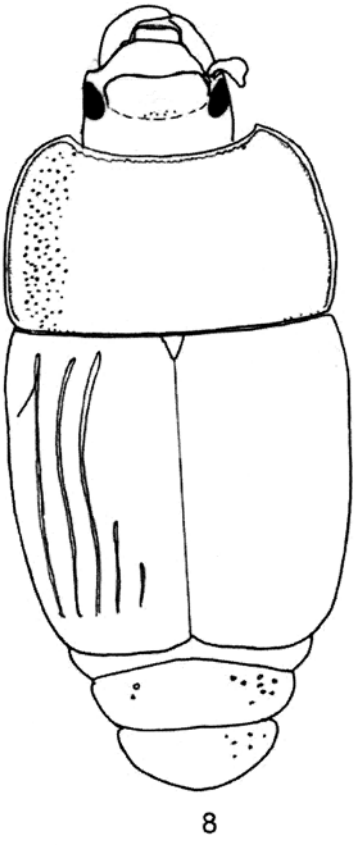
Prosternal lobe (Fig. 9) broad and even, its anterior margin rounded; disc sparsely covered with fine punctulation and with coarse punctures, rather regularly distributed (width 0.5-2.0 punctures). Marginal stria impressed and shortened laterally, its posterior end slightly bent inwardly, lateral secondary stria present. Prosternal process flat, without carinal

striae; surface finely and sparsely punctulate. Prosternal disc with some large and elongate punctures densely distributed, especially along anterior coxae. Posterior margin of prosternal process rounded outwardly. Two lateral striae present, their outer edges carinate.

Mesosternum transverse and flat; surface very finely and sparsely covered with microscopic punctures; anterior margin broadly and arcuately emarginated. Marginal stria of mesosternum well impressed and complete. Meso-metasternal stria feebly impressed. Intercoxal disc of metasternum as punctured as that of mesosternum. Median line of metasternum deeply impressed. Lateral metasternal stria carinate, extending posteriorly, apical end reaching metacoxa and curved inwardly. Postmesocoxal stria present outside of lateral metasternal stria and paralleling it, sometimes abbreviated apically. Lateral metasternal disc densely covered with large, elongate punctures (width 0.2-0.5 punctures). Interspaces among coarse punctures intermingled with small ones.

Intercoxal disc of 1st abdominal segment sparsely covered with microscopic punctures. Two striae present on each side, inner one complete, outer one marked on posterior 1/2; their outer edges cariniform. Lateral disc densely covered with some rugae and elongate punctures. Second to 4th abdominal sterna with irregular rows of coarse punctures in middle, punctures becoming finer apically.

Protibia with 4 spiny dents on outer margin and a pair of spines at inner angle. Mesocoxa with longitudinal carina. Mesotibia with 3 dental spines on outer



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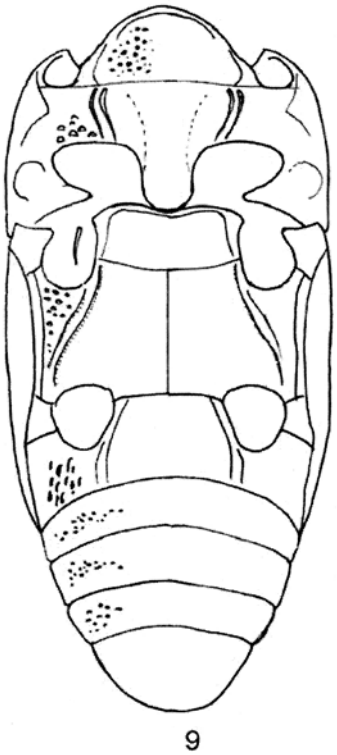

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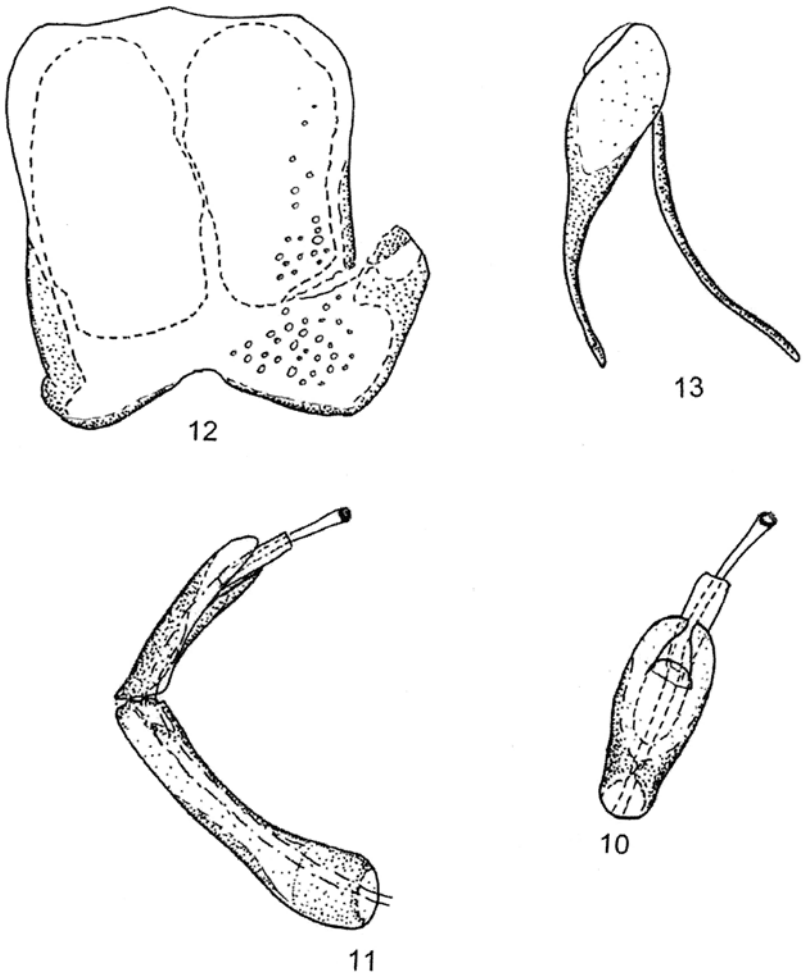
Figs. 8-9. *Platysoma sichuanum.* 8, Upper side, 9, under side.



