

### Monograph



https://doi.org/10.11646/zootaxa.5096.1.1 http://zoobank.org/urn:lsid:zoobank.org:pub:1D9BC8E2-5864-4EA2-812E-D081274FBD46

# **ZOOTAXA**



## Revision of the genus *Adiscus* Gistel, 1857 (Coleoptera: Chrysomelidae, Cryptocephalinae) from mainland China

#### WEN-YUAN DUAN<sup>1,2,3</sup> & HONG-ZHANG ZHOU<sup>1,2,\*</sup>

<sup>1</sup>Key Laboratory of Zoological Systematics and Evolution, Institute of Zoology, Chinese Academy of Sciences, 1 Beichen West Rd., Chaoyang District, Beijing 100101, P. R. China

<sup>2</sup>University of the Chinese Academy of Sciences, 19A Yuquan Rd., Shijingshan District, Beijing 100049, P. R. China

<sup>3</sup> https://orcid.org/0000-0002-3032-5864

\*Corresponding author. = zhouhz@ioz.ac.cn; https://orcid.org/0000-0003-4559-5207; Tel: +86-10-64807252; Fax: +86-10-64807099



Accepted by C. Reid: 28 Oct. 2021; published: 9 Feb. 2022

#### WEN-YUAN DUAN & HONG-ZHANG ZHOU

Revision of the genus *Adiscus* Gistel, 1857 (Coleoptera: Chrysomelidae, Cryptocephalinae) from mainland China

(Zootaxa 5096)

80 pp.; 30 cm.

9 Feb. 2022

ISBN 978-1-77688-452-0 (paperback)

ISBN 978-1-77688-453-7 (Online edition)

FIRST PUBLISHED IN 2022 BY

Magnolia Press

P.O. Box 41-383

Auckland 1041

New Zealand

e-mail: magnolia@mapress.com

https://www.mapress.com/zt

#### © 2022 Magnolia Press

All rights reserved.

No part of this publication may be reproduced, stored, transmitted or disseminated, in any form, or by any means, without prior written permission from the publisher, to whom all requests to reproduce copyright material should be directed in writing.

This authorization does not extend to any other kind of copying, by any means, in any form, and for any purpose other than private research use.

ISSN 1175-5326 (Print edition)

ISSN 1175-5334 (Online edition)

#### **Table of Contents**

Abst	ract	3
Intro	duction	3
	erial and methods	
Taxo	onomy	5
Genu	us <i>Adiscus</i> Gistel, 1857	5
Key	to species of <i>Adiscus</i> from mainland China	6
	Adiscus daofuensis Duan & Zhou, sp. nov	7
	Adiscus ningshanensis Duan & Zhou, sp. nov	10
	Adiscus tanae Duan & Zhou, sp. nov	13
	Adiscus annulatus (Pic, 1922)	
	Adiscus atripennis Chen & Pu, 1980	18
	Adiscus bicoloriceps (Pic, 1932)	
	Adiscus bimaculicollis Chen & Pu, 1980	23
	Adiscus bodhisatva (Gressitt, 1942)	
	Adiscus crasssicornis Tan, 1992	
	Adiscus cyaneus Tan, 1992	
	Adiscus exilis (Weise, 1922)	
	Adiscus fracticeps (Gressitt, 1942)	
	Adiscus glabrous Tan, 1988	
	Adiscus grandipalpus Tan, 1992	
	Adiscus humeralis (Pic, 1922).	
	Adiscus inornatus Chen & Pu, 1980	
	Adiscus kweiyangensis (Gressitt, 1942)	
	Adiscus lushuiensis Tan, 1992.	
	Adiscus maculatus (Weise, 1912)	
	Adiscus mouhoti (Baly, 1877)	
	Adiscus niger (Chen, 1941)	
	Adiscus nigricollis (Gressitt, 1942)	
	Adiscus nigripennis (Jacoby, 1890)	
	Adiscus occipitalis Chen & Pu, 1980.	
	Adiscus pubiventris Medvedev, 2008	
	Adiscus punctithorax Medvedev, 2008	
	Adiscus speciosus Tan, 1988	
	Adiscus tibialis Chen & Pu, 1980	
	Adiscus transversalis Tan, 1992	
	Adiscus variabilis (Jacoby, 1890)	
	Adiscus yunnanus Medvedev, 2008	
	nowledgements	
Refe	rences.	79

#### Abstract

The mainland Chinese fauna of the leaf beetle genus *Adiscus* Gistel, 1857 is revised and three new species described: *Adiscus daofuensis* Duan & Zhou, **new species** from Sichuan, Gansu and Henan, *A. ningshanensis* Duan & Zhou, **new species** from Tibet. One species is newly recorded from China: *A. pubiventris* Medvedev, 2008. The mainland Chinese fauna of *Adiscus* is 35 species, almost all of which are redescribed. Color illustrations and line drawings are provided and a key to all 35 Chinese mainland species. Types of the new species are deposited in the Institute of Zoology, Chinese Academy of Sciences.

Key words: leaf beetle, Cryptocephalini, Monachulina, new species, distribution, Asia

#### Introduction

The genus *Adiscus* Gistel, 1857 (Coleoptera: Chrysomelidae, Cryptocephalinae, Cryptocephalini, Monachulina) was erected early in the history of leaf beetle taxonomy based on the type species *Phaedon nigromaculatum* Kollar & Redtenbacher, 1844. The genus is a distinctive taxon in the subfamily Cryptocephalinae, with short round body, invisible scutellum and strongly convex dorsal surface. *Adiscus* Gistel, 1857 is the senior synonym of *Dioryctus* 

Suffrian, 1860, which was given precedence (Weise, 1903; Jacoby, 1908; Gressitt, 1942; Chûjô, 1954) until the validity of *Adiscus* was established by Monrós & Bechyné (1956) and their treatment has been followed by subsequent taxonomists (Gressitt & Kimoto, 1961; Chen & Pu, 1980; Kimoto & Gressitt, 1981; Medvedev, 2008, 2015, 2019; Schöller *et al.*, 2010; Bezděk 2012; Medvedev & Romantsov 2017, Bezděk 2020). Medvedev (2008) gave a key to the Oriental species of *Adiscus*, but did not include all the species that occurred in China. Zoogeographically, the genus is mainly distributed in the Oriental region with 75 species recorded in South and East Asia (Gressitt & Kimoto, 1961; Chen & Pu, 1980; Kimoto & Gressitt, 1981; Medvedev, 2008, 2015, 2019; Schöller *et al.*, 2010; Bezděk 2012; Medvedev & Romantsov 2017), 32 in southern China. This study revises the mainland Chinese fauna with a new key to the species. Moreover, three new species are described and another 28 species are redescribed with color photographs and line drawings. No material was available for the four remaining species, namely, *A. chekianga* Gressitt & Kimoto, 1961, *A. klapperichi* (Pic, 1955), *A. pectoralis* (Pic, 1926), and *A. weigeli* Medvedev, 2019, which are included in our diagnostic key but not illustrated or redescribed.

#### Material and methods

Dissections and photography. Dried specimens were relaxed in hot distilled water at 80° C for about 2 hours, to soften the body and ease dissection. The abdomen was separated with insect pins from the rest of the body, soaked in 10% KOH solution and heated in a water bath for 15 minutes to advance the process, and then transferred in distilled water to rinse off the residual KOH solution. The aedeagus, spermatheca and rectal sclerites were dissected out and placed in glycerin in a microslide for observation and measurement with an apochromatic stereomicroscope Zeiss SteREO V12. Color photographs of the adults and genitalia were captured with an Axio Zoom V16 fluorescence stereo zoom microscope, and photomontage was performed in Zen 2012 (blue edition) imaging software. Adobe Photoshop CS6 was used in digital post-processing of the color pictures, and Adobe Illustrator 2020 was used to make the line drawings.

The following abbreviations are used in the text to indicate the measurements of the specimens:

**BL**: body length (length from the anterior of pronotum to the posterior of elytra in dorsal view).

BW: body width (distance between the humeri, maximal body width).

HL: head length (length from the posterior margin of head to the apex of mandibles).

HW: head width (distance between the outer margins of eyes in frontal view, maximal head width).

**PL**: pronotal length (median length from the posterior margin (tip of angulation) to anterior-margin, maximal longitudinal length of pronotum).

PW: pronotal width (distance of the widest portion of the pronotum).

PA: basal margin angle of pronotum (Fig. 1A) (the angle of the median lobe of pronotal basal margin).

EL: elytral length (length of the maximal elytral length in dorsal view).

EA: lateral margin angle of elytra (Fig. 1B) (the angle formed by the lateral lobe on elytra lateral margin).

AL: aedeagus length (length from the apex of penis / median lobe to the basal margin, maximal aedeagus length).

AW: aedeagus width (the maximal width of penis / median lobe).

SL: spermathecal length (length of the maximal spermathecal length, without duct).

Type specimens of the new species and most other materials included in this study are preserved in the Institute of Zoology, Chinese Academy of Science, Beijing, China (IZ-CAS). The following abbreviations list the institutions of type deposition.

**BMNH** The Natural History Museum, London, UK.

**ICRI** Zhongshan (Sun Yat-Sen) University, Research Institute of Entomology, Guangzhou, Guangdong, China.

MCZ Museum of Comparative Zoology, Harvard, USA.

**MNHN** Muséum national d'Histoire Naturelle, Paris, France.

NHMB Naturhistorisches Museum Basel, Switzerland.

NHRS Naturhistoriska riksmuseet, Stockholm, Sweden.

**TARI** Taiwan Agriculture Research Institute and Taiwan University, Taipei, China.

**ZIN** Russian Academy of Sciences, Zoological Institute, St. Petersburg, Russia.

**ZMHB** Museum für Naturkunde, Leibniz-Institut für Evolutions- und Biodiversitätsforschung, Berlin, Germany.

Labels with Chinese characters have been translated into pinyin.

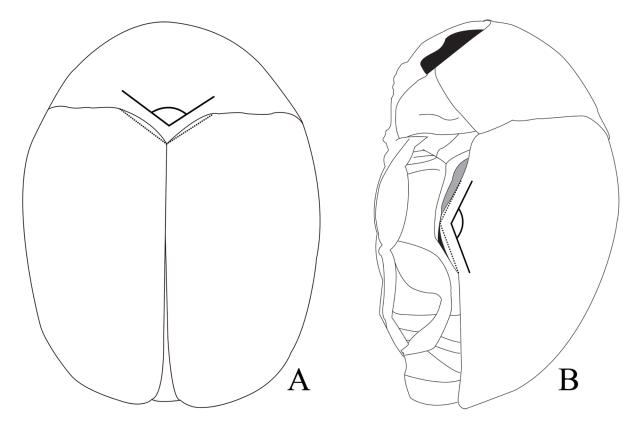
#### **Taxonomy**

#### Genus Adiscus Gistel, 1857

*Adiscus* Gistel, 1857a: 604; Gistel 1857b: 92; Monrós & Bechyně, 1956: 1123; Gressitt,1942: 330; Gressitt & Kimoto, 1961: 114; Kimoto & Gressitt, 1981: 323; Medvedev, 2008: 194; Schöller *et al.*, 2010: 607; Bezděk 2020: 176.

Type species: Phaedon nigromaculatum Kollar & Redtenbacher, 1844.

- = *Dioryctus* Suffrian, 1860: 3; Weise, 1903: 33; Jacoby, 1908: 176; Gressitt, 1942: 330; Chûjô, 1954: 143; Monrós & Bechyné, 1956: 1123 (as synonym of *Adiscus*). Type species: *Dioryctus porculus* Suffrian, 1860.
- = Atropidius Chapuis, 1874: 175; Weise, 1903: 33 (as synonym of *Dioryctus*); Kimoto, 1964: 141 (*Arthopidius*, error). Type species: *Atropidius improbus* Chapuis, 1874.
- = Falsodioryctus Pic, 1955: 21; Gressitt & Kimoto, 1961: 114 (as synonym of Adiscus); Kimoto, 1964: 141 (Ealdodioryctus; error). Type species: Falsodioryctus sinensis Pic, 1955 (synonym of Dioryctus nigripennis Jacoby, 1890).



**FIGURE 1.** Displaying the angle measurement of the genus *Adiscus* on pronotum and elytra: A. angle of pronotum basal margin; B. angle of elytra epipleural lobe.

**Diagnosis.** Body short and ovate, strongly convex. Face flat, in frontal view, eyes reniform and emarginated, antennae usually reaching elytral humeri. Pronotum pentagonal and convex, posterior margin entirely abutting elytra; much broader posteriorly than anteriorly, posterior width about twice as long as pronotal length; anterior margin nearly straight; posterior margin sinuate with fine serration, and medially produced as a sharp angle (Fig. 1A). Scutellum invisible from above. Elytra as broad as pronotum at base, humeri somewhat prominent; disc punctures weak and arranged in 11 regular striae; lateral margins distinctly expanded ventrally and forming a round or angular lobe at basal 1/4–1/3 of elytra; the lobe angle measured as shown in Fig. 1B. Prosternum broad, usually trapezoidal, lateral

margins raised, forming ridge-like structures with variation between species. Pygidium with dense punctures and short pubescence. Female with a large round deep fovea in the middle of ventrite V, fringed with pubescence on lateral margins.

Adiscus can be separated by the following characters from other genera outside the Chinese fauna: by the strong lobe on the lateral margin of elytron and special morphological variation of prosternum. In China, Adiscus can also be distinguished from Coenobius Suffrian, 1857 by concealed scutellum and the widely sperated eyes; and from Melixanthus Suffrian, 1854 by the convex body and the concealed scutellum.

#### Key to species of Adiscus from mainland China

1.	Elytron entirely reddish or pale, except for basal margin black.
-	Elytron partly or entirely black
2.	Shorter than 3 mm in length
-	Longer than 3 mm
3.	Pronotum entirely black
_	Pronotum reddish with basal margin blackish; length 1.8–2.3 mm
4.	Elytron reddish; pronotum feebly rounded and distinctly converging from base to apex; length 2.3–2.5 mm
••	
-	Elytron yellowish; pronotum feebly rounded and only slightly converging from base to apex; length 2.0–3.0 mm
5.	Prosternum with lateral ridges strongly elevated, and hind angle of prosternum black.
-	Prosternum with lateral ridges weakly elevated, and hind angle of prosternum yellowish brown, pronotum sparsely punctate length 2.8 mm.  A. inornatus Chen & Pu
(	Elytron pitchy black, with two yellowish marks; lateral ridges of prosternum strongly elevated; length 2.3 mm
6.	
-	Elytron entirely pale, ochraceous or reddish brown, without marking
7.	Elytron reddish; antennomeres 1-4 brownish-yellow, 5-11 dark brown; length 1.9–2.1 mm
-	Elytron yellowish; antennomeres all yellowish, length 2.5–2.9 mm
8.	Male abdominal ventrite I between metacoxae with brush of erect hairs; mandibles reddish brown with black apex; prosternum
	with elevated longitudinal-median ridge; length 4.2–5.0 mm
-	Without the above character combination
9.	Venter entirely pale
-	Thoracic sterna black; length 3.0–4.0 mm
10.	Elytral stria 7 (below the humerus) grooved anteriorly; epipleural lobe almost angulate near middle
_	Elytral stria 7 not grooved anteriorly; epipleural lobe strongly sinuate; length 3.7–4.5 mm
11.	Pronotum distinctly punctate; elytron pale testaceous in basal 1/2; length 4.1 mm
_	Pronotum impunctate; elytron unicolored
12.	Elytron reddish, and epipleural lobe distinct, forming an angle of 110°; length 3.3 mm
-	Elytron yellowish and epipleural lobe not so distinct, forming an angle of 130°; length 3.2–3.5 mm
13.	Pronotum distinctly punctate
-	Pronotum impunctate or indistinctly punctate
14.	Pronotum very densely and strongly punctate, red fulvous; elytra, venter and apical antennal segments infuscate; length 2.3–2.5 mm
-	Without the above character combination
15.	Epipleural lobe slightly feeble; pronotum with 2 balck spots nearly anterior margin, elytron with 2 black band; length 3.9 mm
_	Epipleural lobe large and arcuate, without the above character combination
16.	Dorsum entirely black
_	Dorsum yellowish or reddish brown, elytron with black marking or not
17.	Prosternal central ridge sharp and acute; elytral row intervals without minute punctures; epipleural lobe large and arcuate
1 /.	length 3.8–4.5 mm
	Prosternal central ridge absent; elytral row intervals scattered with minute punctures, epipleural lobe slightly feeble; length
-	
1.0	2.6–2.9 mm
18.	Spermatheca S-shaped
-	Spermatheca falcate
19.	Elytral striae distinctly and strongly punctate; elytron with 4 black spots, rectangular arrangement; length 3.7–4.0 mm
-	Elytral striae finely punctate, indistinct; elytron without 4 regular black spots
20.	Superior eye-lobes separated by greater distance than antennal insertions; elytron reddish brown, with black markings
	variegated; only distributed in Tibet; length 3.0–3.6 mm

-	Superior eye-lobes separated by same distance with antennal insertions; elytron ochraceous, with 7 black bands; distributed in Fujian and Yunnan; length 2.1–2.6 mm
21.	Aedeagus without pubescence on lateral sides; elytron black, with a median transverse ovate reddish brown spot; length 2.6–3.1 mm
-	Aedeagus with pubescence on lateral sides; elytron without above character
22.	Elytron entirely black, humeri strongly prominent; length 4.3–5.0 mm
-	Elytron yellowish brown, humerus with a black stripe, weakly prominent; length 2.5–3.2 mm
23.	Epipleural lobe of elytron large and arcuate, distinct.
-	Epipleural lobe of elytron absent, feeble or not developed
24.	Dorsum entirely metallic blue, venter black and above surface of femora, apex of femora and tarsi reddish brown; length 3.2–3.6 mm
-	Dorsum not metallic blue
25.	Elytron of male black, with a round medium-sized yellowish-brown spot, elytron of female reddish brown; length 3.7–5.1 mm
	Elytron without above characteristics
- 26.	Venter largely black; lateral ridge of prosternum strongly elevated.
<b>2</b> 0.	Venter yellowish brown, with the same color as dorsum.
27.	Pronotal lateral margins with narrow black stripe; elytron reddish brown, with a ring of dark purple band along margins, except
-7.	median suture; length 3.6–4.0 mm
_	Pronotum entirely reddish or yellowish brown, except the black margin
28.	Head black behind antennal insertions; elytron with 4 black spots, sometimes apical part of suture black; length 2.9–3.5 mm.
-	Elytron yellowish brown, basal region with transversely broad black stripe, with a big round black spot behind the elytral
	middle region, or elytron entirely black, epipleuron yellowish brown; length 2.3–3.0 mm A. kweiyangensis (Gressitt)
29.	Lateral ridge of prosternum broad and high, elevated; length 2.3–2.7 mm
-	Lateral ridge of prosternum broad but low, not strongly elevated; length 2.4–2.7 mm
30.	Dorsum unicolorous, entirely black or metallic blue
- 31.	Dorsum not unicolorous, pronotum and elytron with different color or elytron with black markings
31.	Dorsum black; male maxiliary and labial palpi strongly inickened; epipieural lobe slightly leeble; length 2.0–2.3 mm
-	Pronotum black, elytron metallic blue; male maxillary and labial palpi normal; epipleural lobe absent; length 2.0–2.3 mm
32.	Apex of maxillary palp swollen, securiform; elytron with a broadly transverse black stripe along the basal margin.
32.	A. transversalis Tan
_	Apex of maxillary palp normal; elytral without above characteristic
33.	Venter yellowish brown, elytron with 4 black spots, the base two joined together; length 2.2–2.6 mm <i>A. occipitalis</i> Chen & Pu
-	Venter largely black, elytron entirely black
34.	Elytral striae coarsely punctate and distinct, interstriae with scattered minute punctures; length 2.3–2.8 mm
-	Elytral striae finely punctate, indistinct, interstriae without scattered minute punctures; length 2.6–3.0 mm

#### Adiscus daofuensis Duan & Zhou, sp. nov.

(Figs 2-1; 2-2)

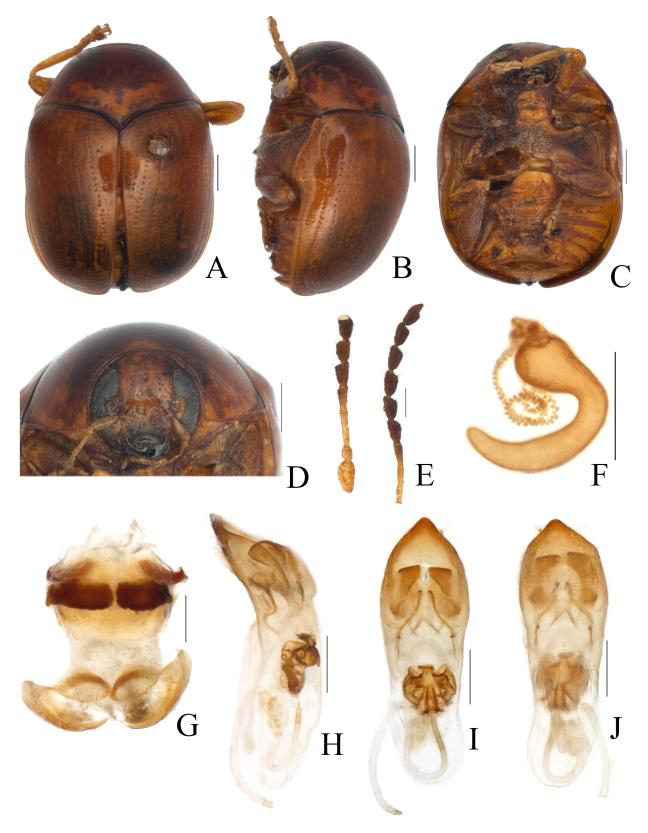
#### Type locality. CHINA: Sichuan Province: Daofu.

Material examined. Holotype: male, CHINA: Sichuan Province: Daofu, Benglong, 3000 m, 12. VIII. 1983, coll. Shuyong Wang (IZ-CAS). Paratypes: CHINA: Sichuan Province: 1 male, 7 females, same data as holotype (IZ-CAS); 1 female, Wenchuan, Yingxiu, 900 m, 1. VIII. 1983, coll. Shuyong Wang (IZ-CAS); Gansu Province: 1 female, Wenxian, Bifenggou, 940–1500 m, 28. VII. 1999, coll. Jian Yao (IZ-CAS); Henan Province: 1 female, Xinxian, Liankang Mountain, 19–21. VII. 2005, coll. Chao Gao & Jiliang Wang (IZ-CAS); 1 male, Luoshandongzhai Reserve, 14–15. VII. 2005, coll. Chao Gao & Jiliang Wang (IZ-CAS).

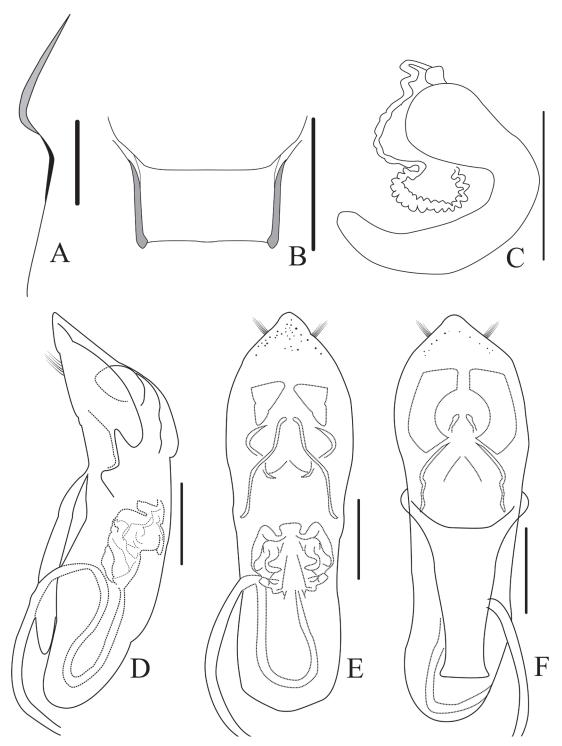
**Description. Measurements. Males.** BL = 3.24–3.54 mm, BW = 2.32–2.45 mm, HL = 1.09 mm, HW = 1.06 mm, PL = 1.12 mm, PW = 2.23 mm, PA =  $100^{\circ}$ , EL = 2.53 mm, EA =  $130^{\circ}$ , AL = 0.91 mm, AW = 0.28 mm.

**Females.** BL = 3.48-3.74 mm, BW = 2.52-2.34 mm, HL = 1.20 mm, HW = 1.18 mm, PL = 1.24 mm, PW = 2.42 mm, PA =  $100^{\circ}$ , EL = 2.75 mm, EA =  $130^{\circ}$ , SL = 0.41 mm.

Body (Fig. 2-1A) short, broadly ovate, almost rectangular; dorsum smooth, mostly yellowish brown. Antennomeres 1-5 yellow, 6-11 brown; labrum and mandibles black. Pronotum with basal margin black. Legs and venter yellowish brown.



**FIGURE 2-1.** *Adiscus daofuensi*s Duan & Zhou, **sp. nov.**: A. habitus; B. lateral view of habitus; C. ventral view of habitus; D. head; E. antennae; F. spermatheca; G. rectal pad; H. lateral view of aedeagus; I. dorsal view of aedeagus; J. ventral view of aedeagus. (Scale bars: A-D = 0.5 mm, E-J = 0.2 mm).



**FIGURE 2-2.** *Adiscus daofuensis* Duan & Zhou, **sp. nov.**: A. epipleural lobe of elytra; B. prosternum; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus. (Scale bars: A–B = 0.5 mm, C–F = 0.2 mm).

Head (Fig. 2-1D) nearly round; distinctly and sparsely punctate. Eyes reniform; superior eye-lobes separated by slightly greater distance than antennal insertions. Clypeus finely and transversely wrinkled, anterior margin arcuately emarginated. Antennae (Fig. 2-1E) reaching elytral humeri, scape clubbed, pedicel oblong, about half as long as scape, antennomeres 3–5 slender, 3<sup>rd</sup> as long as pedicel, 4<sup>th</sup> as long as 5<sup>th</sup>, 6–11 somewhat broadened and flattened, last pointed apically.

Pronotum (Fig. 2-1A) smooth, much broader basely than apically, basal width about twice as long as pronotal length. Anterior margin weakly arched. Posterior margin serrate and undulated, and produced into an obtuse angle of about 100° at middle. Disc evenly convex, impunctate. Posterior margin sinuate with fine serration.

Elytra (Fig. 2-1A) oblong, humeri somewhat prominent, widest slightly behind humeri, feebly rounded at sides and apex. Disc sparsely and finely punctate, with 11 regular striae, intervals with scattered minute punctures. Epipleural lobe (Fig. 2-2A) moderately large, lateral margins slightly expanded ventrally with rounded lobe at basal 1/3 of elytron, with both lobe sides forming angle of 130°; epipleura obliquely placed and visible in lateral view.

Venter (Fig. 2-1C) clothed with short pubescence and punctures. Prosternum (Fig. 2-2B) trapezoidal, anterior margin not protruding, posterior margin nearly straight, central ridge absent, lateral ridges elevated. Mesoventrite broad, twice as wide as long. Metaventrite with dense coarse punctures. Pygidium with dense punctures and short pubescence.

**Aedeagus.** (Figs. 2-1H–J; 2-2D–F) Median lobe elongate, about twice as long as wide, nearly parallel-sided. Apex of median lobe slightly narrower than middle, acute at apex, moderately curved in lateral view; each side of apex and the middle region of ventrally-dilated part with long setae; sparsely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards above surface. Inner sac rather broad, lantern-shaped, dilated at middle, posterior margin nearly straight. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 deep and round. **Spermatheca** (Figs. 2-1F; 2-2C) falcate, acute-angled bending at apex 2/3, moderately acute at apex, slightly dilated at 1/3 from base, then become narrower; duct weakly sclerotized, irregularly coiled. **Rectal sclerites** (Fig. 2-1G) strongly sclerotized, not connected between two rectangular sclerites on ventral side.

Distribution: China (Henan, Gansu, Sichuan).

**Diagnosis.** This new species is similar to *A. fracticeps*, but it can be distinguished from the latter by the smaller body size and paler body surface, the elytral widest just behind humeri, the elytral epipleural lobe forming an angle of 130°, and antennmeres 1-5 yellow but 6-11 brown.

Etymology. The specific epithet is derived from the Chinese name (Pinyin) of the type locality, Daofu.

## Adiscus ningshanensis Duan & Zhou, sp. nov. (Figs 3-1; 3-2)

Type locality. CHINA: Shaanxi Province: Ningshan, Xunyangba.

**Material examined. Holotype:** male, **CHINA: Shaanxi** Province: Ningshan, Xunyangba, 33°55′N 108°54′E, 1368 m, by light trap, 20. VIII. 2007, coll. Hongliang Shi & Ganyan Yang (IZ-CAS). **Paratypes**: 9 females, same data as holotype (IZ-CAS).

**Description. Measurements. Males.** BL = 2.51-2.70 mm, BW = 1.68-1.78 mm, HL = 0.75 mm, HW = 0.77 mm, PL = 0.68 mm, PW = 1.54 mm, PA =  $120^\circ$ , EL = 2.04 mm, EA =  $150^\circ$ , AL = 0.71 mm, AW = 0.24 mm. **Females.** BL = 2.82-2.90 mm, BW = 1.86-1.98 mm, HL = 0.81 mm, HW = 0.83 mm, PL = 0.74 mm, PW = 1.67 mm, PA =  $120^\circ$ , EL = 2.20 mm, EA =  $150^\circ$ , SL = 0.55 mm.

Body (Fig. 3-1A) small; dorsum smooth, mostly ochraceous. Antennae, labrum, and legs yellowish brown, mandibles darkish brown. Pronotum with basal margin black. Elytra with anterior margin black. Legs and venter orange ochraceous.

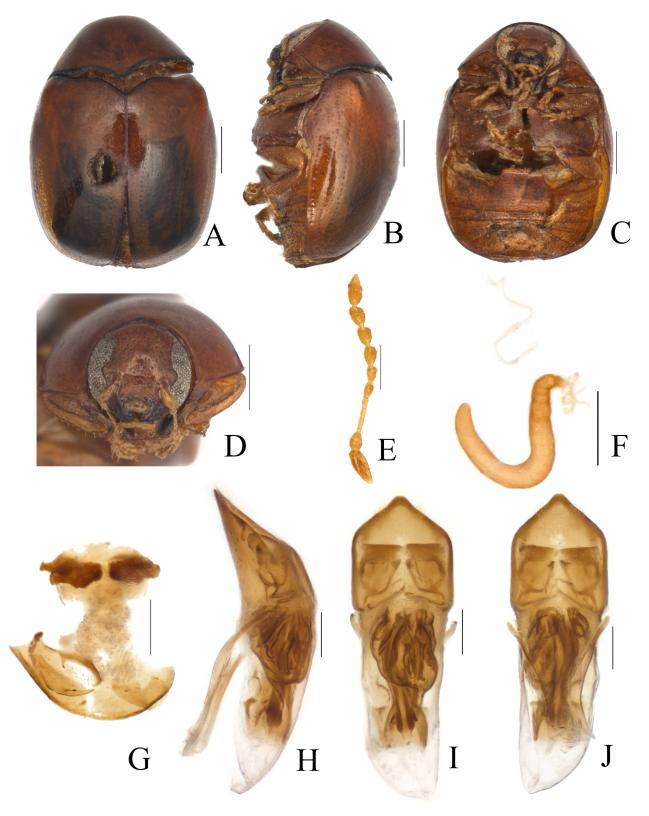
Head (Fig. 3-1D) round, with fine and sparse punctures and short silvery pubescence. Eyes reniform; superior eye-lobes separated by slightly greater distance than antennal insertions. Clypeus densely granulose and sparsely punctate, anterior margin slightly arched and emarginated. Antennae (Fig. 3-1E) reaching elytral humeri, scape clubbed, pedicel subspherical, about 1/2 as long as the scape, antennomeres 3–4 minute, shorter than pedicel, about equal in length, 5–11 somewhat broadened and flattened, last segment pointed apically.

Pronotum (Fig. 3-1A) convex and smooth, base much broader than apex, basal width about twice as long as pronotal length. Anterior margin nearly straight. Posterior margin sinuate with fine serration, and produced into an obtuse angle of about 120° at middle. Disc evenly convex, impunctate.

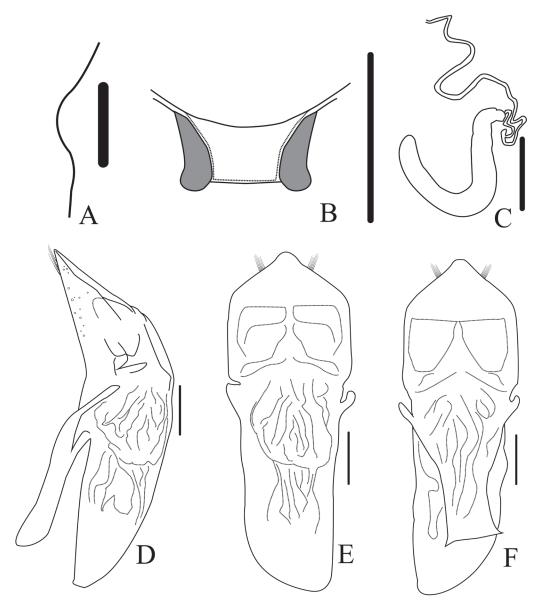
Elytra (Fig. 3-1A) with humeri prominent and glabrous, widest slightly behind humerus, feebly rounded at side and apex. Disc sparsely and finely punctate, with 11 regular striae, intervals without scattered minute punctures. Epipleural lobe (Fig. 3-2A) large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/3 of elytron, with both lobe sides forming angle of 150°; epipleura obliquely placed and indistinct in lateral view.

Venter (Fig. 3-1C) clothed with short pubescence and punctures. Prosternum (Fig. 3-2B) trapezoidal, lateral margin broad and convex strongly, lateral ridges elevated, anterior margin not protruding, posterior margin

nearly straight, central ridge absent. Mesoventrite rectangular, twice as wide as long, with lateral ridges elevated. Metaventrite with sparsely fine punctures. Pygidium with dense punctures and short pubescence.



**FIGURE 3-1.** *Adiscus ningshanensis* Duan & Zhou, **sp. nov.**: A. habitus; B. lateral view of habitus; C. ventral view of habitus; D. head; E. antennae; F. spermatheca; G. rectal pad; H. lateral view of aedeagus; I. dorsal view of aedeagus; J. ventral view of aedeagus. (Scale bars: A–D = 0.5 mm, E–G = 0.2 mm, H–J = 0.1 mm).



**FIGURE 3-2.** Adiscus ningshanensis Duan & Zhou, **sp. nov.**: A. epipleural lobe of elytra; B. prosternum; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus. (Scale bars: A-B=0.5 mm, C=0.2 mm, D-F=0.1 mm).

**Aedeagus.** (Figs. 3-1H–J; 3-2D–F) Median lobe elongate, about 3 times as long as wide, parallel-sided. Apex of median lobe slightly narrower than middle, acute at apex, moderately curved in lateral view; with several setae on each side of apex, sparsely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards above surface. Inner sac rather oblong, cylindrical and convoluted, dilated at base, narrowest at apical 1/3, base slightly prominent in the middle. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 deep and slightly triangular. **Spermatheca** (Figs. 3-1F; 3-2C) falcate, 70°-angled bending halfway, weakly acute at apex, constricted at base 1/4; duct weakly sclerotized, irregularly coiled. **Rectal sclerites** (Fig. 3-1G) moderately sclerotized, not connected between two rectangular sclerites on ventral side.

**Distribution:** China (Shaanxi).

**Diagnosis.** This new species is similar to *A. exilis*, but can be distinguished by larger body size and paler body surface. Its pronotum is impunctate, its penultimate puncture-row of elytra is grooved, and its antennae are totally yellowish brown. The new species has the aedeagal venter sparsely punctate.

**Etymology.** The specific epithet is derived from the Chinese name (Pinyin) of the type locality, Ningshan.

#### Adiscus tanae Duan & Zhou, sp. nov.

(Figs 4-1; 4-2; 4-3)

#### Type locality. CHINA: Tibet: Cona County.

**Material examined. Holotype:** male, **CHINA: Tibet**: Cona County, Lemenba Nationality Township, Senmuzha Scenic Area, 27°83′N 91°73′E, 2791 m, 19. VIII. 2019, coll. Renjie Zhang (IZ-CAS).

**Description. Measurements. Male.** BL = 2.34 mm, BW = 1.77 mm, HL = 0.65 mm, HW = 0.70 mm, PL = 0.73 mm, PW = 1.58 mm, EL = 1.75 mm, AL = 0.95 mm, AW = 0.35 mm.



**FIGURE 4-1.** *Adiscus tanae* Duan & Zhou, **sp. nov.**: A. habitus; B. lateral view of habitus; C. antennae; D. head; E. ventral view of habitus. (Scale bars: A, B, E = 0.5 mm, C, D = 0.2 mm).



**FIGURE 4-2.** *Adiscus tanae* Duan & Zhou, **sp. nov.**: A. lateral view of aedeagus; B. dorsal view of aedeagus; C. ventral view of aedeagus. (Scale bars = 0.2 mm).

Body (Fig. 4-1A) short ovate, subquadrate with rounded angles; dorsum smooth. Head pale testaceous, apical part fuscous. Antennomeres 1–5 yellowish brown, 6–11 fuscous; clypeus yellowish brown; labrum and mandibles slightly reddish brown, and apex of mandibles black. Pronotum yellowish brown, basal margin narrowly black. Elytra darkish brown, with two yellowish brown markings, one on disc, a short stripe, extending from suture to 3<sup>rd</sup> puncture row; the other at apex, oval. Venter with middle darkish brown, apex yellowish brown.

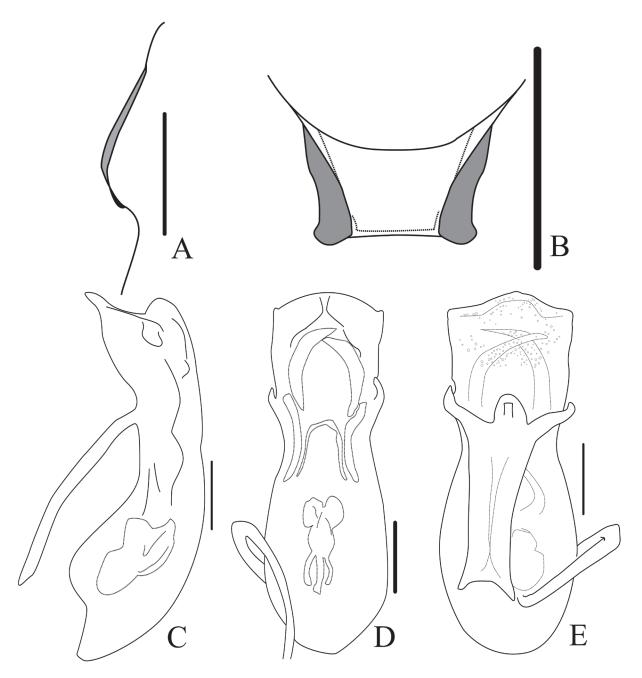
Head (Fig. 4-1D) dull; finely and sparsely punctate; partly strigose on frons. Eyes reniform, distinctly and deeply emarginated; superior eye-lobes separated by moderately greater distance than antennal insertions. Clypeus slightly prominent and declivous, finely wrinkled, with fine pubescence, anterior margin arched and emarginated apically. Antennae (Fig. 4-1C) long and thick, densely pubescent, reaching elytral humeri; scape clubbed, pedicel subspherical, slightly long, about 2/3 as long as scape, antennomeres 3–5 short and thin, each about equal in length and shorter than pedicel, 6–11 somewhat broadened and flattened, narrow at base and broad apically, last segment pointed apically.

Pronotum (Fig. 4-1A) convex and smooth, much broader basely than apically, with basal width about twice of pronotal length. Anterior margin nearly straight. Posterior margin undulated and produced into an acute angle of about 80° at middle. Disc evenly convex, impunctate.

Elytra (Fig. 4-1A) with humeri prominent and glabrous, as broad as prothorax at base, widest slightly behind humeri, feebly rounded at side and apex. Disc sparsely and distinctly punctate, with 11 regular striae, intervals without minute punctures. Epipleural lobe (Fig. 4-3A) large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/3 of elytron, with both lobe sides forming angle of 130°; epipleura obliquely placed and visible in lateral view.

Venter (Fig. 4-1E) clothed with silver pubescence and distinct punctures. Prosternum (Fig. 4-3B) trapezoidal, lateral margin broad and convex strongly, lateral ridges elevated, anterior and posterior margins slightly concave, central ridge absent. Mesoventrite rectangular, 1.5 times as wide as long, lateral ridges slightly elevated. Metaventrite with distinct coarse punctures. Pygidium with dense punctures and pubescence.

**Aedeagus.** (Figs. 4-2; 4-3C–E) Median lobe elongate, about 2.8 times as long as wide, apical 1/3 of median lobe nearly parallel-sided, middle part constricted. Apex of median lobe slightly narrower than middle, a little acute at apex, moderately curved in lateral view, without setae on each side of apex, densely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards beyond surface. Inner sac rather oblong cylindrical and oblong, middle part spherical. Tegmen Y-shaped, weakly sclerotized, almost translucent.



**FIGURE 4-3.** *Adiscus tanae* Duan & Zhou, **sp. nov.**: A. epipleural lobe of elytra; B. prosternum; C. lateral view of aedeagus; D. dorsal view of aedeagus; E. ventral view of aedeagus. (Scale bars: A-B=0.5 mm, C-E=0.2 mm).

**Distribution:** China (Tibet).

**Diagnosis.** This species is easily distinguished from all its congeners by the elytra with two yellowish brown markings and the aedeagus without pubescence. The female is unknown.

Etymology. The specific epithet is named in memory of the former professor, Ms. Tan Juan-jie.

#### Adiscus annulatus (Pic, 1922)

(Figs. 5-1; 5-2)

Dioryctus annulatus Pic, 1922a: 14 (type locality: Yunnan; type deposited: MNHN);

Adiscus annulatus: Gressitt & Kimoto, 1961: 116 (Fukien, Kwangtung); Schöller et al., 2010: 607 (catalogue).

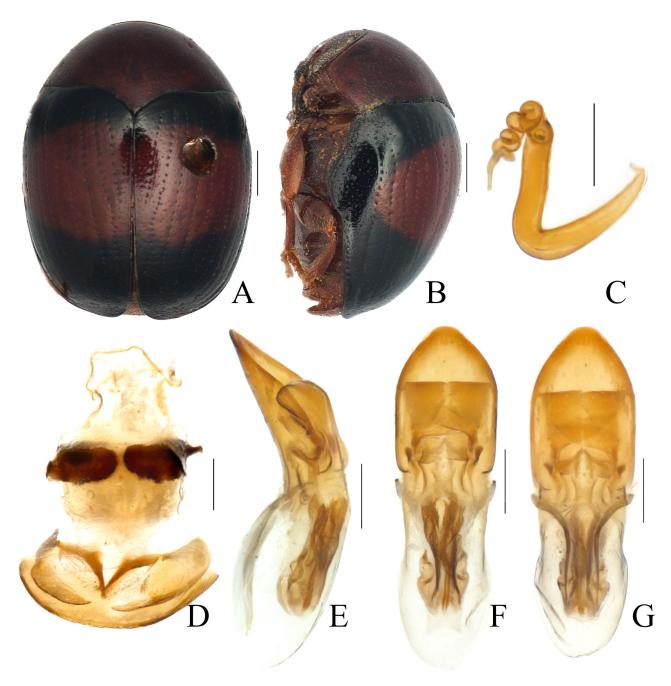
- = Dioryctus alternatus Chen, 1941: 190 (type locality: Yaoshan; type deposited: IZ-CAS);
- = Adiscus alternatus: Gressitt & Kimoto, 1961: 116 (as synonym of Adiscus annulatus).

Material examined. CHINA: Holotype *Dioryctus alternatus* Chen: female, "Guangxi: Xiuren, Yaoshan [Chinese letters] / Chinese Academy of Sciences [Chinese letters] // 1938 // HOLOTYPE". (IZ-CAS); Additional material: Yunnan Province: 1 male, Xishuangbanna, Mengzhe, 11. VII. 1958, coll. Shuyong Wang (IZ-CAS); 1 female, Xishuangbanna, Mengla, 24. V. 1959, coll. Fuji Pu (IZ-CAS); 1 female, Simao, Laojiezi, 22. V. 1957, coll. Zenghao Zhu (IZ-CAS).

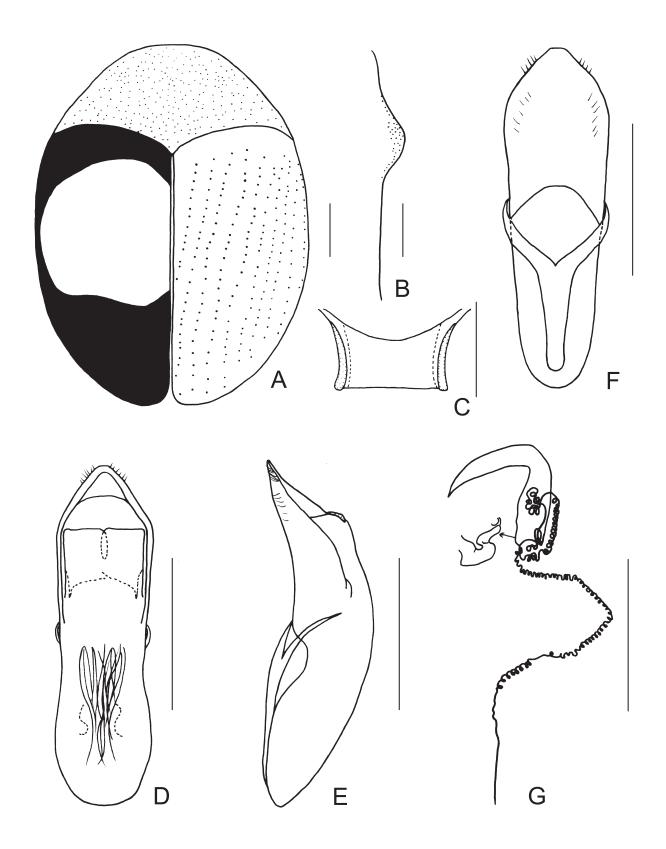
**Redescription. Measurements. Males.** BL = 2.59-2.81 mm, BW = 1.68-1.82 mm, HL = 1.00 mm, HW = 0.95 mm, PL = 1.84 mm, PW = 0.88 mm, PA =  $100^{\circ}$ , EL = 2.15 mm, EA =  $130^{\circ}$ , AL = 1.03 mm, AW = 0.33 mm.

**Females.** BL = 2.88-3.12 mm, BW = 1.82-1.94 mm, HL = 1.08 mm, HW = 1.03 mm, PL = 2.00 mm, PW = 0.96 mm, PA =  $100^{\circ}$ , EL = 2.33 mm, EA =  $130^{\circ}$ , SL = 0.71 mm.

Body (Figs. 5-1A; 5-2A) short and ovate, subrounded. Head darkish red; antennae yellowish brown, apex of mandibles black; frons in between eyes piceous. Pronotum darkish red, basal margin narrowly black. Elytra black with a transverse darkish red marking, covering 2/3 area of elytra and extending from the suture to 10<sup>th</sup> puncture row. Venter reddish brown.



**FIGURE 5-1.** *Adiscus annulatus* (Pic, 1922): A. habitus; B. lateral view of habitus; C. spermatheca; D. rectal pad; E. lateral view of aedeagus; F. dorsal view of aedeagus; G. ventral view of aedeagus. (Scale bars: A–B = 0.5 mm, C–G = 0.2 mm).



**FIGURE 5-2.** *Adiscus annulatus* (Pic, 1922): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

Head dull, densely and coarsely punctate. Eyes reniform, superior eye-lobes separated by slightly greater distance than antennal insertions. Clypeus semicircular, with sparsely fine punctures, and anterior margin weakly emarginated. Antennae short, reaching about basal 1/4 of elytra; scape clubbed, pedicel short, about 1/3 as long as scape, antennomeres 3 and 4 minute, pedicel rarely longer than 3 or 4, 5 slightly broadened apically, 6–11 somewhat broadened and flattened, last segment pointed apically.

Pronotum (Figs. 5-1A; 5-2A) strongly convex, base much broader than apex, basal width about twice pronotal length. Anterior margin weakly convex. Lateral margins nearly straight. Posterior margin slightly sinuate with fine serration, and produced into an obtuse angle of about 100° at middle. Disc evenly convex, with fine and rather close punctures, smaller than those on head.