Figs. 10-13. *Platysoma sichuanum,* genital structures. 10, Aedeagus, dorsal view; 11, aedeagus and basal piece, lateral view; 12, 8th tergite and sternum, dorsal view; 13, 9th and 10th tergites and speculum, lateral view.

margin and 3 spines on apical one. Metatibia with 2 spines at outer margin and 4 spines on apical one. Ventral surface of profemur rarely covered with small, shallow punctures, sparsely distributed (width 2-4 punctures).

Male genitalia (Figs. 10-13). Eighth sternit divided into 2 lobes. Ninth tergit with posterolateral projections stick-like in shape. Ratio of length of parameres to basal piece about 0.62; basal piece long. Lateral sides of parameres divergent apically at basal 1/2, thence convergent apically. Parameres fused on dorsal surface. Median lobe simple.

Length PE: 3.0-3.3 mm; total: 4.2-4.5 mm. Width: 1.9-2.1 mm.

Materials examined:

Holotype: male, Chung King [Chungching], Szechwan [Sichuan], China Centralis [Central China], (EONM).

Paratypes: 3 males, 8 females, same

locality as holotype (2 of them kept in the author's collection, CHSM); sex undetermined. CHINA. YUNNAN: 2.5-3.8 km, 27°20'N, 100°11'E, Habashan Mts., SE slope, 2.5-3.8 km, 3-6-VI-1995, lgt. S. Bečvar (2 specimens, CHSM, 1 specimen, CHFP); YUNNAN: Heishui, 35 km N Lijiang, 27°13'N, 100°19'E, 18-VI-4-VII-1993, S. Bečvar leg. (5 specimens, CHFP); YUNNAN: Ninglang env., 27°19'N 100° 55'E, 6-10-VII-1992, S. Bečvar leg. (2 specimens, CHFP).

Differential diagnosis. It may be distinguished from other Palearctic species as given in the following key.

Key to the Palearctic species of *Platysoma* s.str.

1. Each elytron with 4 complete dorsal striae----------2.
-. Each elytron with 3 complete dorsal striae----------4.
2. Marginal mesosternal stria complete. Short fragment of outer subhumeral stria present medially. China (Yunnan). ----------*P. beybienkoi* Kryzhanovskij
-. Marginal stria of mesosternum broadly interrupted anteriorly. Subhumeral striae absent ----------3.
3. Body size greater, total length more than 4 mm. Intercoxal disc of 1st abdominal sternite impunctate. Pronotum rectangular in shape. Basal piece of aedeagus as long as parameres. Syria. ---------- ----------*P. inexspectatum* Lackner
-. Size smaller, total length under 4 mm. Intercoxal disc of 1st abdominal sternite distinctly punctuate at sides. Pronotum more convergent apically. Basal piece of aedeagus distinctly longer than parameres. Northern and eastern Europe, Siberia, Japan, China (Heilongjiang, Inner Mongolia).---------- ----------*P. deplanatum* (Gyllenhal)
4. Marginal stria of mesosternum broadly interrupted. Europe, Caucasus, Syria, Iran. ----------*P. compressum* (Herbst)
-. Marginal stria of mesosternum complete ----------5.
5. Apical stria of pronotum broadly interrupted medially ----------6.
-. Apical stria of pronotum usually complete, sometimes feebler medially or even narrowly interrupted ----------7.
6. Fifth dorsal and sutural stria absent. North Korea. --------- *P. koreanum* Mazur
-. Fifth and sutural striae present at apex, sutural one usually beginning shortly beyond middle and ending a little beyond basal end of 5th dorsal stria. China (Shandong), Taiwan. ---------- ----------*P. chinense* Lewis
7. Median part of pronotal emargination straight. China (Sichuan).---------- ----------*P. sichuanum* sp.nov.
-. Median part of pronotal emargination arcuate outwardly ----------8.
8. Body size greater, the length over 3 mm. Sutural stria usually present. Japan (Ryukyu Archipelago), Taiwan.-- ----------*P. takehikoi* Ôhara
-. Size smaller, the length under 3 mm. Sutural stria absent, sometimes marked by elongate punctures. Japan, South Korea.---------- *P. rasile* Lewis

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中國產閻魔蟲科 (Coleoptera: Histeridae) 兩新種

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摘　要

本文描述中國產閻魔蟲科兩新種：雲南產 *Cryptomalus mingh* Mazur sp. nov.；四川及雲南產 *Platysoma sichuanum* Mazur sp. nov.。文中並附此兩屬之檢索表。

關鍵詞：閻魔蟲科、*Cryptomalus mingh*、*Platysoma sichuanum*、新種、中國。

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