Elytra (Figs. 5-1A; 5-2A) as broad as prothorax at base, humeri weakly prominent, glabrous. Disc finely punctate, with 11 regular striae, intervals with scattered minute punctures, puncture striae irregular on apical slope. Epipleural lobe (Fig. 5-2B) distinct, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/4 of elytron, with both lobe sides forming an angle of 130°, epipleura obliquely placed and visible in lateral view.

Venter clothed with short pubescence and dense punctures. Prosternum (Fig. 5-2C) trapezoidal, lateral margin broad and convex strongly, weakly arcuate in lateral view; central ridge weakly elevated, anterior margin not protruding, posterior margin nearly straight. Mesoventrite length shorter than half of prosternum, width about 3.3 times of length. Metaventrite with dense and coarse punctures. Pygidium with dense punctures and short pubescence.

**Aedeagus.** (Figs. 5-1E–G; 5-2D–F) Median lobe elongate, 3.1 times as long as wide, parallel-sided, apex of median lobe gradually narrow and rounded, bent ventrally and curved in lateral view, with feeble dense punctures on ventral side of distal part, without setae. Median orifice with median sclerite bending inwards beyond surface. Inner sac slender, cylindrical, contracted on basal third, slightly narrow at apex. Tegmen, Y-shaped, weakly sclerotized, nearly translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 shallow and round. **Spermatheca** (Figs. 5-1C; 5-2G) falcate, 60°-angled bending halfway, acute at apex; duct base thickened strongly, coiled, then becoming thinner, and coiled about 4–5 times. **Rectal sclerites** (Fig. 5-1D) strongly scerotized, two sclerites rectangular, not connected in ventral view.

Distribution. China (Fujian, Guangdong, Guangxi, Yunnan).

#### Adiscus atripennis Chen & Pu, 1980

(Figs. 6-1; 6-2)

Adiscus atripennis Chen & Pu, 1980: 109 (type locality: Fujian; type deposited: IZ-CAS); Schöller et al., 2010: 607 (catalogue).

**Material examined. CHINA: Holotype:** female, "Fujian: Chong' an, Xingcun, Sangang [Chinese letters] / 800 m / Chinese Academy of Sciences [Chinese letters] // 20. V. 1960 / coll. Shengqiao Jiang [Chinese letters] // HOLOTYPE" (IZ-CAS). **Paratype:** 1 female, "Fujian: Chong' an, Xingcun, Sangang [Chinese letters] // 720 m / Chinese Academy of Sciences [Chinese letters] // 14. V. 1960 / coll. Shengqiao Jiang [Chinese letters] // PARATYPE" (IZ-CAS).

**Redescription. Measurements. Females.** BL = 2.26-2.82 mm, BW = 1.65-1.74 mm, HL = 0.97 mm, HW = 0.92 mm, PL = 0.74 mm, PW = 1.55 mm, PA =  $110^{\circ}$ , EL = 2.19 mm, EA =  $160^{\circ}$ .

Body (Figs. 6-1A; 6-2A) small and ovate, dorsum shiny. Head reddish brown. Antennae yellowish brown, mandibles darkish brown. Pronotum orange, basal margin black. Elytra black. Legs largely reddish brown. Venter darkish brown.

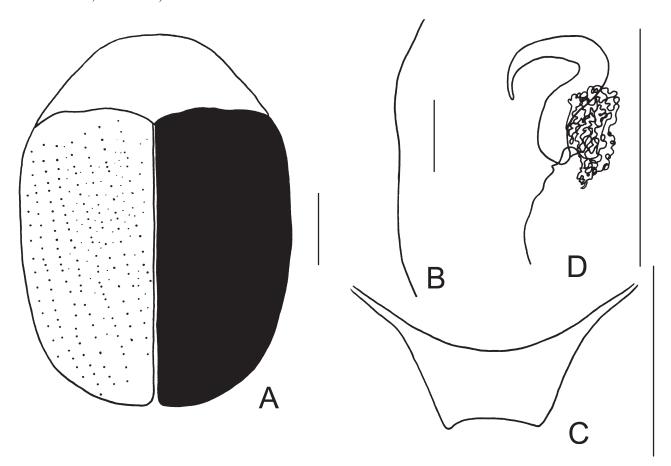
Head shinywith fine and dense punctures, coarser than those on pronotum. Eyes reniform, slightly emarginated below middle; superior eye-lobes separated by moderately greater distance than antennal insertions. Clypeus sparsely punctate, anterior margin arched and slightly emarginated. Labrum with sparse short setae. Antennae short with long setae, reaching area base of elytra, scape clubbed, pedicel oblong, about half as long as scape, antennomeres 3–5 minute, each segment about equal in length, 6–11 somewhat broadened and flattened, last segment slightly acute apically.

Pronotum (Figs. 6-1A; 6-2A) convex and smooth, much broader basely than apically, width twice pronotal length. Anterior margin nearly straight. Posterior margin sinuate with fine serration, produced into an obtuse angle

of about 110° at middle. Anterior and posterior angles nearly right-angled. Disc evenly convex, punctures fine and weak, indistinct.



**FIGURE 6-1.** *Adiscus atripennis* Chen & Pu, 1980, paratype: A. habitus; B. lateral view of habitus; C. rectal pad. (Scale bars: A-B=0.5 mm, C=0.2 mm).



**FIGURE 6-2.** *Adiscus atripennis* Chen & Pu, 1980: A. habitus; B. epipleural lobe of elytra; C. prosternum; D, spermatheca. (Scale bars = 0.5 mm).

Elytra (Figs. 6-1A; 6-2A) with humeri prominent and glabrous. Disc sparsely and finely punctate, with 11 regular striae, intervals with scattered minute punctures. Lateral margins distinctly raised, epipleural lobe feeble (Fig. 6-2B), weakly arcuate, forming a rounded angle of about 160°, epipleura obliquely placed and visible in lateral view.

Venter clothed with pubescence. Prosternum (Fig. 6-2C) trapezoidal, anterior margin longer than posterior one, anterior margin not protruding, posterior margin slightly concave, lateral ridge weakly elevated, straight in lateral view. Mesoventrite twice as wide as long, posterior margin slightly concave. Pygidium with dense punctures and short pubescence.

**Female.** Body robust. **Spermatheca** (Fig. 6-2D) falcate, 45°-angled bending halfway, acute at the apex; duct base thickened strongly, coiled, then becoming thinner, and coiled about 5–6 times. **Rectal sclerites** (Fig. 6-1C) strongly sclerotized, two sclerites oblong, nearly connected in ventral view.

Distribution. China (Fujian).

**Diagnosis.** This species is similar to *A. variabilis* but the main difference is that the punctures on elytra are coarser, the interstriae are covered with obvious but feeble punctures, especially on the disc, and the terminal segments of antennae are brown, not smoky colored, and thick, with each segment as broad as long.

#### Adiscus bicoloriceps (Pic, 1932)

(Figs 7-1; 7-2)

*Dioryctus bicoloriceps* Pic, 1932a: 208 (type locality: China; type deposited: MNHN). *Adiscus bicoloriceps*: Gressitt & Kimoto, 1961: 116; Schöller *et al.*, 2010: 607 (catalogue).

- = *Dioryctus bicoloriceps* var. *interruptus* Pic, 1954: 56 (type locality: Kuatun)
- = Adiscus bicoloriceps var. interruptus: Gressitt & Kimoto, 1961: 116 (synonym of A. bicoloriceps).

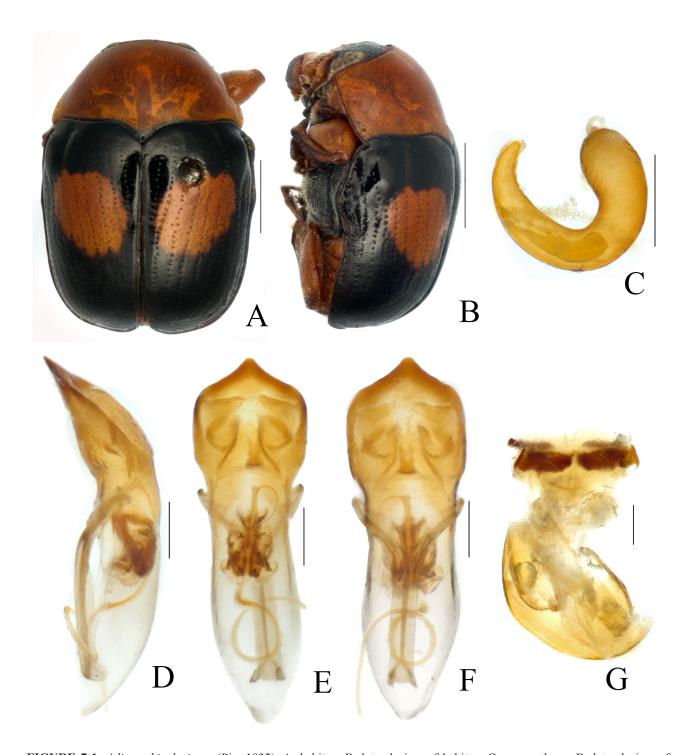
Material examined. CHINA: Fujian province: 1 female, Jianyang, Huangkeng, 25. III. 1960, coll. Shengqiao Jiang (IZ-CAS); 2 females, Jianyang, Huangkeng, 25. III. 1960, coll. Fuji Pu; 1 female, Jianyang, Huangkeng, 26. III. 1960, coll. Chenglin Ma (IZ-CAS); 1 female, Jianyang, Huangkeng, 26. III. 1960, coll. Yong Zuo (IZ-CAS); 2 females, Jianyang, Huangkeng, 27. III. 1960, coll. Fuji Pu (IZ-CAS); 2 females, Jianyang, Huangkeng, 27. III. 1960, coll. Shengqiao Jiang (IZ-CAS); 1 female, Jianyang, Huangkeng, 27. III. 1960, coll. Shengqiao Jiang (IZ-CAS); 1 female, Jianyang, Huangkeng, 29. III. 1960, coll. Yong Zuo (IZ-CAS); 1 female, Jianyang, Huangkeng, 29. IV. 1960, coll. Fuji Pu; 1 female, Jianyang, Huangkeng, Guilin, 4. IV. 1960, coll. Yong Zuo (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 4. IV. 1960, coll. Yong Zuo (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Guilin, 10. IV. 196

**Redescription. Measurements. Males.** BL = 3.68–4.02 mm, BW = 2.52–2.78 mm, HL = 1.48 mm, HW = 1.36 mm, PL = 1.49 mm, PW = 2.45 mm, PA =  $100^{\circ}$ , EL = 2.76 mm, EA =  $130^{\circ}$ , AL = 1.24 mm, AW = 0.42 mm.

**Females.** BL = 4.01-5.12 mm, BW = 2.54-2.95 mm, HL = 1.60 mm, HW = 1.48 mm, PL = 1.61 mm, PW = 2.65 mm, PA =  $100^{\circ}$ , EL = 2.98 mm, EA =  $130^{\circ}$ , SL = 0.59 mm.

Body (Figs. 7-1A; 7-2A) ovate, dorsum convex. Head basal region black, apical region yellowish brown. Labrum yellowish brown, mandibles yellowish brown, apex black; maxillary palpus and last segment of labial palpus black. Antennomeres 1–4 yellowish brown, 5 darkish brown, 6–11 black. Pronotum yellowish brown, basal margin black. Elytra black, disc either with a round and medium-sized yellowish brown mark, covering about 1/3 area of elytra and extending from the interspace of 1<sup>st</sup> and 2<sup>nd</sup> puncture rows to 8<sup>th</sup>, or elytra largely yellowish brown with black basal margin and subapical spot. Legs largely yellowish brown, lateral surface of tibiae black, tarsi slightly brown. Venter mostly yellowish brown, prosternum and mesoventrite black.

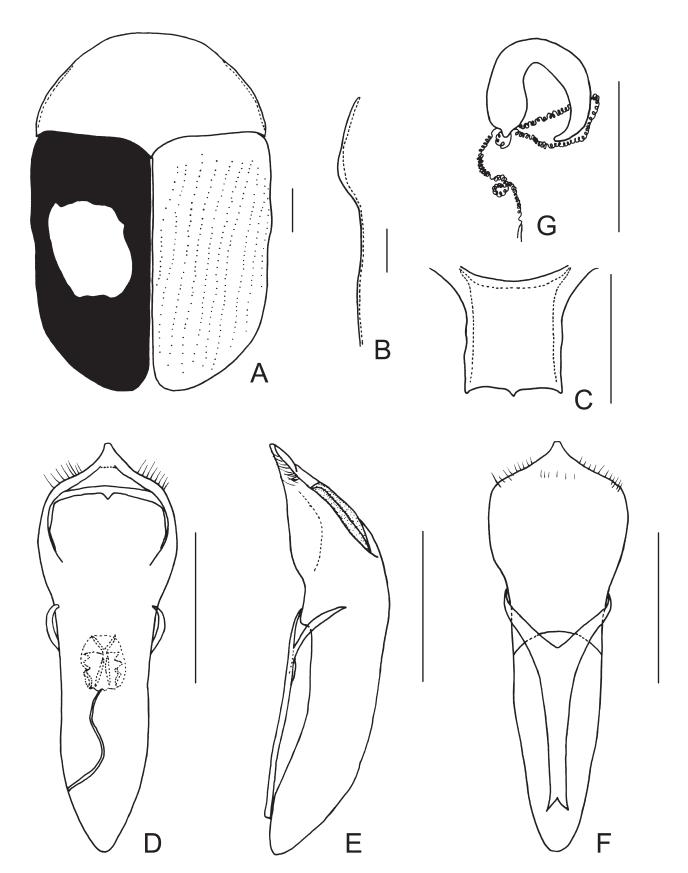
Head with dense and coarse punctures, densely strigose on frons. Eyes reniform; superior eye-lobes separated by slightly greater distance than antennal insertions. Clypeus arched and slightly emarginated. Antennae long, reaching apex of basal 1/3 of elytra; scape broad and long, pedicel shortest, antennomeres 3 and 4 slender, 3 slightly shorter than 4, 5 broader, as long as 4 while longer than 3, 6–11 somewhat broadened and each segment broader than long, but not flattened.



**FIGURE 7-1.** *Adiscus bicoloriceps* (Pic, 1932): A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus; G. rectal pad. (Scale bars: A–B = 0.5 mm, C–G = 0.2 mm).

Pronotum (Figs. 7-1A; 7-2A) broadly smooth and glabrous, base much broader than apex, with basal width about 2.5 times of pronotal length. Anterior margin nearly straight; posterior margin undulated slightly, and its middle portion produced into an obtuse angle of about 100°. Disc evenly convex, impunctate.

Elytra (Figs. 7-1A; 7-2A) almost as broad as long, humeri somewhat prominent and glabrous. Disc evenly and moderately punctate, with 11 regular striae, intervals scatted with minute punctures. Epipleural lobe (Fig. 7-2B) large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/4 of elytron, with both lobe sides forming angle of 130°, epipleura obliquely placed and visible in lateral view.



**FIGURE 7-2.** *Adiscus bicoloriceps* (Pic, 1932): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

Venter clothed with dense and short pubescence. Prosternum (Fig. 7-2C) trapezoidal, with coarse and dense punctures, posterior margins slightly emarginated, hind angles not produced, lateral ridges elevated, straight in lateral view. Mesoventrite with dense coarse punctures, about twice as wide as long. Pygidium with dense and coarse punctures. Front and middle legs swollen, femur robust, apex of tibiae thick, tarsi inflated.

**Aedeagus.** (Figs. 7-1D–F; 7-2D–F) Median lobe elongate, about 3 times as long as wide, parallel-sided, apex of median lobe slightly narrower than middle, strongly arcuate at apex; with several setae on each side of apex, impunctate on ventral side. Median orifice with median sclerite bending inwards beyond surface at one-ninth of median lobe. Inner sac almost round, bilobed and narrowed from apex, truncate at bottom. Tegmen Y-shaped, almost bifurcate at basal 1/3, weakly sclerotized, nearly translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 shallow. **Spermatheca** (Figs. 7-1C; 7-2G) falcate, swollen at base, 45°-angled bending halfway, acute at the apex; duct base thickened strongly, coiled, then becoming thinner, weakly sclerotized, and irregularly coiled about 2–3 times. **Rectal sclerites** (Fig. 7-1G) strongly sclerotized, two sclerites slender, rectangular, almost connected in ventral view.

Distribution. China (Fujian, Taiwan).

#### Adiscus bimaculicollis Chen & Pu, 1980

(Figs 8-1; 8-2)

Adiscus bimaculicollis Chen & Pu, 1980: 110 (type locality: Yunnan; type deposited: IZ-CAS); Schöller et al., 2010: 607 (catalogue).

Material examined. CHINA: Holotype: female, "Yunnan, Jinping River, Dongzhai [Chinese letters] / 1500–1700 m // Chinese Academy of Sciences [Chinese letters] / 11. VI. 1956 / coll. Keren Huang leg. [Chinese letters] // HOLOTYPE". (IZ-CAS).

**Redescription. Measurements. Female.** BL = 3.94 mm, BW = 2.78 mm, HL = 1.28 mm, HW = 1.22 mm, PL = 1.17 mm, PW = 2.42 mm, PA =  $80^{\circ}$ , EL = 2.75 mm, EA =  $160^{\circ}$ .

Body (Figs. 8-1A; 8-2A) ovate, dorsum strongly convex, basic color reddish brown. Antennomeres 1–5 pale brown, 6–11 darkish brown. Pronotum with two transverse-ovate black patches at each side,near but not reaching anterior margin, their combined width about 2/3 as broad as basal margin; posterior margin black. Elytra with two transverse broad irregularly shaped black bands, one at base, extending from lateral margin to suture, with lateral edge reaching basal 1/3 of elytra and inner edge reaching about middle of suture, posterior edge irregular; apical band extending from near lateral margin of elytra to first puncture row, like two black ovals combined, inner longer than outer. Reddish brown on legs, propleura, mesopleura, apical region of Mesoventrite. Venter black, and the apical region of pygidium with a broad black spot.

Head rugose, coarsely and rather closely punctate, middle region slightly concave. Eyes reniform, superior eyelobes separated by slightly greater distance than antennal insertions. Clypeus not distinctly separated from frons, anterior margin arched and emarginated. Antennae moderately short, reaching shoulder region of elytra; scape clubbed, pedicel oblong, about half as long as scape, antennomeres 3 and 4 slender, about equal in length, slightly longer than pedicel; 6–11 broadened but not flattened, each segment obviously longer than wide.

Pronotum (Figs. 8-1A; 8-2A) convex, much broader basely than apically, basal width about twice as long as pronotal length. Anterior margin nearly straight. Posterior margin sinuate with fine serration, and produced into an acute angle of about 80° at middle. Disc with both kinds of coarse and fine punctures, but coarse ones sparse; punctures on black spots slightly denser and more obvious; fine punctures extremely small and dense.

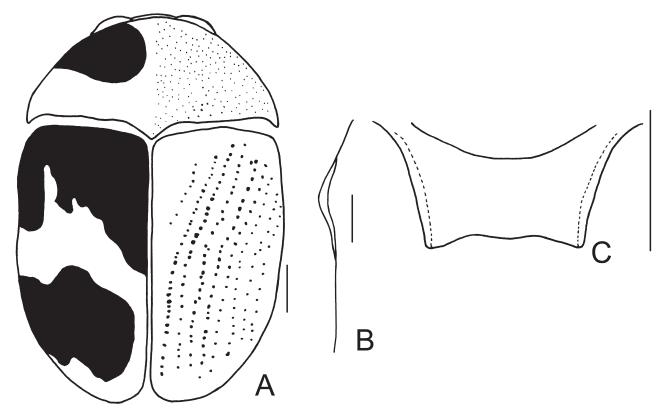
Elytra (Figs. 8-1A; 8-2A) with humeri prominent and glabrous, as long as wide. Disc with regular striae, more coarsely punctured than pronotum, intervals with scattered minute punctures. Epipleural lobe (Fig. 8-2B) weak, lateral margins slightly expanded ventrally and with weakly arcuate lobe at basal 1/4 of elytron, with both lobe sides forming angle of 160°, epipleura visible in lateral view.

Venter clothed with sparse and short pubescence. Prosternum (Fig. 8-2C) trapezoidal, anterior margin not prominent, lateral ridge elevated slightly, posterior margin weakly undulated. Mesoventrite broad, 2.5 times as broad as long. Pygidium with dense coarse punctures.

Distribution. China (Yunnan).



**FIGURE 8-1.** *Adiscus bimaculicollis* Chen & Pu, 1980, holotype: A. habitus; B. lateral view of habitus. (Scale bars = 0.5 mm).



**FIGURE 8-2.** *Adiscus bimaculicollis* Chen & Pu, 1980: A. habitus; B. epipleural lobe of elytra. C. prosternum. (Scale bars = 0.5 mm).

**Diagnosis.** This species is similar to *A. maculatus* and *A. kweiyangensis*. The main difference is that *A.bimaculicollis* has the black markings of dorsum much larger, the terminal segments of antennae slightly flattened, the lateral ridges of prosternum not as strongly raised, and the epipleural lobe of elytra slightly prominent and weakly arc-shaped.

#### Adiscus bodhisatva (Gressitt, 1942)

(Figs 9-1; 9-2)

*Dioryctus bodhisatva* Gressitt, 1942: 332 (type locality: Mt. Emei; type deposited: ICRI). *Adiscus bodhisatva*: Gressitt & Kimoto, 1961: 116; Schöller *et al.*, 2010: 607 (catalogue).

**Material examined. CHINA: Sichuan** Province: 1 male, Emeishan, Jiulao hole, 4. VIII. 1957, coll. Youcai Lu (IZ-CAS); 1 female, Wenchuan, Wolong, 24. VII. 1983, coll. Shuyong Wang (IZ-CAS); **Yunnan** Province: 1 female, Lanping, 22. VIII. 1984, coll. Shuyong Wang (IZ-CAS).

**Redescription. Measurements. Male.** BL = 2.25 mm, BW = 1.48 mm, HL = 0.70 mm, HW = 0.77 mm, PL = 0.54 mm, PW = 1.22 mm, PA =  $110^{\circ}$ , EL = 1.85 mm, EA =  $140^{\circ}$ , AL = 0.78 mm, AW = 0.25 mm.



**FIGURE 9-1.** *Adiscus bodhisatva* (Gressitt, 1942): A. habitus; B. lateral view of habitus; C. spermatheca; D. rectal pad. (Scale bars: A–B = 0.5 mm, C–D = 0.2 mm).

**Females.** BL = 2.25-2.69 mm, BW = 1.42-1.78 mm, HL = 0.76 mm, HW = 0.84 mm, PL = 0.58 mm, PW = 1.32 mm, PA =  $110^{\circ}$ , EL = 2.00 mm, EA =  $140^{\circ}$ , SL = 0.51 mm.

Body (Figs. 9-1A; 9-2A) ovate, dorsum strongly convex, mostly yellowish brown. Head, labrum, ventral side of mouthparts and antennomeres 1–4 yellowish brown, 5–11 brown; mandibles darkish brown. Elytra basal margin narrowly black, disc with 3 darkish brown spots, the first large, in middle basal region and near the suture, the second posterior to the first, the third anterior and slightly lateral to the second. Legs yellowish brown, lateral margin of tibia blackish, but not obvious. Venter yellowish brown.

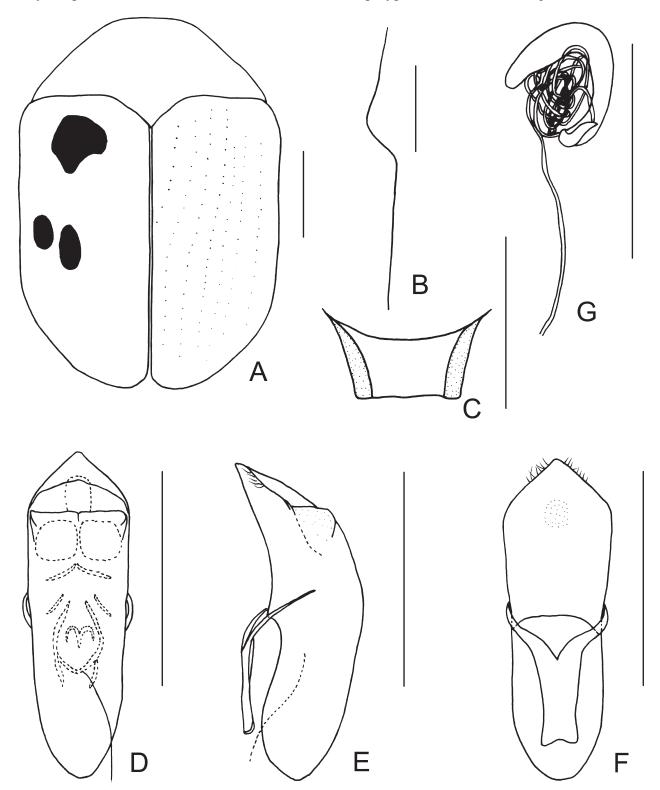
Head with sparsely and coarsely fine punctures and sparsely short hairs. Eyes reniform, superior eye-lobes separated by same distance with antennal insertions. Clypeus with dense coarse punctures, anterior margin nearly straight. Antennae reaching elytral humeri, scape long and thick, pedicel suboblong, antennomeres 3 and 4 most slender, as broad as long, 5 slightly broader than 4, 6–11 somewhat broadened and long.

Pronotum (Figs. 9-1A; 9-2A) convex, smooth, much broader basely than apically, basal width about 2.3 times of pronotal length. Anterior margin nearly straight, posterior margin slightly sinuate with fine serration, and its middle portion produced into an obtuse angle of about 110°. Disc finely punctate.

Elytra (Figs. 9-1A; 9-2A) with humeri prominent and glabrous. Disc sparsely and finely punctate, with 11 regular striae, puncture striae irregular on apical slope, row intervals with scattered minute punctures. Epipleural

lobe (Fig. 9-2B) large, lateral margins slightly expanded ventrally and arcuately lobe-formed at basal 1/3 of elytron, with both sides forming angle of 140°, epipleura nearly invisible in lateral view.

Venter clothed with sparse short pubescence. Prosternum (Fig. 9-2C) trapezoidal; anterior margin arcuately concave, lateral margin broad, lateral ridge elevated strongly, nearly straight in the lateral view, posterior margin nearly straight. Mesoventrite broad, about twice as broad as long. Pygidium with dense coarse punctures.



**FIGURE 9-2.** *Adiscus bodhisatva* (Gressitt, 1942): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

**Aedeagus.** (Fig. 9-2D–F) Median lobe elongate, 2.6 times as long as wide, parallel-sided. Apex of median lobe gradually narrow than middle, acute at apex, and strongly curved in lateral view; with several short sparse setae on each side of apex, lacking punctures on ventral side. Median orifice with middle square sclerite bending inwards beyond surface. Inner sac nearly pear-shaped, slightly acute at apex, gradually narrow from basal 1/3, bottom margin with two slender process. Tegmen Y-shaped, almost bifurcate at basal 1/3, weakly sclerotized, nearly translucent.

**Female.** Body more robust than male, abdomen unknown [missing from specimen]. **Spermatheca** (Figs. 9-1C; 9-2G) falcate, 120°-angled bending halfway, slightly acute at apex; duct base thickened strongly, coiled, then becoming thinner, and coiling about 2–3 times, but the end of duct nearly straight. **Rectal sclerites** (Fig. 9-1D) strongly sclerotized, two sclerites rectangular, posterior margin sinuate, not connected in ventral view.

Distribution. China (Sichuan, Yunnan).

#### Adiscus crasssicornis Tan, 1992

(Figs 10-1; 10-2)

Adiscus crasssicornis Tan, 1992b: 781 (type locality: Yunnan; type locality: IZ-CAS); Schöller et al., 2010: 608 (catalogue).

Material examined. CHINA: Holotype: male, "Yunnan: Lushui, Pianma [Chinese letters] / 2300 m / Chinese Academy of Sciences [Chinese letters] // 31. V. 1981 / coll. Shuyong Wang [Chinese letters] // HOLOTYPE". (IZ-CAS); Paratype: 1 male, "Yunnan: Lushui, Pianma [Chinese letters] // 2300 m / Chinese Academy of Sciences [Chinese letters] // 26. V. 1981 / coll. Shuyong Wang [Chinese letters] // PARATYPE". (IZ-CAS); 1 male, same as holotype, (IZ-CAS).

**Redescription. Measurements. Males.** BL = 3.21-3.56 mm, BW = 2.05-2.38 mm, HL = 0.81 mm, HW = 0.77 mm, PL = 1.17 mm, PW = 2.17 mm, PA =  $80^{\circ}$ , EL = 2.43 mm, EA =  $140^{\circ}$ , AL = 0.91 mm, AW = 0.31 mm.

Body (Figs. 10-1A; 10-2B) broad and short, subquadrate, dorsum lustrous, steel blue. Yellowish brown on clypeus, labrum and antennomeres 1–4 yellow, 7–11 black. Legs and venter mostly darkish brown, upper surface of femora, apex of femora and tarsi reddish brown.

Head shiny; finely and sparsely punctate. Eyes slightly oblong; superior eye-lobes separated by strongly greater distance than antennal insertions. Clypeus slightly prominent and declivous, anterior margin arched and emarginated apically. Vertex with a small round fovea. Antennae broad and long, reaching the middle region of the elytra, scape clubbed, pedicel cylindrical, about half as long as scape, antennomeres 3 and 4 slender, almost as long as pedicel, 5 base narrow and apex broad, 6–11 somewhat broadened and flattened, last segment pointed apically.

Pronotum (Figs. 10-1A; 10-2B) convex, smooth and shiny, base much broader than apex, basal width about twice as long as pronotal length. Anterior margin nearly straight. Posterior margin undulated, and its middle portion produced into an acute angle of about 80°. Disc evenly convex, impunctate.

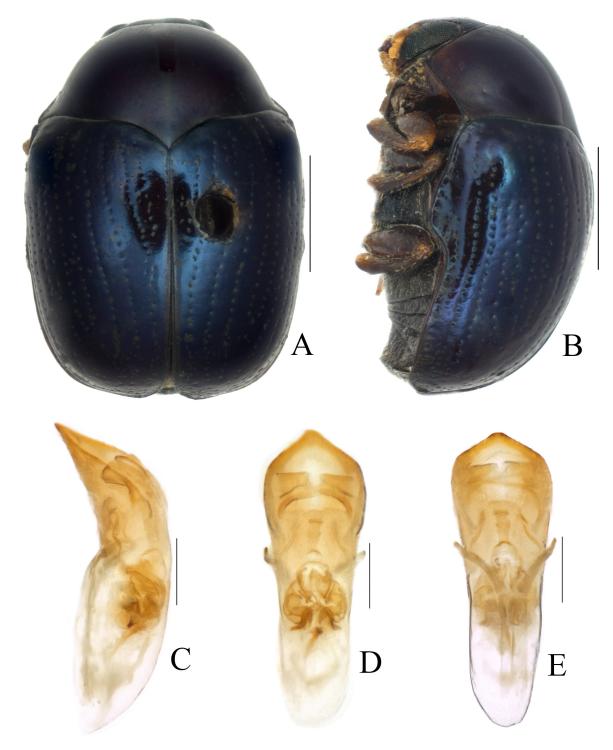
Elytra (Figs. 10-1A; 10-2B) as broad as prothorax at base, humeri somewhat prominent, glabrous. Disc sparsely and finely punctate, with 11 regular striae, intervals impunctate. Epipleural lobe (Fig. 10-2B) distinct, lateral margins distinctly expanded ventrally and with arcuate lobe at basal 1/2 of elytron, with both lobe sides forming angle of 140°, epipleura obliquely placed and visible in lateral view.

Venter clothed with short pubescence. Prosternum (Fig. 10-2C) broad, trapezoidal, lateral margin slightly protruding, posterior margins weakly concave. Mesoventrite broad, width about 2.5 times as long as length, hind angles slightly protruded. Pygidium with coarse punctures and short pubescence.

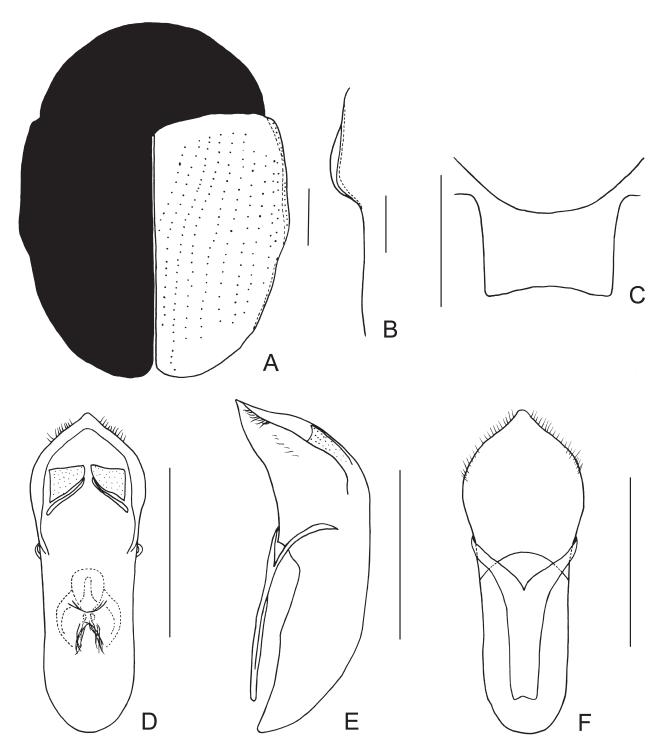
**Aedeagus.** (Figs. 10-1C–E; 10-2D–F) Median lobe elongate, clubbed, 3 times as long as wide, apex of median lobe gradually narrower than middle and bent ventrally, acute at apex; with sparse short setae on each side of apex, impunctate. Median orifice with median sclerite bending inwards above surface. Inner sac oblate, bilobed, with two slender band. Tegmen Y-shaped, weakly sclerotized, nearly translucent.

Distribution. China (Yunnan).

**Diagnosis.** This species is easily distinguished from all its congeners by the long and thick antennae.



**FIGURE 10-1.** *Adiscus crasssicornis* Tan, 1992, holotype: A. habitus; B. lateral view of habitus; C. lateral view of aedeagus; D. dorsal view of aedeagus; E. ventral view of aedeagus. (Scale bars: A–B = 0.5 mm, C–E = 0.2 mm).



**FIGURE 10-2.** *Adiscus crasssicornis* Tan, 1992: A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus. (Scale bars = 0.5 mm).

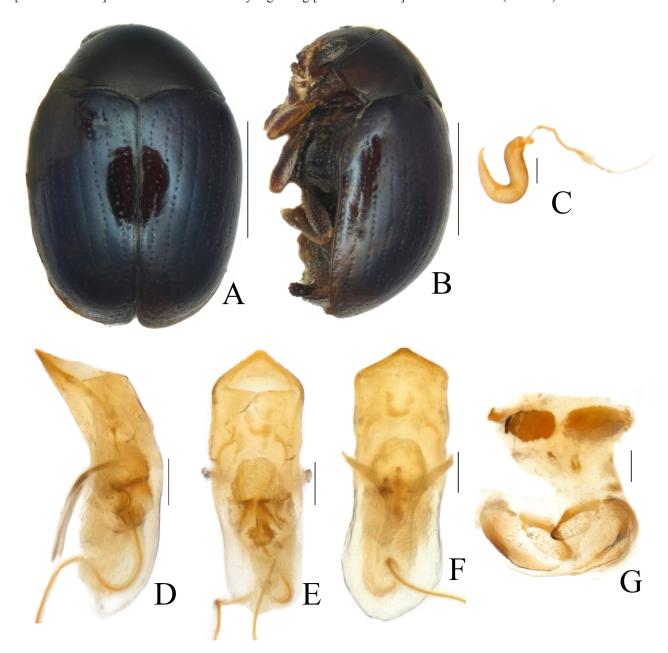
#### Adiscus cyaneus Tan, 1992

(Figs 11-1; 11-2)

Adiscus cyaneus Tan, 1992b: 782 (type locality: Sichuan; type deposited: IZ-CAS); Medvedev, 2008: 202 (Yunnan); Schöller et al., 2010: 607 (catalogue).

Material examined. CHINA: Holotype: male, "Sichuan: Ganzi [Chinese letters] / 3650 m / Chinese Academy

of Sciences [Chinese letters] // 11. VII. 1983 / coll. Yuanqing Chen [Chinese letters] // HOLOTYPE". (IZ-CAS); **Paratypes:** 1 female, "Sichuan: Mt. Gongga [Gonggashan], Yanzigou [Chinese letters] // 2350 m / Chinese Academy of Sciences [Chinese letters] // 4. VI. 1983 / coll. Xuezhong Zhang [Chinese letters] // PARATYPE". (IZ-CAS); 1 male, "Sichuan: Mt. Gongga [Gonggashan], Yanzigou [Chinese letters] // 2340 m / Chinese Academy of Sciences [Chinese letters] // 5. VI. 1983 / coll. Shuyong Wang [Chinese letters] // PARATYPE". (IZ-CAS).



**FIGURE 11-1.** *Adiscus cyaneus* Tan, 1992, holotype: A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus; G. rectal pad. (Scale bars: A–B = 1.0 mm, C–G = 0.1 mm).

**Redescription. Measurements. Males.** BL = 2.34-2.59 mm, BW = 1.42-1.74 mm, HL = 0.75 mm, HW = 0.73 mm, PL = 0.69 mm, PW = 1.48 mm, PA =  $140^{\circ}$ , EL = 1.84 mm, EA =  $160^{\circ}$ , AL = 0.62 mm, AW = 0.19 mm.

**Female.** BL = 2.64–2.82 mm, BW = 1.68–1.86 mm, HL = 0.81 mm, HW = 0.79 mm, PL = 0.75 mm, PW = 1.60 mm, PA =  $140^{\circ}$ , EL = 1.99 mm, EA =  $160^{\circ}$ , SL = 0.47 mm.

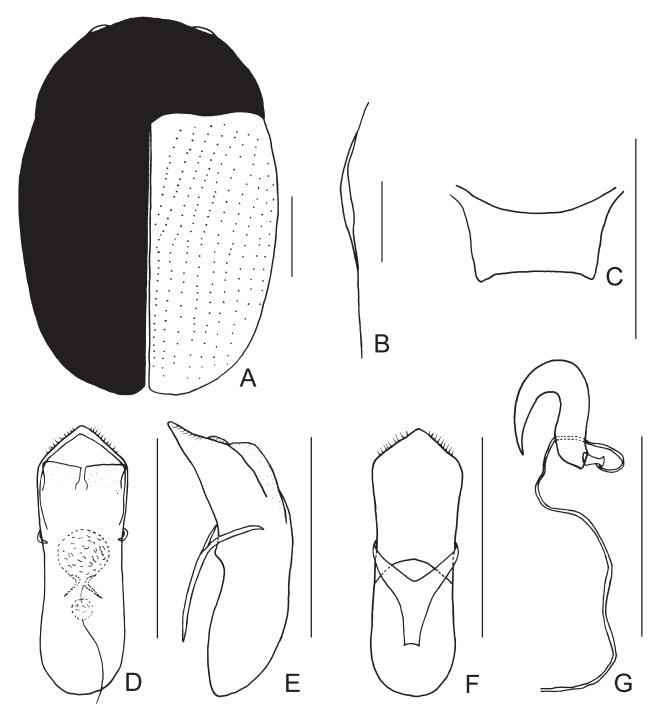
Body (Figs. 11-1A; 11-2A) small, oval, dorsum smooth and shiny. Head black, apex of clypeus, labrum, and antennomeres 1–4 yellowish brown, 5–11 black. Pronotum black. Elytra dark blue. Legs mostly dark brown, femur, base and apex of tibiae, and tarsus brown. Venter piceous black.

Head sparsely and finely punctate. Eyes oblong; superior eye-lobes separated by more than antennal insertions.

Clypeus with weakly transverse wrinkles, anterior margin slightly arched and emarginated. Antennae reaching to the elytral humeri, scape clubbed, pedicel spherical, about half as long as scape, antennomeres 3–5 slender, cylindrical, almost as long as pedicel, 6–11 broadened and flattened.

Pronotum (Figs. 11-1A; 11-2A) smooth, impunctate, base much broader than apex, the width of base almost 2.1 times as long as pronotal length. Anterior margin nearly straight. Basal margin sinuate with fine serration, and produced into an obtuseangle of about 140° at middle. Disc evenly convex, smooth.

Elytra (Figs. 11-1A; 11-2A) smooth, as long as wide, as broad as pronotum at base, humeri prominent. Disc with fine punctures, with 11 regular striae; nearly intervals impunctate. Epipleural lobe (Fig. 11-2B) small, lateral margins weakly expanded ventrally and finely arcuately lobe-formed at basal 1/3 of elytron, with both sides forming angle of 160°, epipleura obliquely placed and visible in lateral view.



**FIGURE 11-2.** *Adiscus cyaneus* Tan, 1992: A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

Venter clothed with sparsely short pubescence. Prosternal episternum with weak wrinkles and short pubescence, prosternal epimeron smooth. Prosternum (Fig. 11-2C) broad, rugose, lateral margin slightly prominent, posterior margin straight. Mesoventrite slightly trapezoid, 2/5 times as long as wide, anterior margin narrower than prosternum. Pygidium with dense coarse punctures.

**Aedeagus.** (Figs. 11-1D–F; 11-2D–F) Median lobe elongate, 3.3 times as long as wide, parallel-sided. Apex of median lobe gradually narrower than middle, acute at apex, and bent ventrally, with short pubescence on each side of apex, impunctate. Median orifice with median sclerite bending inwards above surface. Inner sac almost spherical, with coarse point-like structure, posterior margin bilobed, a small sphere with punctures directly below this. Tegmen Y-shaped, weakly sclerotized, nearly translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 shallow and round. **Spermatheca** (Figs. 11-1C; 11-2G) falcate, 45°-angled bending halfway, acute at apex, base more wide; duct base thickened strongly, almost not coiled, then becoming thinner, and coiling about 3–4 times. **Rectal sclerites** (Fig. 11-1G) strongly sclerotized, two sclerites rectangular, not connected in the ventral view.

Distribution. China (Sichuan, Yunnan).

**Diagnosis.** This species is similar to *A. glabricollis*, but can be distinguished by elytral puncture rows of elytra not weakened at apex, and the color of the antennae and legs being different.

#### Adiscus exilis (Weise, 1922)

(Figs 12-1; 12-2)

Dioryctus exilis Weise, 1922: 43 (type locality: Yunnan; type deposited: NHRS); Gressitt, 1942: 332. Adiscus exilis: Gressitt & Kimoto, 1961: 117 (Kwangtung); Schöller et al., 2010: 607 (catalogue).

Material examined. CHINA: Sichuan Province: 1 female, Luding, Moxi, 13. IX. 1982, coll. Shuyong Wang (IZ-CAS); 1 female, Luding, Moxi, Hailuogou, 16. IX. 1982, coll. Shuyong Wang (IZ-CAS); 1 female, Luding, Xinxing, Yanzigou, 17. IX. 1982, coll. Shuyong Wang (IZ-CAS); Yunnan Province: 21 males, 17 females, Weixi Pantiange, 2750 m, 22. VII. 1981, coll. Shuyong Wang (IZ-CAS); 3 females, Weixi Pantiange, 2500 m, 25. VII. 1981, coll. Shuyong Wang (IZ-CAS); 2 females, Weixi Pantiange, 2400 m, 25. VII. 1981, coll. Shuyong Wang; 1 female, Weixi Baijixun, 1780 m, 10. VII. 1981, coll. Shuyong Wang (IZ-CAS); 1 female, Xishuangbanna Mengzhe, 15. VI. 1958, coll. unknown (IZ-CAS); 1 female, Xishuangbanna Mengzhe, 25. VI. 1958, coll. Shuyong Wang (IZ-CAS); 1 female, Kunming, time unknown, coll. unknow (IZ-CAS); Tibet: 1 male, Motuo, Gedang, 23. IX. 1982, coll. Yanheng Han (IZ-CAS).

**Redescription. Measurements. Males.** BL = 1.86-2.12 mm, BW = 1.28-1.58 mm, HL = 0.76 mm, HW = 0.74 mm, PL = 0.49 mm, PW = 1.16 mm, PA =  $80^{\circ}$ , EL = 1.58 mm, EA =  $120^{\circ}$ , AL = 0.69 mm, AW = 0.25 mm.

**Females.** BL = 2.03–2.49 mm, BW = 1.46–1.62 mm, HL = 0.83 mm, HW = 0.81 mm, PL = 0.54 mm, PW = 1.26 mm, PA = 80°, EL = 1.72 mm, EA = 120°, SL = 0.40 mm.

Body (Figs. 12-1A; 12-2A) small, ovate; head mostly black, clypeus light brown; labrum and antennomeres 1–4 yellowish brown, 5–11 darkish brown. Pronotum reddish brown, and posterior margin black. Elytra reddish brown, basal margin black. Abdomen black, propleura yellowish brown, apex of last segment of abdomen and pygidium yellowish brown; legs yellowish brown, apex of femur and tibia slightly black, claws black.

Head dull; coarsely punctate. Eyes reniform; superior eye-lobes almost equally separated as antennal insertions. Clypeus densely granulose and sparsely punctate, anterior margin slightly arched and emarginated apically. Frons with sparse punctures and sparse short hairs, and intervals scattered with minute punctures. Antennae short, reaching elytral humeri, scape clubbed, pedicel elliptic, about half as long as scape, antennomeres 3 and 4 short and slender, both slightly shorter than pedicel, 5 subtriangular, base narrow and apex broad, 6–11 somewhat broadened and flattened, each segment longer than those of basal, last segment pointed apically.

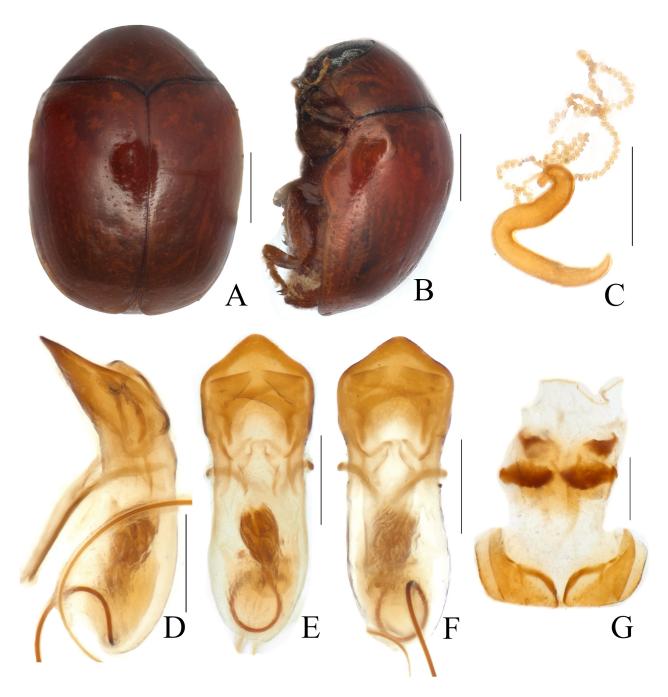
Pronotum (Figs. 12-1A; 12-2A) convex, much broader basely than apically, basal width about 2.3 times as long as pronotal length. Anterior margin nearly straight. Posterior margin slightly sinuate with fine serration, and produced into an acuteangle of about 80° at middle. Disc convex, finely and rather evenly punctate.

Elytra (Figs. 12-1A; 12-2A) as broad as long, humeri somewhat prominent, glabrous. Disc sparsely and finely punctate, with 11 regular striae, intervals sparsely and finely punctate. Epipleural lobe (Fig. 12-2B) large, lateral

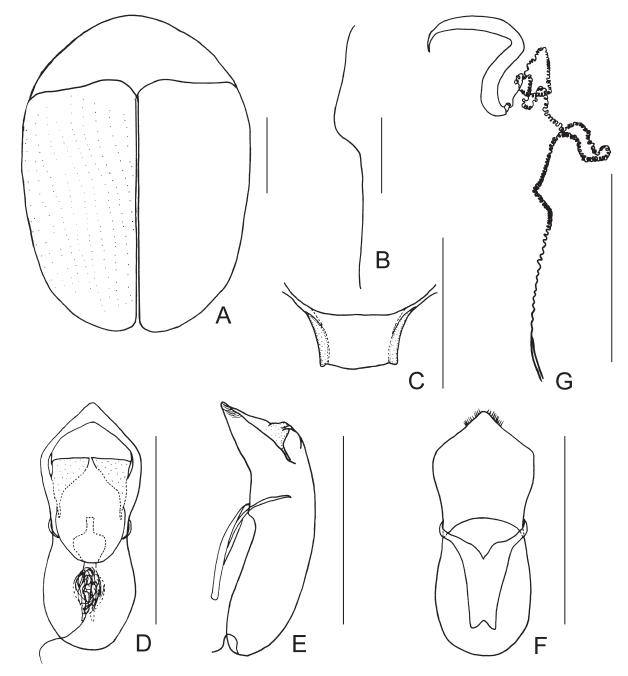
margins distinctly expanded ventrally with rounded lobe at basal 1/2 of elytron, with both lobe sides forming angle of 120°, epipleura obliquely placed and visible in lateral view.

Venter clothed with fine punctures and short pubescence. Prosternal episternum slightly rugose. Prosternum (Fig. 12-2C) trapezoidal, lateral margin protruded strongly, anterior margin slightly arched emarginated, posterior margin nearly straight, lateral ridges elevated, straight in lateral view. Mesoventrite broad, twice as wide as long, with dense coarse punctures. Pygidium with coarse dense punctures.

**Aedeagus.** (Figs. 12-1D–F; 12-2D–F) Median lobe elongate, about 2.7 times as long as wide, nearly parallel-sided. Apex of median lobe slightly narrower than middle, acute at apex, strongly curved in lateral view; with several short setae on each side of apex, densely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards above surface. Inner sac rather oblong, cylindrical. Tegmen Y-shaped, weakly sclerotized, almost translucent.



**FIGURE 12-1.** *Adiscus exilis* (Weise, 1922): A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; G. rectal pad. (Scale bars: A–B = 0.5 mm, C–G = 0.2 mm).



**FIGURE 12-2.** *Adiscus exilis* (Weise, 1922): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

**Female.** Body more robust than male, apical hollow in ventrite 5 shallow and round. **Spermatheca** (Figs. 12-1C; 12-2G) falcate, right-angled bending from apex 3/5, acute at apex, become narrower from apex 1/5; duct weakly sclerotized, irregularly coiling 4–6 times. **Rectal sclerites** (Fig. 12-1G) moderately sclerotized, not connected between two rectangular sclerites on ventral side.

Distribution. China (Guangdong, Sichuan, Guizhou, Yunnan, Xizang).

#### Adiscus fracticeps (Gressitt, 1942)

(Figs 13-1)

*Dioryctus fracticeps* Gressitt, 1942: 333 (type locality: Lant'au I., nr. Hong Kong; type deposited: ICRI). *Adiscus fracticeps*: Gressitt & Kimoto, 1961: 117; Schöller *et al.*, 2010: 607 (catalogue).

**Material examined. CHINA: Holotype:** male, "Tung-chung, Lan-t'au Island, near Hong Kong // 7. VIII. 1934 / coll. Y. W. Djou // HOLOTYPE". (ICRI).

**Redescription. Measurements. Male.** BL = 3.30 mm, BW = 2.45 mm, HL = 0.92 mm, HW = 0.99 mm, PL = 1.03 mm, PW = 2.24 mm, PA =  $130^{\circ}$ , EL = 2.48 mm, EA =  $110^{\circ}$ .

Body (Fig. 13-1A) fairly broad; rounded oblong, mostly reddish ochraceous. Labrum and mandibles pitchy to black. Antennae ochraceous on first three and a half segments, remainder pitchy black. Pronotum with basal margin black. Elytra with anterior margin black. Metaventrite with sides slightly pitchy. Venter brown ochraceous.

Head round, with close punctures on frons and sparse punctures on occiput. Eyes reniform; superior eye-lobes separated by slightly greater distance than antennal insertions, with a short longitudinal groove between upper ends of eyes. Clypeus with anterior margin slightly arched and emarginated. Antennae, reaching beyond humeral region of the elytra, scape clubbed and long, pedicel subspherical, about 1/2 as long as the scape, antennomeres 3–4 minute, nearly as long as pedicel, 5–11 somewhat broadened and flattened, last segment pointed apically.

Pronotum (Fig. 13-1A) convex, smooth and shiny, strongly narrowed anteriorly, basal width about twice of pronotal length. Anterior margin nearly straight. Posterior margin sinuate with fine serration, and produced into an obtuse angle of about 130° at middle. Disc evenly convex, impunctate.

Elytra (Fig. 13-1A) with humeri prominent and glabrous, slightly narrowed behind humerus, slightly rounded apically. Disc distinctly punctate, with 11 regular striae, with shallow minute punctures between rows. Epipleural lobe large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/2 of elytron, with both lobe sides forming angle of 110°, epipleura obliquely placed and indistinct in lateral view.

Venter clothed with short pubescence and fine punctures. Prosternum trapezoidal, lateral margin broad and convex, lateral ridges elevated, anterior margin not protruding, posterior margin nearly straight, central ridge absent. Mesoventrite rectangular, twice as wide as long, lateral ridges elevated. Metaventrite with irregular fine punctures. Pygidium with dense punctures and short pubescence.

Distribution. China (Guangdong).

**Diagnosis.** Allied to *A. mouhoti*, but can be distinguished by smaller size and darker ochraceous coloration, the pronotum nearly impunctate, the sublateral puncture-row of elytra distinctly grooved.



**FIGURE 13-1.** *Adiscus fracticeps* (Gressitt, 1942), holotype: A. habitus; B. lateral view of habitus; C. holotype labels. (Scale bars: A–B = 0.5 mm).

Adiscus glabrous Tan, 1988

(Figs 14-1; 14-2)

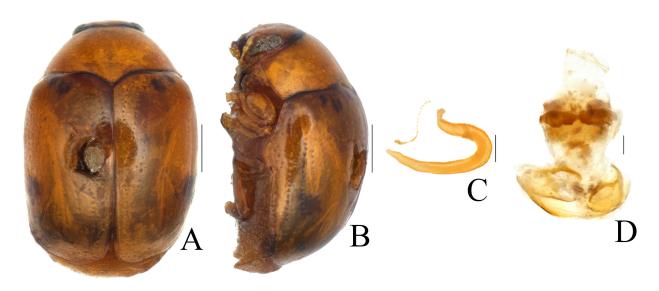
Adiscus glabrous Tan, 1988: 319 (type locality: Xizang; type deposited: IZ-CAS); Schöller et al., 2010: 607 (catalogue).

Material examined. CHINA: Paratype: 1 female, "Tibet: Motuo, Gedang [Chinese letters] / Chinese Academy of

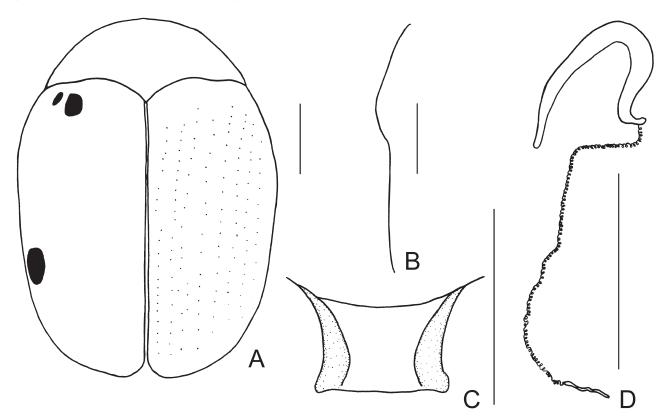
Sciences [Chinese letters] / 1900–2000 m / 26. IX. 1982 // PARATYPE". (IZ-CAS); Additional material: Tibet: 1 female, Bomi, 700 m, 2–3. IX. 1983, coll. Yinheng Han (IZ-CAS).

**Redescription. Measurements. Females.** BL = 2.43-2.74 mm, BW = 1.61-1.82 mm, HL = 0.77 mm, HW = 0.75 mm, PL = 0.68 mm, PW = 1.39 mm,  $PA = 100^{\circ}$ , EL = 1.96 mm,  $EA = 135^{\circ}$ , SL = 0.63 mm.

Body (Figs. 14-1A; 14-2A) small and ovate; above shiny, mostly yellowish brown. Antennae pale yellow, apical 5 or 6 segments dark brown. Pronotum and elytra yellow, posterior margin, middle anterior margin of pronotum, basal posterior of elytra and lateral ridge of prosternum black; elytral disc with three small black spots, first at lateral side of humerus, second at middle along basal margin, third lateral to elytral middle region. Venter pale yellowish brown.



**FIGURE 14-1.** *Adiscus glabrous* Tan, 1988, paratype: A. habitus; B. lateral view of habitus; C. spermatheca; D. rectal pad. (Scale bars: A–B = 0.5 mm, C–D = 0.1 mm).



**FIGURE 14-2.** *Adiscus glabrous* Tan, 1988: A. habitus; B. epipleural lobe of elytra; C. prosternum; D. spermatheca. (Scale bars = 0.5 mm).

Head dull, finely and sparsely punctate. Eyes distinct and reniform; superior eye-lobes separated wider than antennal insertions. Antennae reaching elytral humeri, scape clubbed and broadened, pedicel oblong, shorter than scape, antennomeres 3–5 slender, shorter than pedicel, 6–11 somewhat broadened.

Pronotum (Figs. 14-1A; 14-2A) convex, smooth and shiny, much broader basely than apically, basal width about twice pronotal length. Anterior margin nearly straight. Posterior margin undulated in dorsal view, and produced into an obtuse angle of about 100° at middle. Disc evenly convex, impunctate.

Elytra (Figs. 14-1A; 14-2A) as broad as long, humeri somewhat prominent, glabrous. Disc sparsely and finely punctate, arranged in 9 regular srtriae excluding scutellar row, strial intervals without minute punctures. Epipleural lobe (Fig. 14-2B) distinct, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/3 of elytron, with both lobe sides forming angle of 135°, epipleura visible in lateral view.

Venter clothed with short pubescence. Prosternum (Fig. 14-2C) trapezoidal, lateral margin prominent, broadened and bifurcate. Mesoventrite broad, about 2.5 times as wide as long. Pygidium with densely fine punctures.

**Female.** Apical hollow in ventrite 5 shallow and oval. **Spermatheca** (Figs. 14-1C; 14-2D) falcate, 50°-angled bending from apex 2/3, acute at apex, moderately sclerotized, slightly become narrower from apex 1/3; duct weakly sclerotized, irregularly coiled. **Rectal sclerites** (Fig. 14-1D) moderately sclerotized, slightly connected between two rectangular sclerites on ventral side.

Distribution. China (Tibet).

**Diagnosis.** Allied to *A. exilis*, distinguished chiefly by the smooth body and impunctate pronotum and elytral interstriae.

### Adiscus grandipalpus Tan, 1992

(Figs 15-1; 15-2)

Adiscus grandipalpus Tan, 1992a: 602 (type locality: Hunan; type deposited: IZ-CAS); Schöller et al., 2010: 607 (catalogue).

**Material examined. CHINA: Holotype:** male, "Hunan: Mt. Huping [Hupingshan] [Chinese letters] // 800 m / Chinese Academy of Sciences [Chinese letters] // 22. VI. 1987 / coll. Guangchun Lei [Chinese letters] // HOLOTYPE". (IZ-CAS); **Paratype:** 1 male, same data as holotype.

**Redescription. Measurements. Males.** BL = 1.98-2.33 mm, BW = 1.36-1.63 mm, HL = 0.73 mm, HW = 0.76 mm, PL = 0.72 mm, PW = 1.35 mm, PA =  $125^{\circ}$ , EL = 1.57 mm, EA =  $150^{\circ}$ , AL = 1.21 mm, AW = 0.24 mm.

Body (Figs. 15-1A; 15-2A) small, ovate; mostly black. Head dark reddish brown, except vertex black; mouthparts yellowish; antennae yellowish brown, base of terminal segment fuscous; legs yellowish brown. Venter dark brown.

Head dull and smooth; finely and sparsely punctate. Eyes distinct, reniform; inner margin slightly emarginated; superior eye-lobes separated wider than antennal insertions. The anterior part of clypeus with punctures, slightly denser than those on head. Antennae slightly short, reaching elytral humeri, scape strongly swollen, pedicel subspherical and small, antennomeres 3–5 slender, almost as long as pedicel, 6–11 somewhat thickened, terminal segment about as long as scape.

Pronotum (Figs. 15-1A; 15-2A) convex, and broad, base much broader than apex, basal width about 1.9 times as long as pronotal length. Anterior margin nearly straight. Posterior margin sinuate with fine serration, and its middle portion produced into an obtuse angle of about 125°. Disc evenly convex, impunctate.

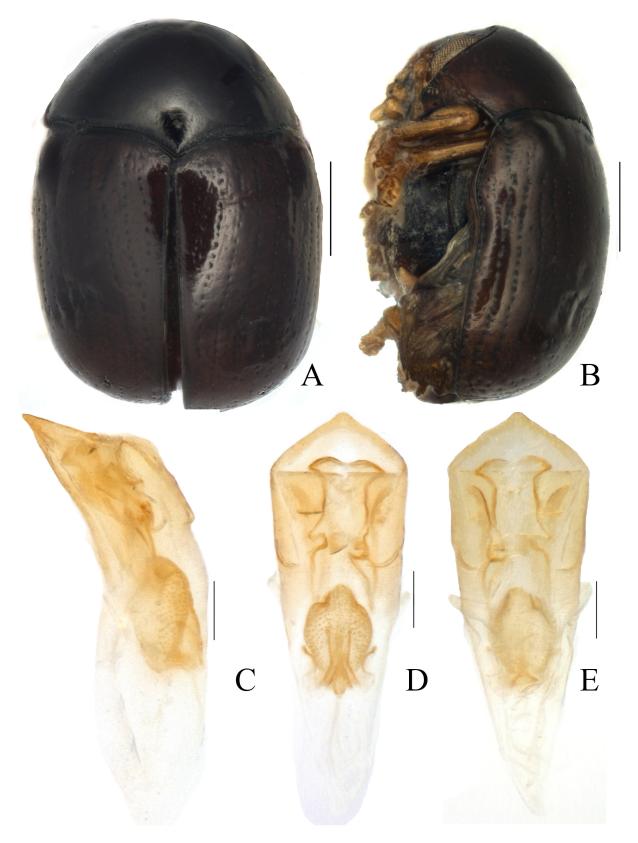
Elytra (Figs. 15-1A; 15-2A) as broad as pronotum at base, humeri somewhat prominent, glabrous. Disc sparsely and finely punctate, with 11 regular striae, without distinct minute punctures between rows. Epipleural lobe (Fig. 15-2B) weak, lateral margins weakly expanded ventrally and with fine lobe at basal 1/4 of elytron, with both lobe sides forming angle of 150°, epipleura obliquely placed and visible in lateral view.

Venter clothed with short pubescence and fine punctures. Prosternum (Fig. 15-2C) transverse, subquadrate, both sides weakly elevated into a low longitudinal ridge. Mesoventrite twice as wide as long, hind angles protruded.

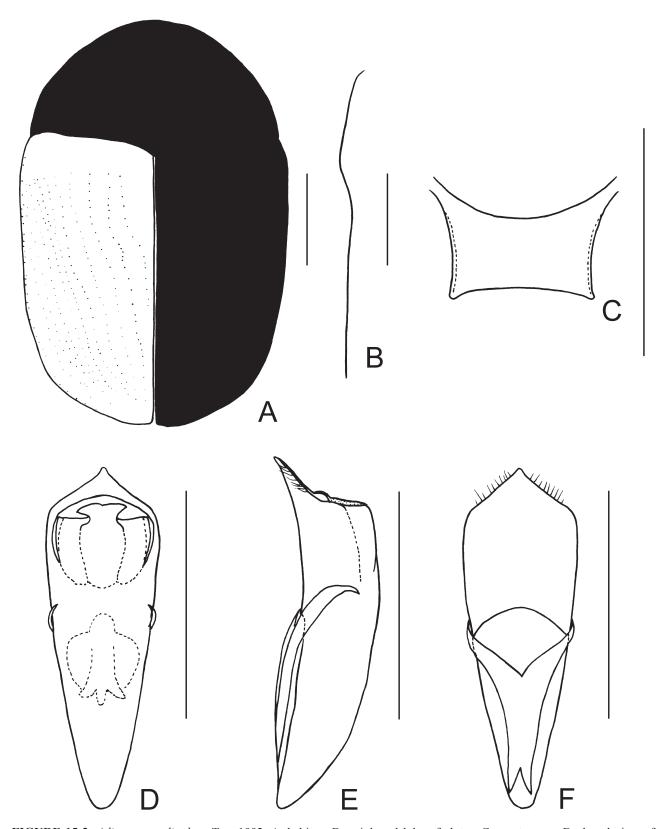
**Aedeagus.** (Figs. 15-1C–E; 15-2D–F) Median lobe elongate, about 3 times as long as wide. Apex of median lobe slightly narrower than middle, acute at apex, moderately curved in lateral view; with several small setae on each side of apex, impunctate on ventral side. Median orifice with median sclerite bending inwards below surface. Inner sac slightly narrow, bell-shaped, dilated at apical 1/3, and strongly narrow at basal 1/4, but rounded and acute at apex. Tegmen Y-shaped, weakly sclerotized, almost translucent.

### **Distribution.** China (Hunan).

**Diagnosis.** This species is similar to *A. niger* in body color, but distinguished by the strongly developed terminal segment of maxillary and labial palpi; head with fine punctures, impunctate pronotum and finely punctured elytra.



**FIGURE 15-1.** *Adiscus grandipalpus* Tan, 1992, holotype: A. habitus; B. lateral view of habitus; C. lateral view of aedeagus; D. dorsal view of aedeagus; E. ventral view of aedeagus. (Scale bars: A–B = 0.5 mm, C–E = 0.1 mm).



**FIGURE 15-2.** *Adiscus grandipalpus* Tan, 1992: A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus. (Scale bars = 0.5 mm).

### Adiscus humeralis (Pic, 1922)

(Figs 16-1; 16-2)

Dioryctus humeralis Pic, 1922a: 14 (type locality: Yunnan; type deposited: MNHN);

Adiscus humeralis: Gressitt & Kimoto, 1961: 117 (Hupeh); Kimoto & Gressitt, 1981: 325 (Tonkin); Schöller et al., 2010: 607 (catalogue).

- = Dioryctus auricacumen Gressitt, 1942: 331 (type locality: Mt. Omei; type deposited: ICRI).
- = Adiscus auricacumen: Gressitt & Kimoto, 1961: 117 (as synonym of A. humeralis).

Material examined. CHINA: Sichuan Province: 7 males, 8 females, Luding, Moxi, Hailuogou, 1550 m, 16. IX. 1982, coll. Shuyong Wang (IZ-CAS); 7 males, 4 females, Luding, Moxi, Hailuogou, 1550 m, 18. IX. 1982, coll. Shuyong Wang (IZ-CAS); 1 female, Luding, Moxi, Hailuogou, 1550 m, 13. IX. 1982, coll. Shuyong Wang (IZ-CAS); 1 female, Luding, Moxi, Hailuogou, 1550 m, 14. IX. 1982, coll. Shuyong Wang (IZ-CAS); 2 males, 18 females, Luding, Moxi, Hailuogou, 1550 m, 17. IX. 1982, coll. Shuyong Wang (IZ-CAS); 8 males, 7 females, Luding, Moxi, Hailuogou, 1550 m, 17. IX. 1982, coll. Yuanqing Chen (IZ-CAS); 2 males, Luding, Moxi, Hailuogou, 1600 m, 18. VI. 1983, coll. Shuyong Wang (IZ-CAS); 2 females, Luding, Moxi, Hailuogou, 1600 m, 18. VI. 1983, coll. Xuezhong Zhang (IZ-CAS); 2 males, 5 females, Luding, Moxi, Hailuogou, 1500 m, 20. VI. 1982, coll. Xuezhong Zhang (IZ-CAS); 1 male, 4 females, Luding, Moxi, Hailuogou, 1650 m, 20. VI. 1983, coll. Shuyong Wang (IZ-CAS); 1 female, 1 male, Luding, Xinxing, 1900 m, 13. VI. 1983, coll. Yuanqing Chen (IZ-CAS); 1 female, Luding, Xinxing, Yanzigou 2000 m, 17. IX. 1982, coll. Shuyong Wang (IZ-CAS); 1 female, Luding, Xinxing, Dewei, 1230 m, 21. VI. 1983, coll. Shuyong Wang (IZ-CAS); Yunnan Province: 1 female, 1 male, Kongming, Mt. Western, 2000 m, 7. VII. 1956, coll. Keren Huang (IZ-CAS).

**Redescription. Measurements. Males.** BL = 2.53-2.94 mm, BW = 2.00-2.34 mm, HL = 1.29 mm, HW = 0.98 mm, PL = 0.89 mm, PW = 1.88 mm, PA =  $70^{\circ}$ , EL = 2.11 mm, EA =  $140^{\circ}$ , AL = 1.25 mm, AW = 0.45 mm.

**Females.** BL = 2.79–3.23 mm, BW = 2.13–2.34 mm, HL = 1.40 mm, HW = 1.07 mm, PL = 0.89 mm, PW = 1.88 mm, PA = 70°, EL = 2.11 mm, EA = 140°, SL = 0.43 mm.

Body (Figs. 16-1A; 16-2A) medium sized, oblong; dorsum shiny. Head yellowish brown, sometimes vertex black; mandibles reddish brown, apex black; labrum, ventral side of mouth parts and antennomeres 1–5 yellow, 6–11 brown or dark brown. Basic color of pronotum yellowish brown or reddish brown, lateral middle margin and posterior margin black. The most common variety with a narrow transverse black stripe along basal margin of elytra, and a large black spot at humeral region, sometimes extending downward, rarer variety with elytra almost black. Legs yellowish brown, except claws black. Venter yellowish brown, lateral ridge of prosternum black, pygidium yellowish brown.

Head dull, coarsely punctate and with short pubescent. Eyes distinct, reniform; superior eye-lobes separated by moderately greater distance than antennal insertions. The interspace of antennal sockets semicircular emarginated, as a boundary between frons and clypeus. Clypeus densely granulose and sparsely punctate, anterior margin arched and emarginated apically. Frons with coarse punctures, scattered with minute punctures. Antennae short, reaching the humeral region of the elytra, scape clubbed, swollen, pedicel oblong, about 1/3 as long as scape, antennomeres 3 and 4 slender, pedicel as long as 3, 5 subtriangular, about as long as 4, 6–11 somewhat broadened and flattened, 6–10 about equal in length, last segment pointed apically.

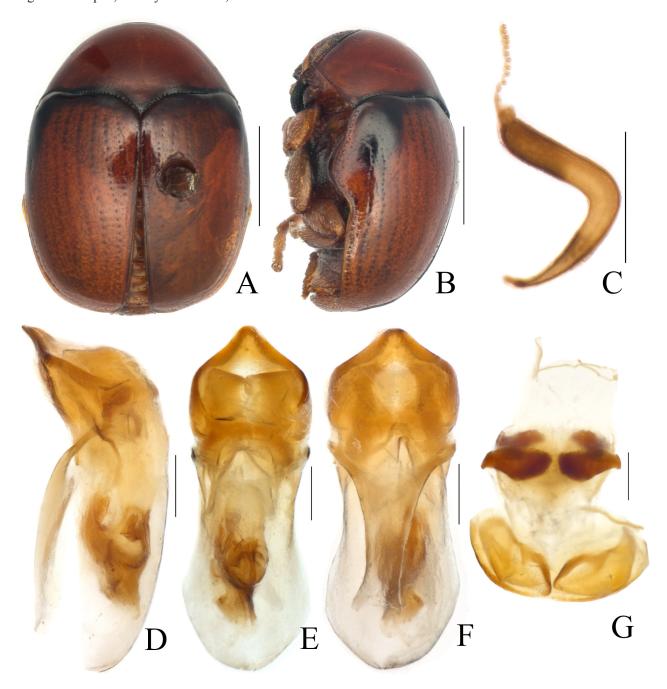
Pronotum (Figs. 16-1A; 16-2A) convex, much broader basely than apically, basal width about 2.1 times as long as pronotal length. Anterior margin nearly straight. Posterior margin sinuate with fine serration, and produced into an acute angle of about 70° at middle. Disc evenly convex, finely and rather sparsely punctures, and scattered with strongly fine punctures.

Elytra (Figs. 16-1A; 16-2A) as broad as long, humeri somewhat prominent. Disc finely punctate lateral two puncture rows and base with distinct punctures, with 11 regular striae, strial intervals with scattered minute and fine punctures. Epipleural lobe (Fig. 16-2B) large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/2 of elytra, with both lobe sides forming angle of 140°, epipleura not visible in lateral view.

Venter clothed with short pubescence and fine punctures. Prosternum (Fig. 16-2C) trapezoidal, with dense coarse punctures, anterior margin finely rugose and arcuately concave, lateral margin elevated to a ridge. Mesoventrite densely and coarsely punctate, twice as wide as long Pygidium with dense coarse punctures.

Aedeagus. (Figs. 16-1D-F; 16-2D-F) Median lobe elongate, about 3 times as long as wide, distinctly narrow

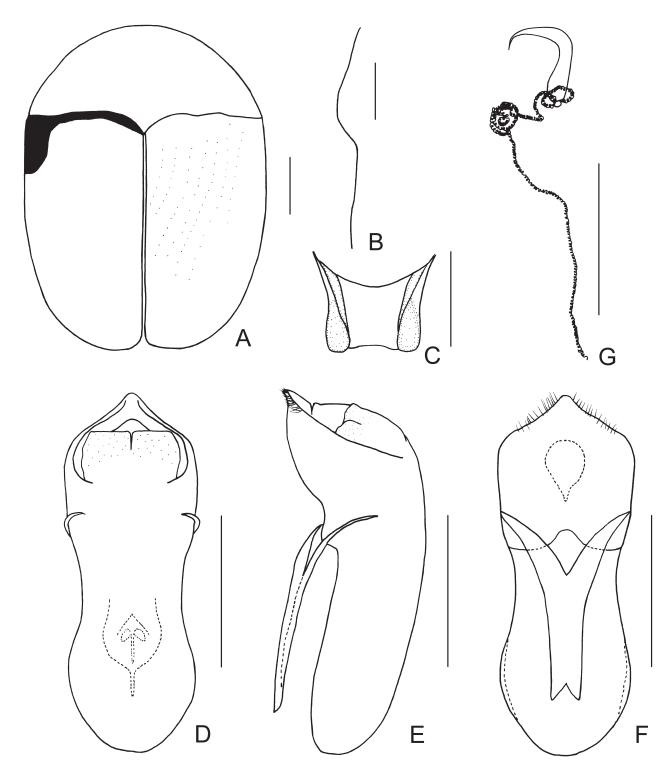
at base 1/3. Apex of median lobe moderately narrower than middle, strongly acute at apex, slightly curved in lateral view; with several setae on each side of apex, densely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards above surface. Inner sac rather slender, cylindrical, basal margin nearly round. Tegmen Y-shaped, weakly sclerotized, almost translucent.



**FIGURE 16-1.** *Adiscus humeralis* (Pic, 1922): A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; G. rectal pad. (Scale bars: A–B = 1.0 mm, C–G = 0.2 mm).

**Female.** Body more robust than male, apical hollow in ventrite 5 shallow and round. **Spermatheca** (Figs. 16-1C; 16-2G) falcate, right-angled bending halfway, acute at apex, become narrower from apex 1/3; duct weakly sclerotized, irregularly coiled. **Rectal sclerites** (Fig. 16-1G) strongly sclerotized, not connected between two rectangular sclerites on ventral side.

Distribution. China (Hubei, Sichuan, Yunnan); Vietnam.



**FIGURE 16-2.** *Adiscus humeralis* (Pic, 1922): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

### Adiscus inornatus Chen & Pu, 1980

(Figs 17-1; 17-2)

Adiscus inornatus Chen & Pu, 1980: 111 (type locality: Yunnan; type deposited: IZ-CAS); Schöller et al., 2010: 607 (catalogue).

**Material examined. CHINA: Holotype:** female, "Yunnan: Xishuangbanna Menghun [Chinese letters] / 1200–1400 m / Chinese Academy of Sciences [Chinese letters] // 28. V. 1958 / coll. Shuyong Wang [Chinese letters] // HOLOTYPE". (IZ-CAS).

**Redescription. Measurements. Female.** BL = 2.86 mm, BW = 2.15 mm, HL = 1.02 mm, HW = 0.76 mm, PL = 0.87 mm, PW = 1.89 mm, PA =  $105^{\circ}$ , EL = 2.34 mm, EA =  $130^{\circ}$ .

Body (Figs. 17-1A; 17-2A) small and ovate; dorsum shiny. Head reddish brown; antennomeres 1–5 yellow, 6–11 darkish brown. Pronotum reddish brown, basal margin black. Elytra orange, without black markings. Venter yellowish brown.

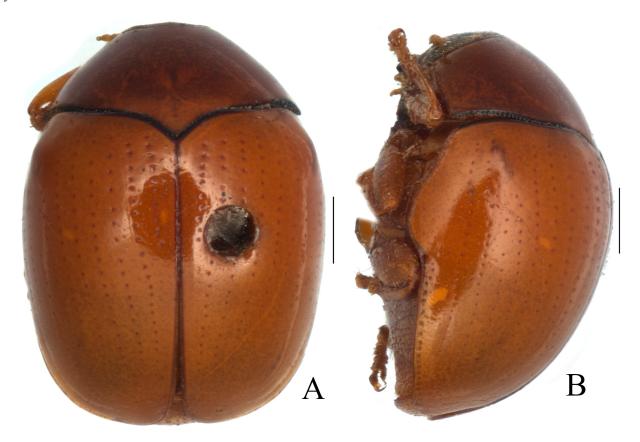


FIGURE 17-1. Adiscus inornatus Chen & Pu, 1980, holotype: A. habitus; B. lateral view of habitus. (Scale bars = 0.5 mm).

Head dull; distinctly and coarsely punctate. Eyes reniform, emarginated below middle; superior eye-lobes separated about equally as antennal insertions. Antennae short, reaching basal region of elytra, scape long, pedicel short and round, antennomeres 3 and 4 minute, shorter than pedicel, 6–11 somewhat broadened and flattened, about equal in length and broad.

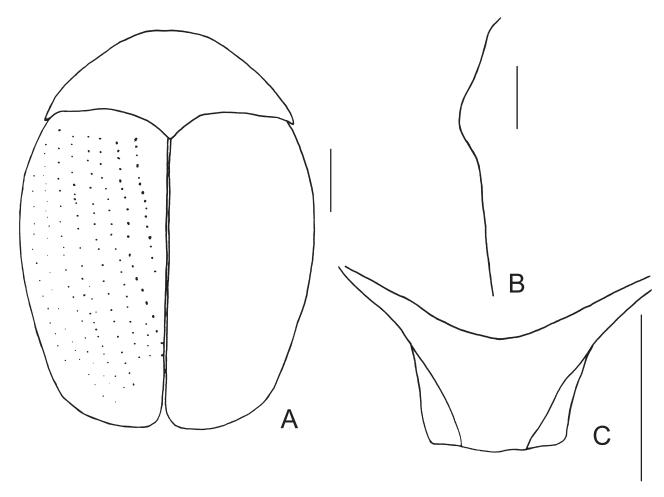
Pronotum (Figs. 17-1A; 17-2A) convex, smooth and shiny, base much broader than apex, basal width about twice pronotal length. Anterior margin nearly straight. Posterior margin finely sinuate with fine serration, and produced into an obtuse angle of about 105° at middle. Disc evenly convex, fine and coarse punctures.

Elytra (Figs. 17-1A; 17-2A) as broad as long, humeri somewhat prominent, shiny. Disc distinctly and evenly punctate, with 11 regular striae, intervals without any minute punctures. Epipleural lobe (Fig. 17-2B) large, lateral margin distinctly expanded ventrally with rounded lobe at basal 1/2 of erytron, with both lobe sides forming angle of 130°, epipleura visible in lateral view.

Venter clothed with sparsely short pubescence. Prosternum (Fig. 17-2C) trapezoidal, lateral ridge slightly prominent, bifurcate, posterior margin nearly straight. Mesoventrite broad, about 2.7 times as wide as long. Pygidium with dense and coarse punctures

**Distribution.** China (Yunnan).

**Diagnosis.** This species is similar to *A. tibialis*, but distinguished by the coloration of body, lacking black spots. Its pronotum is broad and the lateral ridge of prosternum less bifurcate.



**FIGURE 17-2.** *Adiscus inornatus* Chen & Pu, 1980: A. habitus; B. epipleural lobe of elytra; C. prosternum. (Scale bars = 0.5 mm).

## Adiscus kweiyangensis (Gressitt, 1942)

(Figs 18-1; 18-2)

Dioryctus kweiyangensis Gressitt, 1942: 334 (type locality: Kweiyang; type deposited: ICRI). Adiscus kweiyangensis: Gressitt & Kimoto, 1961: 118 (Hupeh, Szechuan); Schöller et al., 2010: 608 (catalogue). = Dioryctus monticolus Chûjô, 1954: 161 (type locality: Formosa); Kimoto, 1969: 5 (as synonym of Adiscus kweiyangensis).

Material examined. CHINA: Hubei Province: 1 male, 1 female, Shennongjia, Songbai village, 4. VII. 1980, coll. Peiyu Yu (IZ-CAS); 1 male, 44 females, Shennongjia, Songbai village, 5. VII. 1980, coll. Peiyu Yu (IZ-CAS); 2 females, Shennongjia, Songluo, 13. VI. 1981, coll. Yinheng Han (IZ-CAS); 1 female, Shennongjia, Songluo, 83. VI. 1981, coll. Yinheng Han (IZ-CAS); 1 female, Hefeng watershed forest farm, 29. VII, 1989, coll. Shuyong Wang (IZ-CAS); 1 female, Mt. Xing, Longmen river, 23. VI. 1993, coll. Hongxing Li (IZ-CAS); Hunan Province: 1 female, Yongshun, 8. VIII. 1989, coll. Ningnian Xiao (IZ-CAS); Sichuan Province: 1 male, Nanchong, 22. VI. 1981, coll. Huiming Luo (IZ-CAS); 1 female, Wenchuan Wolong, 27. VII. 1983, coll. Shuyong Wang (IZ-CAS); Guizhou Province: 21 males, Songtao, 2. VII. 1989, Ningnian Xiao (IZ-CAS).

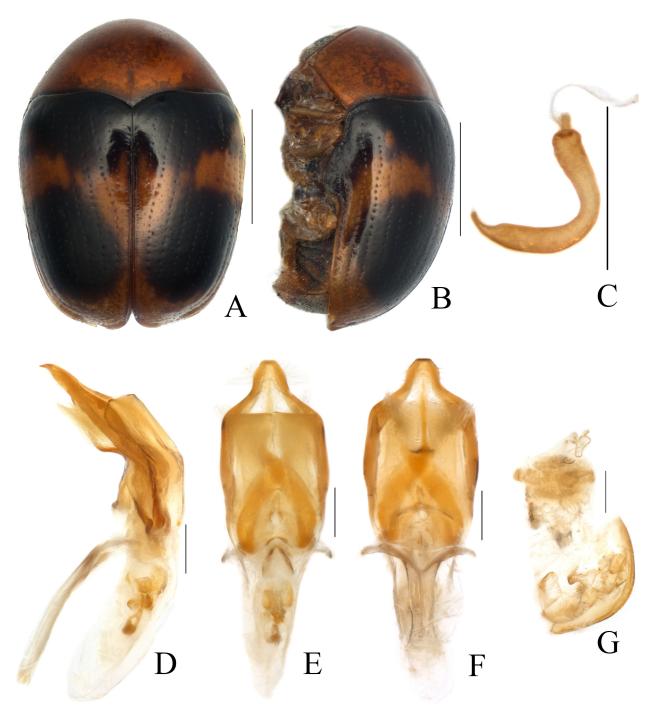
**Redescription. Measurements. Males.** BL = 2.32-2.68 mm, BW = 1.69-1.94 mm, HL = 0.88 mm, HW = 0.79 mm, PL = 0.74 mm, PW = 1.68 mm, PA =  $120^{\circ}$ , EL = 1.97 mm, EA =  $100^{\circ}$ , AL = 1.35 mm, AW = 0.44 mm.

**Females.** BL = 2.64–2.96 mm, BW = 1..96–2.24 mm, HL = 0.96 mm, HW = 0.86 mm, PL = 0.80 mm, PW = 1.83 mm, PA =  $120^\circ$ , EL = 2.14 mm, EA =  $100^\circ$ , SL = 0.28 mm.

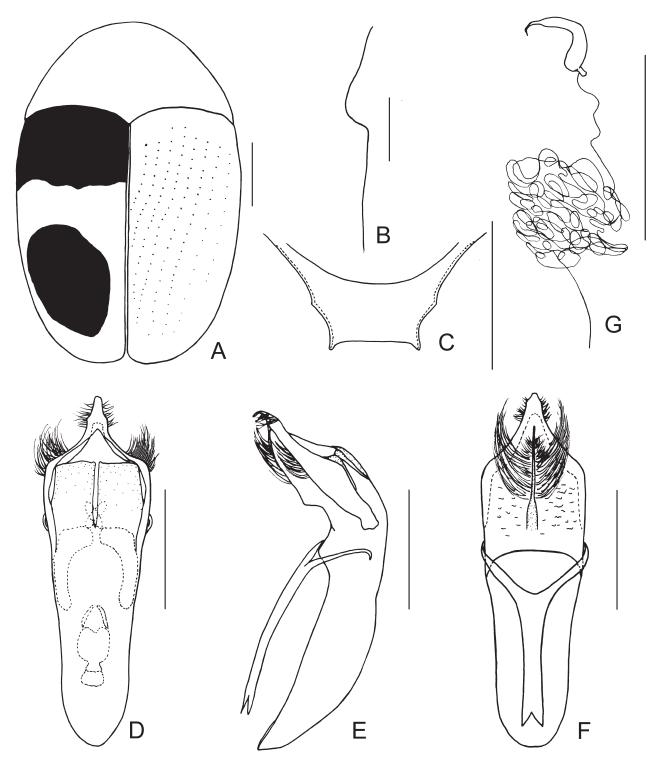
Body (Figs. 18-1A; 18-2A) small and ovate. Head yellowish brown; apical region of mandibles black; antennae pale yellowish brown. Pronotum yellowish brown, and basal margin black. Elytra of the most common variety

yellowish brown, with broad black transverse band along anterior margin, extending backward along lateral margin, and lateral middle region black and a large black spot on apical region, covering 1/3 area of elytra; scarcer variety black except transverse band on middle region of elytra yellowish brown. Legs yellowish brown, except claws black. Venter largely black, propleura, mesopleura and apical region of abdomen yellowish brown; basal region of pygidium black.

Head dull, with coarse punctures, and scattered minute punctures. Eyes reniform, superior eye-lobes separated by slightly greater distance than antennal insertions. Clypeus with denser and finer punctures than those on frons, densely and finely granulose, anterior margin arched and emarginated apically. Antennae short, reaching the humeral region of the elytra, scape swollen, clubbed, pedicel oblong, about half as long as scape, antennomeres 3 and 4 slender, 3 slightly shorter than 4, 5–11 slightly broadened and flattened, 3, 5 and 6 about equal in length, 7–10 slightly longer, each segment about equal in length, last segment pointed apically.



**FIGURE 18-1.** *Adiscus kweiyangensis* (Gressitt, 1942): A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus; G. rectal pad. (Scale bars: A–B = 1.0 mm, C–G = 0.2 mm).



**FIGURE 18-2.** *Adiscus kweiyangensis* (Gressitt, 1942): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

Pronotum (Figs. 18-1A; 18-2A) smooth, base much broader than apex, basal width about 2.3 times as long as pronotal length. Anterior margin nearly straight. Posterior margin undulated, and produced into an obtuse angle of about 120° at middle. Disc evenly convex, impunctate, glabrous.

Elytra (Figs. 18-1A; 18-2A) as broad as long, humeri somewhat prominent. Disc punctate, with 11 regular striae, intervals with scattered minute punctures, puncture striae irregular on apical slope. Epipleural lobe (Fig. 18-2B) large, lateral margins with coarser punctures than those on disc, and distinctly expanded ventrally with rounded lobe at basal 1/3 of elytron, with both lobe sides forming angle of 100°, epipleura obliquely placed and visible in lateral view.

Venter clothed with sparse short pubescence and fine punctures. Prosternal episternum finely rugose. Prosternum (Fig. 18-2C) trapezoidal, with dense coarse punctures, anterior margin arcuately concave, lateral margin elevated to a high longitudinal ridge, posterior margin nearly straight, hind angles slightly produced. Mesoventrite subtrapezoidal, with dense coarse punctures, anterior margin narrower than posterior one. Pygidium with dense coarse punctures. First segment of middle leg tarsus swollen.

**Aedeagus.** (Figs. 18-1D–F; 18-2D–F) Median lobe elongate, about 3 times as long as wide, middle part parallel-sided. Apex of median lobe much narrower than middle, apex acute, strongly curved in lateral view; with dense long setae on each side of apex and median longitudinal line on ventral side of distal region, densely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards below surface. Inner sac rather narrow, cylindrical, strongly narrowed at apical 1/4, base nearly round, but bilobed at apex. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than in male, apical hollow in ventrite 5 deep and round. **Spermatheca** (Figs. 18-1C; 18-2G) falcate, nearly right-angled bending halfway, acute at apex, slightly dilated at 1/3 from apex, then extremely narrowed; duct weakly sclerotized, irregularly coiled. **Rectal sclerites** (Fig. 18-1G) weakly sclerotized, slightly connected between two rectangular sclerites on ventral side.

Distribution. China (Hubei, Hunnan, Sichuan, Guizhou, Taiwan).

### Adiscus lushuiensis Tan, 1992

(Figs 19-1; 19-2)

Adiscus lushuiensis Tan, 1992b: 782 (type locality: Lushui, Yunnan; type locality: IZ-CAS); Schöller et al., 2010: 608 (catalogue).

**Material examined. CHINA: Holotype:** female, "Yunnan: Lushui, Pianma [Chinese letters] / 800 m / Chinese Academy of Sciences [Chinese letters] // 31. V. 1981 // HOLOTYPE". (IZ-CAS); **Additional material:** 2 females, same data as holotype, (IZ-CAS).

**Redescription. Measurements. Females.** BL = 3.58-3.96 mm, BW = 2.54-2.89 mm, HL = 1.11 mm, HW = 1.09 mm, PL = 0.93 mm, PW = 2.28 mm, PA =  $90^{\circ}$ , EL = 3.07 mm, EA =  $140^{\circ}$ , SL = 0.37 mm.

Body (Figs. 19-1A; 19-2A) short ovate, subquadrate; dorsum shiny, mostly yellowish brown. Head black; antennomeres 1–6 reddish brown, 7–11 darkish brown; clypeus and labrum reddish brown. Pronotum reddish brown; with broad transverse black band along anterior margin and a narrowly black stripe along lateral margin; sometimes anterior black band posteriorly expanded at middle and sides, and posterior margin somewhat tinged with black. Elytra reddish brown, with a dark purple margins, except median suture. Legs yellow-brown. Venter black, partly tinged with reddish brown.

Head smooth and shiny, finely and weakly punctate. Eyes reniform; superior eye-lobes separated by slightly greater distance than antennal insertions. Clypeus anterior margin slightly emarginated apically. Antennae long, reaching middle basal 1/3 of elytra, antennomeres 1–5 with indistinct hairs, 6–11 pubescent, scape swollen, clubbed, pedicel oblong, about half as long as scape, antennomeres 3–5 slender, cylindrical, about as long as pedicel, 6–11 somewhat broadened and flattened, last segment pointed apically.

Pronotum (Figs. 19-1A; 19-2A) convex, smooth and shiny, base much broader than apex, basal width about 2.5 times pronotal length. Anterior and hind angles nearly90°. Lateral margin nearly straight. Posterior margin undulated, its middle portion produced into a right-angle of about 90°. Disc evenly convex, impunctate.

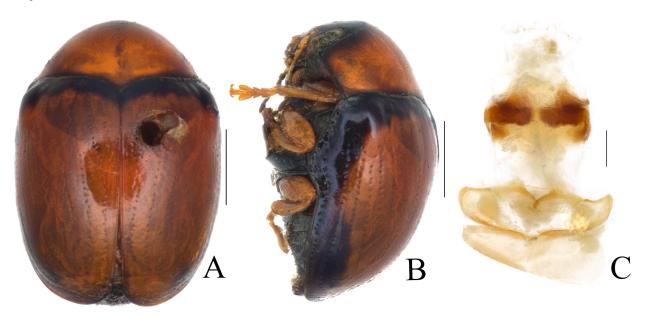
Elytra (Figs. 19-1A; 19-2A) as broad as long, about as broad as pronotum at base; humeri somewhat prominent. Disc weakly and finely punctate, with 11 regular striae, intervals without minute punctures. Epipleural lobe (Fig. 19-2B) large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/2 of elytron, with both lobe sides forming angle of 140°, epipleura obliquely placed and visible in lateral view.

Venter clothed with short pubescence. Prosternal episternum finely rugose; prosternum trapezoidal, lateral margin slightly protruding, posterior margin a little concave, hind angles weakly subtriangular. Mesoventrite broad, about 3.3 times as wide as long. Pygidium with densely fine punctures and pubescence.

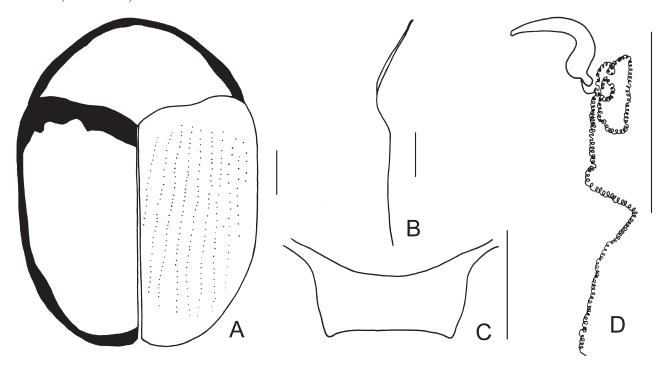
**Female.** Body more robust than male, apical hollow in ventrite 5 deep and triangular. **Spermatheca** (Fig. 19-2D) falcate, 80°-angled from apical 2/3, acute at apex; duct weakly sclerotized, irregularly coiling 4–5 times; **Rectal sclerites** (Fig. 19-1C) strongly sclerotized, not connected between two rectangular sclerites on ventral side.

Distribution. China (Yunnan).

**Diagnosis.** This species is similar to *A. humeralis*, but the pronotum is smooth and impunctate, and the color of elytra different.



**FIGURE 19-1.** *Adiscus lushuiensis* Tan, 1992, holotype: A. habitus; B. lateral view of habitus; C. rectal pad. (Scale bars: A–B = 1.0 mm, C = 0.2 mm).



**FIGURE 19-2.** *Adiscus lushuiensis* Tan, 1992: A. habitus; B. epipleural lobe of elytra; C. prosternum; D. spermatheca. (Scale bars = 0.5 mm).

### Adiscus maculatus (Weise, 1912)

(Figs 20-1; 20-2)

Dioryctus maculatus Weise, 1912: 80 (type locality: Yunnan; type deposited: MNHN). Adiscus maculatus: Gressitt & Kimoto, 1961: 118; Tan et al., 1980: 170; Schöller et al., 2010: 608 (catalogue).

- = Dioryctus multimaculatus Pic, 1935: 19 (type locality: China; type deposited: MNHN).
- = Adiscus multimaculatus: Gressitt & Kimoto, 1961: 118 (as synonym of Adiscus maculatus).
- = Adiscus maculatithorax sensu Tan, 1992b: 783, nec Pic, 1927.

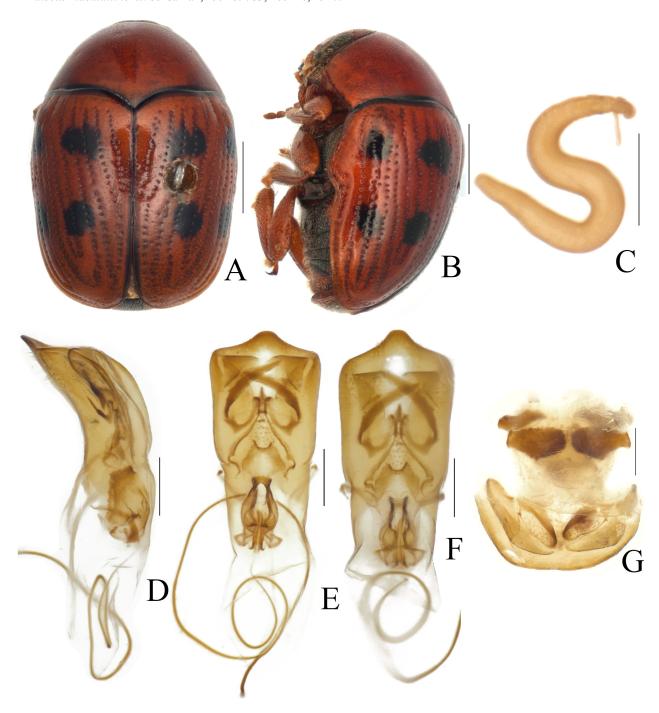
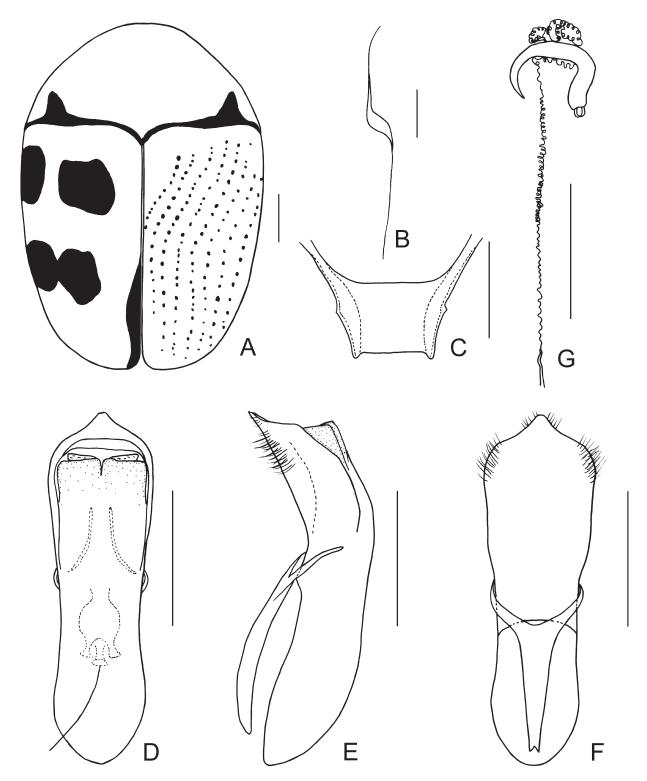


FIGURE 20-1. Adiscus maculatus (Weise, 1912): A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus; G. rectal pad. (Scale bars: A-B = 1.0 mm, C-G = 0.2 mm).

Material examined. CHINA: Yunnan Province: 2 males, Kunming, 31. V. 1931, coll. unknown (IZ-CAS); 1 female, Dali, 31. VI. 1955, coll. Chongle Liu (IZ-CAS).

Redescription. Measurements. Males. BL = 3.65 - 3.94 mm, BW = 2.34 - 2.78 mm, HL = 1.21 mm, HW = 1.07 mmmm, PL = 1.20 mm, PW = 2.43 mm, PA = 105°, EL = 2.97 mm, EA = 150°, AL = 1.77 mm, AW = 0.66 mm.

Female. BL = 4.22 mm, BW = 2.86 mm, HL = 1.31 mm, HW = 1.16 mm, PL = 1.30 mm, PW = 2.64 mm, PA =  $105^{\circ}$ , EL = 3.22 mm, EA =  $150^{\circ}$ , SL = 0.77 mm.



**FIGURE 20-2.** *Adiscus maculatus* (Weise, 1912): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

Body (Figs. 20-1A; 20-2A) broadly ovate, reddish brown. Head reddish brown; mandibles black; labrum and antennae tinged with yellow. Pronotum reddish brown, basal margin black; sometimes basal part with two triangular black marks, fused with basal margin. Elytra reddish brown, basal margin and middle of suture black, and black margin of middle suture broadened from middle, disc with four black spots, basal pair always separate, while apical pair sometimes connected. Legs and prosternum yellowish brown, claws black. Venter black or sometimes reddish brown.

Head dull, densely and coarsely punctate, frons partly strigose. Eyes reniform; superior eye-lobes separated by same distance as antennal insertions. Clypeus densely granulose and finely punctate, anterior margin arched and emarginated apically. Antennae reaching elytral humeri; scape broadened, clubbed, pedicel shortly cylindrical, antennomeres 3 and 4 slender, 5 slightly broader, 3–5 about equal in length, 6–11 somewhat broadened and flattened, each segment about equal in length, the last segment pointed apically.

Pronotum (Figs. 20-1A; 20-2A) convex, base much broader than apex, basal width about twice as long as pronotal length. Anterior margin nearly straight. Posterior margin undulated, and produced into an obtuse angle of about 105° at middle. Disc evenly convex, finely and rather closely punctured, with smooth narrow interspaces.

Elytra (Figs. 20-1A; 20-2A) as broad as prothorax at base, subrectangular, humeri a little prominent. Disc slightly coarsely punctate, with 11 regular striae, row intervals with scattered minute punctures, puncture striae irregular on apical slope. Epipleural lobe (Fig. 20-2B) moderately large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/3 of elytron, with both lobe sides forming angle of 150°, epipleura obliquely placed and visible in lateral view.

Venter clothed with shortly silvery pubescence and fine punctures. Prosternum (Fig. 20-2C) trapezoidal, the lateral ridge distinctly and triangularly protruding, posterior margin nearly straight, Pygidium with coarse punctures and short fine pubescence.

**Aedeagus.** (Figs. 20-1D–F; 20-2D–F) Median lobe elongate, about 3 times as long as wide, parallel-sided. Apex of median lobe slightly narrower than middle, acute at apex, narrowly rounded, moderately curved in lateral view; with several setae on each side of apex, sparsely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards above surface. Inner sac slightly slender, bell-shaped, base with three lobes and slightly prominent, apex narrow and anterior margin nearly straight. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 deep and round. **Spermatheca** (Figs. 20-1C; 20-2G) s-shaped, acute-angled bending from base 1/3 and then bending in opposite direction from apex 1/3, weakly acute at apex; duct weakly sclerotized, irregularly coiled. **Rectal sclerites** (Fig. 20-1G) strongly sclerotized, not connected between two clubbed sclerites on ventral side.

Distribution. China (Yunnan); Vietnam.

### Adiscus mouhoti (Baly, 1877)

(Figs 21-1; 21-2)

Dioryctus mouhoti Baly, 1877: 36 (type locality: Laos, Siam; type deposited: BMNH); Kimoto & Gressitt, 1981: 325; Schöller et al., 2010: 608 (junior synonym of A. laetus); Löbl & Smetana 2013: 45 (valid).

= Dioryctus laetus Weise, 1904: 161 (type locality: China; type deposited: ZMHB);

Adiscus laetus: Gressitt & Kimoto, 1961: 118 (Kwangtung, Hainan); Tan et al., 1980: 168; Kimoto & Gressitt, 1981: 325 (as synonym of Adiscus mouhoti); Schöller et al., 2010: 608 (valid); Löbl & Smetana 2013: 45 (synonymy).

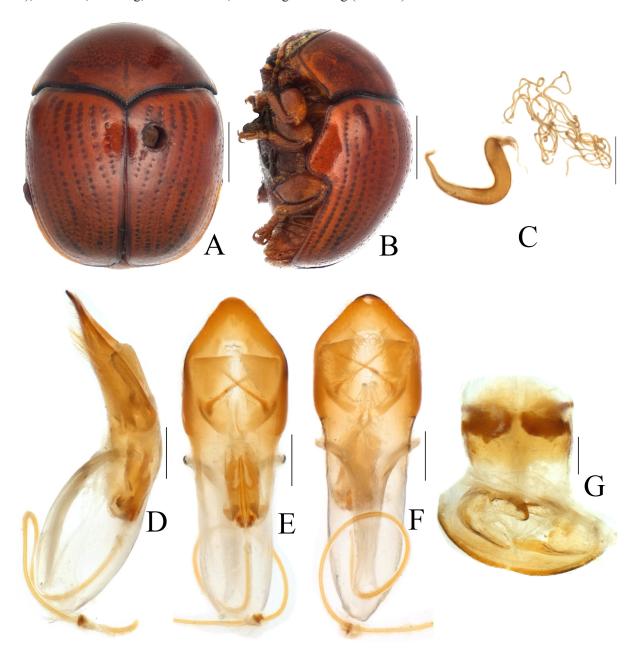
- = Dioryctus grandis Hoffmann, 1937: 632, nec Baly, 1865: 64 [misidentification]; Gressitt, 1942: 333 (Kwangtung).
- = Dioryctus rubripennis Pic, 1926a: 12 (type locality: China; type deposited: MNHN);

Adiscus rubripennis: Gressitt & Kimoto, 1961: 118 (as synonym of Adiscus laetus).

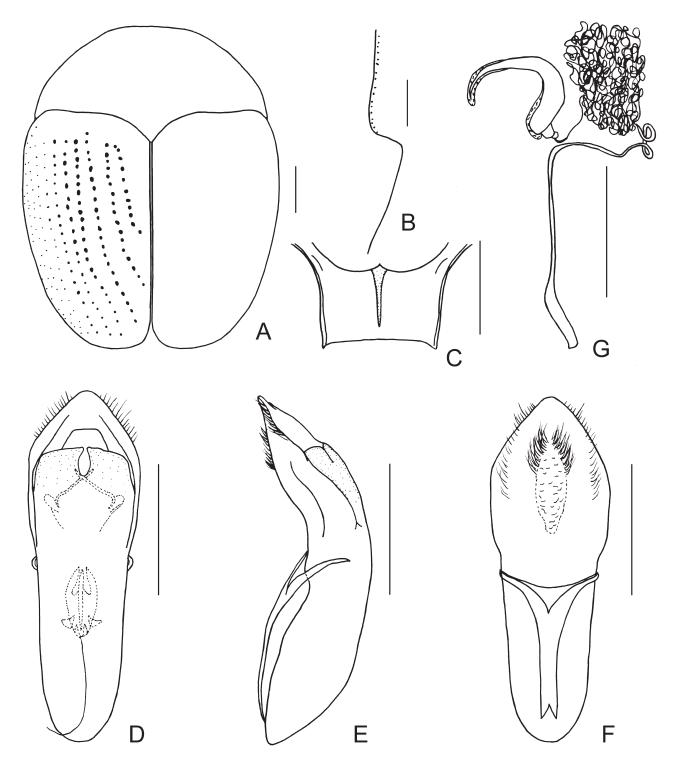
= Adiscus kabakovi Medvedev & Samoderzhenkov, 1987: 23 (type locality: Vietnam); Medvedev, 2008: 203 (as synoym of Adiscus mouhoti).

Material examined. CHINA: Guangxi Province: 3 males, Mt. Yao [Yaoshan], V–VI, 1938, coll. unknown (IZ-CAS); 1 male, Yangshuo, 21. VII. 1963, coll. Shuyong Wang (IZ-CAS); Yunnan Province: 1 male, Xishuangbanna Mengsong, 28. IV. 1958, coll. Fuji Pu (IZ-CAS); 1 male, Xishuangbanna Menghai, 18. VIII. 1958, coll. Shuyong Wang (IZ-CAS); 2 females, Xishuangbanna Menghai, 19. VIII. 1958, coll. Shuyong Wang (IZ-CAS); 1 male, Xishuangbanna Menghai, 26. VII. 1958, coll. Shuyong Wang (IZ-CAS); 1 female, Xishuangbanna Menghai, 22. VII. 1958, coll. Fuji Pu (IZ-CAS); 1 male, 2 females, Xishuangbanna Menghai, 23. VII. 1958, coll. Shuyong Wang (IZ-CAS); 1 male, Xishuangbanna Menghai, 24. VII. 1958, coll. Shuyong Wang (IZ-CAS); 1 male, 3 females, Xishuangbanna Menghai, 26. VII. 1958, coll. Fuji Pu (IZ-CAS); 1 female, Xishuangbanna Mengzhe, 30. VIII. 1958, coll. Shuyong Wang (IZ-CAS); 1 female, Xishuangbanna Mengzhe, 30. VIII. 1958, coll. Shuyong Wang (IZ-CAS); 1 female, Xishuangbanna Mengzhe, 3. IX. 1958, coll. Fuji

Pu (IZ-CAS); 1 female, Xishuangbanna Mengzhe, 4. IX. 1958, coll. Fuji Pu (IZ-CAS); 1 male, Xishuangbanna Mengzhe, 5. IX. 1958, coll. Shuyong Wang (IZ-CAS); 1 female, Xishuangbanna Xiaomengyang, 23. VI. 1957, coll. Lingchao Zang (IZ-CAS); 1 female, Xishuangbanna Xiaomengyang, 7. VII. 1957, coll. Shuyong Wang (IZ-CAS); 1 male, Xishuangbanna Xiaomengyang, 9. VII. 1957, coll. Shuyong Wang (IZ-CAS); 1 male, Xishuangbanna Xiaomengyang, 12. VII. 1957, coll. Lingchao Zang (IZ-CAS); 1 female, Xishuangbanna Xiaomengyang, 12. VII. 1957, coll. Shuyong Wang (IZ-CAS); 1 male, Xishuangbanna Xiaomengyang, 2. IX. 1957, coll. Shuyong Wang (IZ-CAS); 3 females, Xishuangbanna Xiaomengyang, 25. X. 1957, coll. Lingchao Zang (IZ-CAS); 2 females, 2 males, Xishuangbanna Xiaomengyang, 26. X. 1957, coll. Lingchao Zang (IZ-CAS); 1 male, Xishuangbanna Xiaomengyang, 22. VI. 1958, coll. Fuji Pu (IZ-CAS); 1 female, Xishuangbanna Xiaomengyang, 1. IX. 1958, coll. Xuwu Meng (IZ-CAS); 1 male, Xishuangbanna botanical garden, 22. VII. 2007, coll. Guocai Zheng (IZ-CAS); 1 female, Yiwubannan Menglun, 3. VIII. 1959, coll. Zhenfu Li (IZ-CAS); 1 male, Jingdong, 30. VI. 1956, coll. Deyin Lin (IZ-CAS); 2 females, Jingdong, 30. VI. 1956, coll. Krezenovsky (IZ-CAS); 2 females, Lancang, 3. VIII. 1957, coll. Shuyong Wang (IZ-CAS); 1 female, Lancang, 10. VIII. 1957, coll. Lingchao Zang (IZ-CAS).



**FIGURE 21-1.** *Adiscus mouhoti* (Baly, 1877): A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; G. rectal pad. (Scale bars: A–B = 1.0 mm, C–G = 0.2 mm).



**FIGURE 21-2.** *Adiscus mouhoti* (Baly, 1877): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

**Redescription. Measurements. Males.** BL = 3.74-3.99 mm, BW = 2.88-3.25 mm, HL = 1.31 mm, HW = 1.14 mm, PL = 1.36 mm, PW = 2.96 mm, PA =  $130^{\circ}$ , EL = 2.91 mm, EA =  $100^{\circ}$ , AL = 1.30 mm, AW = 0.43 mm.

**Females.** BL = 4.02–4.46 mm, BW = 3.12–3.63 mm, HL = 1.43 mm, HW = 1.24 mm, PL = 1.49 mm, PW = 3.21 mm, PA =  $130^\circ$ , EL = 3.15 mm, EA =  $100^\circ$ , SL = 0.64 mm.

Body (Figs. 21-1A; 21-2A) short and round, strongly convex; dorsum shiny, orange colored. Mandibles black; antennomeres 1–5 yellow, 6–11 black. The basal margins of pronotum and elytra, and claws black.

Head small, finely and densely punctate. Eyes reniform, deeply emarginate below middle, superior eye-lobes

separated by slightly greater distance than antennal insertions. Clypeus densely and sparsely punctate, anterior margin arched and emarginated apically. Antennae short, reaching elytral humeri, scape broadened, pedicel short, spherical, antennomeres 3 and 4 slender and small, about equal in length, 5 slightly broadened, 6–11 strongly broadened and flattened.

Pronotum (Figs. 21-1A; 21-2A) smooth, base much broader than apex, basal width about twice pronotal length. Anterior margin nearly straight. Posterior margin slightly sinuate with fine serration, and produced into an obtuse angle of about 130° at middle. Disc evenly convex, impunctate and glabrous.

Elytra (Figs. 21-1A; 21-2A) as broad as long, humeri slightly prominent, glabrous. Disc coarsely punctate, with 11 regular striae, intervals nearly impunctate,. Epipleural lobe (Fig. 21-2B) large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/2 of elytron, with both lobe sides forming angle of 100°, epipleura obliquely placed and visible in lateral view.

Venter clothed with sparse short pubescence. Prosternum (Fig. 21-2C) broadly quadrangular, lateral ridge elevated; anterior margin protruding, subtriangular. The femora of middle and hind legs more robust than front legs.

**Aedeagus.** (Figs. 21-1D–F; 21-2D–F) Median lobe elongate, about 3 times as long as wide, middle part parallel-sided. Apex of median lobe slightly narrower than middle, acute at apex, strongly curved in lateral view; with several setae on each side of apex and distal part of ventral part, densely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards above surface. Inner sac oblong, cylindrical, base narrowed and with two attachments protruding, bilobed and acute at apex. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 deep and round. **Spermatheca** (Figs. 21-1C; 21-2G) falcate, 60°-angled from apex 2/3, acute at apex, duct weakly sclerotized, irregularly coiling 5–6 times. **Rectal sclerites** (Fig. 21-1G) moderately sclerotized, not connected between two rectangular sclerites on ventral side.

Distribution. China (Guangdong, Guangxi, Hainan, Yunnan).

**Remark**: *Dioryctus mohouti* (Baly, 1877) from China was erroneously synonymised with *D. grandis* Baly, 1865: 64 (from Sumatra, Indonesia) because of a misidentification (Hoffman, 1937) and later mistakenly placed as a junior synonym of *D. laetus* Weise, 1904 (Schöller *et al.* 2010). This mistake was rectified by Löbl & Smetana (2013). There is a large gap in the geographical distributions of these two speies as there is no record of either in Indo-China (between the Malay Peninsula and South China).

## Adiscus niger (Chen, 1941)

(Figs 22-1; 22-2)

*Dioryctus niger* Chen, 1941: 189 (type locality: Kweichow; type deposited: IZ-CAS). *Adiscus niger*: Gressitt & Kimoto, 1961: 118; Schöller *et al.*, 2010: 608 (catalogue).

Material examined. CHINA: Holotype: female, "Guizhou / Chinese Academy of Sciences [Chinese letters] // HOLOTYPE". (IZ-CAS); Additional material: Sichuan Province: 2 females, Luding Xingxin, 1800 m, 13. VI. 1983, coll. Shuyong Wang (IZ-CAS); 1 female, Luding Xingxin, 2100 m, 5. VI. 1983, coll. Yuanqing Chen (IZ-CAS); Gansu Province: 1 female, Wen country, Liujiaping, 1300–2100 m, 27. VI. 1998, coll. Jun Chen (IZ-CAS); Shaanxi Province: 1 female, Liuba, Weituogou, 21. VII. 1998 (IZ-CAS); Hubei Province: 1 female, Shennongjia, Jiuhuping, Chegou, 1600 m, 24. VII. 1998, coll, Xiaodong Yu (IZ-CAS); 1 female, Shennongjia, Chegou, 1730 m, 4. VII. 1998, coll, Hongzhang Zhou (IZ-CAS).

**Redescription. Measurements. Females.** BL = 2.62-2.92 mm, BW = 2.98-2.43 mm, HL = 0.86 mm, HW = 0.80 mm, PL = 0.72 mm, PW = 1.69 mm, PA =  $100^{\circ}$ , EL = 2.31 mm, EA =  $160^{\circ}$ , SL = 0.24 mm.

Body (Figs. 22-1; 22-2) small, dorsum black. Head black, apical half reddish brown; antennae and legs reddish brown.

Head shiny, finely and densely punctate. Eyes reniform, inner margin slightly emarginated; superior eye-lobes separated by greater distance than antennal insertions. Antennae absent in specimen studied.

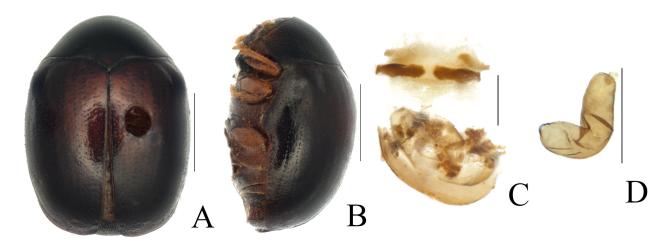
Pronotum (Figs. 22-1; 22-2) broad, base much broader than apex, basal width about 2.3 times as long as pronotal length. Anterior margin nearly straight. Posterior slightly sinuate with fine serration, and its middle portion produced into an obtuse angle of about 100°. Disc evenly convex, slightly coarsely and rather closely punctures.

Elytra (Figs. 22-1; 22-2) as broad as prothorax at base, humeri somewhat prominent, glabrous. Disc finely punctate, with 11 regular striae, intervals with scattered minute punctures, puncture striae irregular on apical slope. Epipleural lobe (Fig. 22-2B) large, lateral margins weakly expanded ventrally and with slightly lobe at 1/3 of elytron, with both lobe sides forming angle of 160°, epipleura obliquely placed and visible in lateral view.

Venter clothed with short pubescence and fine punctures. Prosternum broad, trapezoidal, lateral margins extending outward, forming low longitudinal ridge. Mesoventrite twice as wide as long. Pygidium with dense punctures and short pubescence.

**Female.** Apical hollow in ventrite 5 deep and round. **Spermatheca** (Fig. 22-1D) **f**alcate, right-angled bending halfway, weakly acute at apex; duct not seen. **Rectal sclerites** (Figs. 22-1C) moderately sclerotized, sclerite slender, not connected between two rectangular sclerites on ventral side.

Distribution. China (Shaanxi, Hubei, Gansu, Sichuan, Guizhou).



**FIGURE 22-1.** *Adiscus niger* (Chen, 1941), holotype: A. habitus; B. lateral view of habitus; C. rectal pad; D. spermatheca. (Scale bars: A–B = 1.0 mm, C–D = 0.2 mm).

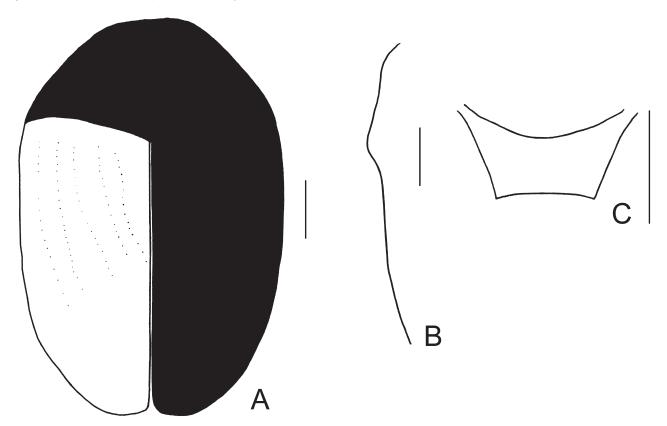


FIGURE 22-2. Adiscus niger (Chen, 1941): A. habitus; B. epipleural lobe of elytra; C. prosternum. (Scale bars = 0.5 mm).

*Dioryctus nigricollis*: Gressitt, 1942: 334 (type locality: Sichuan, Mt. Omei; type deposited: ICRI). *Adiscus nigricollis*: Gressitt & Kimoto, 1961: 119; Schöller *et al.*, 2010: 608 (catalogue).



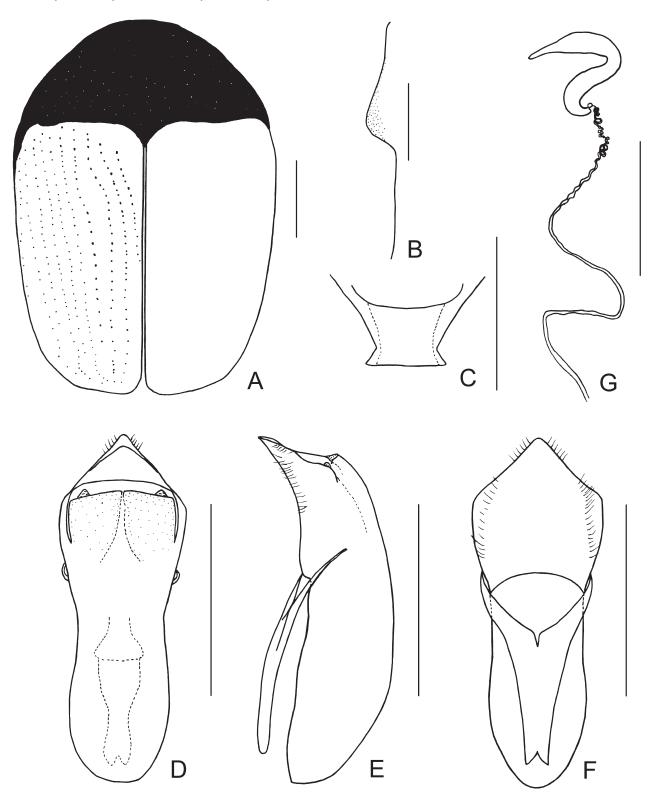
**FIGURE 23-1.** *Adiscus nigricollis* (Gressitt, 1942): A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus; G. rectal pad. (Scale bars: A–B = 0.5 mm, C–G = 0.2 mm).

**Material examined. CHINA: Sichuan** Province: 10 males, 8 females, Wenchuan, Wolong, 920 m, 23. VII. 1983, coll. Shuyong Wang (IZ-CAS); 2 males, 2 females, Wenchuan, Wolong, 2100 m, 24. VII. 1983, coll. Shuyong Wang; 4 males, 1 female, Wenchuan, Wolong, 2100 m, 24. VII. 1983, coll. Xuezhong Zhang (IZ-CAS); 3 males, Wenchuan, Wolong, 1600 m, 26. VII. 1983, coll. Shuyong Wang (IZ-CAS); 3 males, 4 females, Wenchuan, Wolong, 2000 m, 30. VII. 1983, coll. Shuyong Wang (IZ-CAS); 1 male, 1 female, Wenchuan, Wolong, 1920 m, 26. VII. 1983,

coll. Chunlai Zhu (IZ-CAS); 2 females, Luding, Moxi, 1500 m, 14. IX. 1982, Shuyong Wang (IZ-CAS); 1 male, Luding, Moxi, Hailuogou, 1420 m, 18. IX. 1982, Shuyong Wang (IZ-CAS).

**Redescription. Measurements. Males.** BL = 2.34-2.84 mm, BW = 1.68-1.98 mm, HL = 0.74 mm, HW = 0.79 mm, PL = 0.70 mm, PW = 1.66 mm, PA =  $95^{\circ}$ , EL = 2.23 mm, EA =  $120^{\circ}$ , AL = 0.89 mm, AW = 0.30 mm.

**Females.** BL = 2.54–2.86 mm, BW = 1.68–1.99 mm, HL = 0.74 mm, HW = 0.79 mm, PL = 0.70 mm, PW = 1.66 mm, PA =  $95^{\circ}$ , EL = 2.23 mm, EA =  $120^{\circ}$ , SL = 0.54 mm.



**FIGURE 23-2.** *Adiscus nigricollis* (Gressitt, 1942): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

Body (Figs. 23-1A; 23-2A) short ovate, strongly convex, mostly reddish-brown. Head pitchy reddish; antennomeres 1–5 yellowish brown, 6–11 pitchy brown; apical region of mandibles black; labrum yellowish brown. Pronotum black. Elytra reddish brown or dark reddish brown. Prosternum dark yellowish brown, lateral margin black; Mesoventrite yellowish brown; Metaventrite and abdomen dark brown. Legs yellowish brown.

Head less than half as broad as pronotum, slightly convex, finely and sparsely punctate. Eyes reniform; superior eye-lobes separated by greater distance than antennal insertions. Clypeus densely granulose and sparsely punctate, anterior margin arched and emarginated apically. Frons evenly punctured. Antennae reaching elytral humeri; scape flattened, clubbed, pedicel oblong, antennomeres 3 and 4 slenderest, 3 slightly shorter than pedicel, pedicel as long as 4, 5 slightly broader, as long as 4, 6–11 somewhat broadened and flattened, each segment about equal in length, the last segment pointed apically.

Pronotum (Figs. 23-1A; 23-2A) convex, base much broader than apex, basal width about 2.4 times pronotal length. Lateral margin feebly rounded. Anterior margin nearly straight. Posterior margin undulated, and produced into an obtuse angle of about 95° at middle. Disc smooth, with minute punctures.

Elytra (Figs. 23-1A; 23-2A) about as broad as pronotum at base, humeri somewhat prominent, feebly rounded at sides and apex. Disc convex, sparsely and finely punctate, with 11 regular striae, intervals with scattered minute punctures, puncture striae irregular on apical slope. Epipleural lobe (Fig. 23-2B) large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/3 of elytron, with both lobe sides forming angle of 120°, epipleura invisible in lateral view.

Venter clothed with finely silvery pubescence and fine punctures. Prosternum (Fig. 23-2C) trapezoidal, with obtuse angle near middle in lateral view. Mesoventrite broad, twice as wide as long. Pygidium with coarse punctures. Legs minutely punctate, first tarsomere of middle legs swollen.

**Aedeagus.** (Figs. 23-1D–F; 23-2D–F) Median lobe elongate, about 3.3 times as long as wide, nearly clubbed. Apex of median lobe slightly narrower than middle, apex narrowly rounded, slightly curved in lateral view; with several setae on each side of apex, densely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards below surface. Inner sac rather slender, about 3 times as long as wide, cylindrical, base 1/4 broadest, then becoming narrower, apex 1/3 most narrow, bilobed and acute at apex Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 shallow and round. **Spermatheca** (Figs. 23-1C; 23-2G) falcate, 30°-angled bending halfway, acute at apex, slightly dilated at 1/3 from apex, then narrower; duct weakly sclerotized, weakly and irregularly coiling 4–6 times. **Rectal sclerites** (Fig. 23-1G) moderately sclerotized, not connected between two clubbed sclerites on ventral side.

Distribution. China (Sichuan).

#### Adiscus nigripennis (Jacoby, 1890)

(Figs 24-1; 24-2)

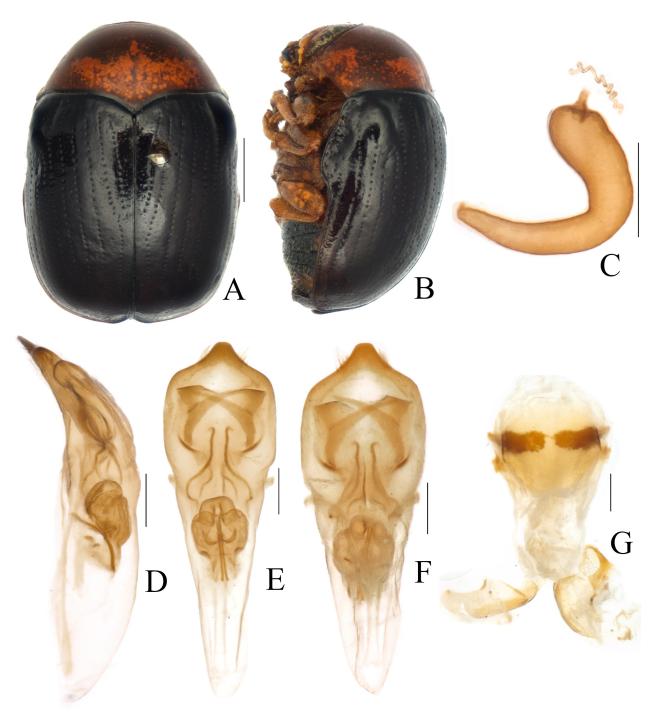
Dioryctus nigripennis Jacoby, 1890: 89 (type locality: Chang-yang; type deposited: MCZ).

Adiscus nigripennis: Gressitt & Kimoto, 1961: 119 (Chekiang, Fukien); Kimoto, 1964: 142 (Ryukyus); Tan et al. 1980: 169; Kimoto & Gressitt, 1981: 325; Medvedev, 1992b: 385 (India); Schöller et al., 2010: 608 (catalogue).

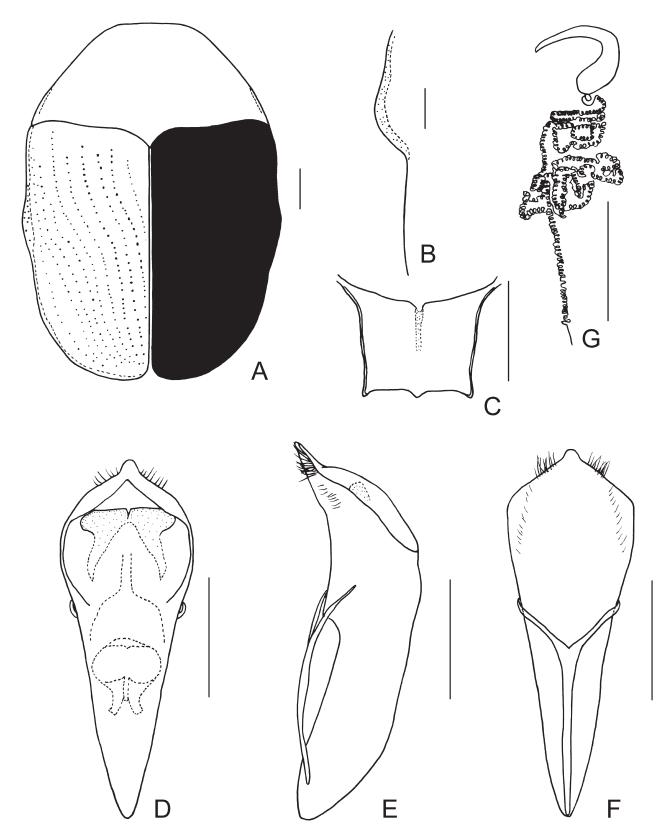
- = Dioryctus major Pic, 1926a: 12 (type locality: Tonkin; type deposited: MNHN).
- = Adiscus major: Gressitt & Kimoto, 1961: 119 (as synonym of Adiscus nigripennis).
- = Falsodioryctus sinensis Pic, 1955: 21 (type locality: Kuatun; type deposited: NHRS).
- = Adiscus sinensis: Gressitt & Kimoto, 1961: 119 (as synonym of Adiscus nigripennis).

Material examined. CHINA: Zhejiang Province: 1 female, Mt. Mogan [Moganshan], 7. VI. 1935, coll. Unknown (IZ-CAS); 2 females, Mt. Tianmu Peak, 26. VI. 1957, coll. Jikun Yang (IZ-CAS); Fujian Province: 2 females, Chong'an, Xing Village, Sangang, 16. V. 1960, coll. Fuji Pu (IZ-CAS); 2 females, Chong'an, Xing Village, Sangang, 17. V. 1960, coll. Shengqiao Jiang (IZ-CAS); 1 female, Chong'an, Xing Village, Sangang, 25. V. 1960, coll. Chenglin Ma (IZ-CAS); 1 male, Chong'an, Xing Village, Sangang, 29. V. 1960, coll. Shengqiao Jiang (IZ-CAS); 1 male, Chong'an, Xing Village, Longdu, 21. V. 1960, coll. Yiran Zhang (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 11. V. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. V. 1960, coll. Shengqiao Jiang (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Chong'an, Xing Village, Guadun, 2. VII. 1960, col

Qili Bridge [Qiliqiao], 1. VI. 1960, coll. Shengqiao Jiang (IZ-CAS); 1 female, Chong'an, Xing Village, Tongmuguan, 28. VI. 1960, coll. Shengqiao Jiang (IZ-CAS); 1 male, 1 female, Jianyang, Huangkeng Chutou, 23. IV. 1960, coll. Yiran Zhang (IZ-CAS); 1 male, Jianyang, Huangkeng Chutou, 26. IV. 1960, coll. Yiran Zhang (IZ-CAS); 1 female, Jianyang Huangkeng, Chutou, 30. IV. 1960, coll. Fuji Pu (IZ-CAS); 1 male, Jianyang, Huangkeng, Dazhulan, 2. V. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Huangkeng, Dazhulan, 2. V. 1960, coll. Yong Zuo (IZ-CAS); 1 female, Jianyang, Huangkeng, Dazhulan, 2. V. 1960, coll. Yiran Zhang (IZ-CAS); 2 females, Jianyang, Huangkeng, Dazhulan, 28. V. 1960, coll. Yiran Zhang (IZ-CAS); 1 female, Jianyang, Huangkeng, Dazhulan, 28. V. 1960, coll. Shengqiao Jiang; 2 females, Jianyang, Huangkeng, Guilin, 11. IV. 1960, coll. Yiran Zhang (IZ-CAS); 1 female, Jianyang, Huangkeng, Lijiatang, 7. V. 1960, coll. Yong Zuo (IZ-CAS); 1 female, Jianyang, Dehua, Dongli, 7. VI. 1960, coll. Fuji Pu (IZ-CAS);



**FIGURE 24-1.** *Adiscus nigripennis* (Jacoby, 1890): A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus; G. rectal pad. (Scale bars: A–B = 1.0 mm, C–G = 0.2 mm).



**FIGURE 24-2.** *Adiscus nigripennis* (Jacoby, 1890): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

1 female, Jianyang, Dehua, Dongli, 7. VI. 1960, coll. Fuji Pu (IZ-CAS); 1 female, Jianyang, Dehua, Dongli, Mt. Xiaodaiyun [Xiaodaiyunshan], 6. VI. 1960, coll. Fuji Pu (IZ-CAS); **Guizhou** Province: 1 female, Guizhu, Qingyan, 25. V. 1951, coll. Xianhua Chen (IZ-CAS).

**Redescription. Measurements. Males.** BL = 4.36–4.82 mm, BW = 3.04–3.45 mm, HL = 1.61 mm, HW = 1.35 mm, PL = 1.41 mm, PW = 2.94 mm, PA =  $110^{\circ}$ , EL = 3.54 mm, EA =  $150^{\circ}$ , AL = 1.53 mm, AW = 0.49 mm.

**Females.** BL = 4.68–5.04 mm, BW = 3.23–3.65 mm, HL = 1.74 mm, HW = 1.47 mm, PL = 1.53 mm, PW = 3.18 mm, PA = 110°, EL = 3.84 mm, EA = 150°, SL = 0.66 mm.

Body (Figs. 24-1A; 24-2A) ovate, subquadrate. Head orange to fuscous; apex of mandibles black; antennomeres 1–5 orange, 6–11 darkish brown. Pronotum orange, sometimes black tinged reddish brown, basal margin black. Elytra metallic black. The venter of prothorax and mesothorax yellowish brown, lateral margin of mesoventrite tinged black; metathorax largely yellowish brown, metaventrite tinged black. Abdomen largely black, sides yellowish brown. Legs yellowish brown.

Head dull, finely and sparsely punctate. Eyes reniform; broadly emarginated; superior eye-lobes separated by greater distance than antennal insertions. Clypeus densely granulose and sparsely and coarsely punctate. From with dense fine punctures. Vertex with sparser punctures than on frons, intervals with scattered minute punctures. Antennae reaching area behind humeri of elytra, scape thick, clubbed, pedicel spherical, antennomeres 3–5 slender, 4 longer than 3, 5 broader, 6–11 somewhat broadened and flattened, 10 elongate; the last segment pointed apically.

Pronotum (Figs. 24-1A; 24-2A) broad, base much broader than apex, basal width about 2.1 times of pronotal length. Anterior margin nearly straight. Posterior margin finely sinuate with fine serration, and produced into an obtuse angle of 110° at middle. Disc evenly convex, shiny, finely punctate.

Elytra (Figs. 24-1A; 24-2A) subquadrate, as broad as pronotum at base, humeri strongly prominent, and posterior region not convex. Disc punctate, with 11 regular striae, intervals with scattered minute punctures, puncture striae irregular on apical slope. Epipleural lobe (Fig. 24-2B) large, lateral margins distinctly expanded ventrally and with lobe at basal 1/2 of elytron, with both lobe sides forming angle of 150°, epipleura obliquely placed and visible in lateral view.

Venter clothed with sparse pubescence and dense fine punctures. Prosternum (Fig. 24-2C) broad, with media longitudinal raising in anterior half; lateral margin elevated to ridge, straight in lateral view, posterior margin with sharp angles on both sides, middle area with a prominent obtuse angle. Mesoventrite about 1.7 times as wide as long, lateral margin slightly protruding, posterior margin with weakly acute angles on both sides. Pygidium with dense coarse punctures.

**Aedeagus.** (Figs. 24-1D–F; 24-2D–F) Median lobe elongate, about twice as long as wide, nearly clubbed. Apex of median lobe slightly narrower than middle, acute at apex, moderately curved in lateral view; with several setae on each side of apex, apex acutely protuberant with indistinct and sparse punctures on ventral side of distal part. Median orifice with median sclerite bending inwards above surface. Inner sac slightly broad, cylindrical, dilated at middle part nearly quadrate, but bilobed and acute at apex. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 deep and round. **Spermatheca** (Figs. 24-1C; 24-2G) falcate, 70°-angled bending from apex 3/5, slightly acute at apex, dilated at base 1/5, then narrower, duct weakly sclerotized, strongly and irregularly coiling 7–8 times. **Rectal sclerites** (Fig. 24-1G) weakly sclerotized, sclerite narrow, not connected between two rectangular sclerites on ventral side.

Distribution. China (Zhejiang, Fujian, Hubei, Guizhou); India; Japan; Vietnam.

### Adiscus occipitalis Chen & Pu, 1980

(Figs 25-1; 25-2)

Adiscus occipitalis Chen & Pu, 1980: 109 (type locality: Fujian; type deposited: IZ-CAS); Schöller et al., 2010: 608 (catalogue).

**Material examined. CHINA: Holotype:** female, "Fujian: Jianyang, Julin [Chinese letters] / 350–460 m / Chinese Academy of Sciences [Chinese letters] // 28. III. 1960 / coll. Yiran Zhang [Chinese letters] // HOLOTYPE". (IZ-CAS).

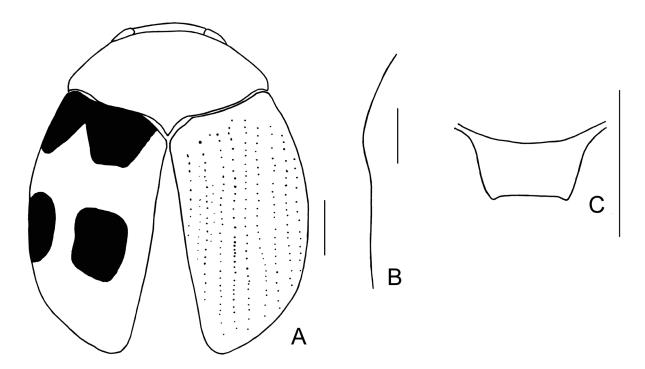
**Redescription. Measurements. Female.** BL = 2.23-2.61 mm, BW = 1.62-1.97 mm, HL = 0.85 mm, HW = 0.87 mm, PL = 0.74 mm, PW = 1.37 mm, PA =  $80^{\circ}$ , EL = 1.85 mm, EA =  $160^{\circ}$ .

Body (Figs. 25-1A; 25-2A) nearly round, dorsum convex, mostly yellowish brown. Upper portion of head somewhat alutaceous, posterior yellowish brown. Antennomeres 1–5 yellow, 6–11 fuscous. Pronotum pale reddish

brown, with basal margin black. Elytra yellowish brown, with transverse black bilobed band at base, not extending to lateral margin or suture, and two large subquadrate spots at middle and near lateral margin of each. Venter yellowish brown.



FIGURE 25-1. Adiscus occipitalis Chen & Pu, 1980, holotype: A. habitus; B. lateral view of habitus. (Scale bars = 0.5 mm).



**FIGURE 25-2.** *Adiscus occipitalis* Chen & Pu, 1980: A. habitus; B. epipleural lobe of elytra; C. prosternum. (Scale bars = 0.5 mm).

Head dull, finely and sparsely punctate. Eyes slightly emarginated below middle; superior eye-lobes separated by greater distance than antennal insertions. Antennae moderately short, reaching elytral humeri, scape clubbed, pedicel oblong, antennomeres 3 and 4 slenderest, longer than pedicel, 5–10 somewhat dilated apically.

Pronotum (Figs. 25-1A; 25-2A) convex, smooth and shiny, much broader basely than apically, basal width about 1.9 times of pronotal length. Anterior margin nearly straight. Posterior margin sinuate with fine serration, and produced into an acute angle of 80° at middle. Disc evenly convex, impunctate. Anterior and hind angles about 90°.

Elytra (Figs. 25-1A; 25-2A) as broad as long, humeri somewhat prominent, glabrous. Disc sparsely and finely punctate, with 11 regular striae, intervals with scattered minute punctures, puncture striae irregular on apical slope. Epipleural lobe (Fig. 25-2B) weak, lateral margins slightly expanded ventrally and with arched lobe at basal 1/4 of elytron, with both sides forming angle of 160°, epipleura invisible in lateral view.

Venter clothed with short pubescence. Prosternum (Fig. 25-2C) trapezoidal, anterior margin not protruding, lateral ridges weakly elevated. Mesoventrite broad, about 2.7 times as wide as long. Pygidium with indistinct punctures.

Genitalia not examined.

Distribution. China (Fujian).

**Diagnosis.** This species is similar to *A. variabilis*, but can be distinguished by the different coloration and coarser punctures on elytra, the sparse and minute punctures on pronotum, the widely separated superior eye-lobes and the terminal five segments of antennae almost moniliform.

### Adiscus pubiventris Medvedev, 2008

(Figs 26-1; 26-2)

Adiscus pubiventris Medvedev, 2008: 202 (type locality: Vietnam and Laos; type deposited: LM).

Material examined. CHINA: Jiangxi Province [New record]: 1 female, Mt. Jiulian [Jiulianshan], 8. VI. 1975, coll. Youwei Zhang (IZ-CAS); Guangxi Province: 3 males, 5 females, Lingui, Wantian, 1. VII. 1963, coll. Shuyong Wang (IZ-CAS); 1 female, Lingui, Wantian, 17. VI. 1963, coll. Shuyong Wang (IZ-CAS); 1 female, Longsheng, Sanmen, 26. VI. 1963, coll. Chunguang Wang (IZ-CAS); 1 male, Jinxiu, Mt. Lianhua [Lianhuashan], 20. VI. 1999, coll. Wenzhu Li (IZ-CAS); Guizhou Province: 2 females, Shixian, 23. VII. 1988, coll. Shuyong Wang (IZ-CAS); 1 female, Mt. Foding [Fodingshan], 23. VII. 1988, coll. Xingke Yang (IZ-CAS).

**Redescription. Measurements. Males.** BL = 4.21–4.56 mm, BW = 3.24–3.65 mm, HL = 1.41 mm, HW = 1.26 mm, PL = 1.24 mm, PW = 2.86 mm, PA =  $90^{\circ}$ , EL = 3.37 mm, EA =  $110^{\circ}$ , AL = 1.43 mm, AW = 0.44 mm.

**Females.** BL = 4.51–4.96 mm, BW = 3.48–3.85 mm, HL = 1.53 mm, HW = 1.36 mm, PL = 1.34 mm, PW = 3.09 mm, PA =  $90^{\circ}$ , EL = 3.65 mm, EA =  $110^{\circ}$ , SL = 0.65 mm.

Body (Figs. 26-1A; 26-2A) short and ovate, dorsum mostly reddish fulvous. Head reddish brown; mandibles reddish brown, apex black. Apical segments of antennae more or less darkened. Pronotum fulvous, basal margin black. Legs and venter yellowish brown.

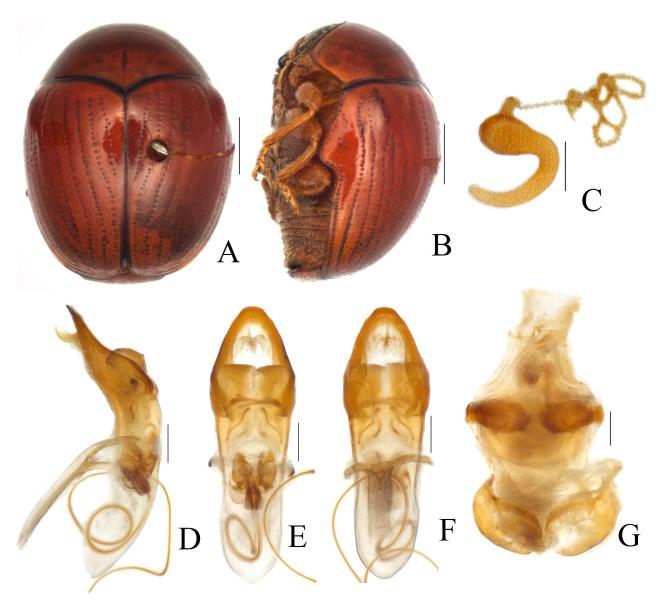
Head shiny, frons with fine and dense punctures, mixed with minute punctures. Clypeus with straight anterior margin, densely granulose and sparsely punctate. Antennae long, reaching area behind elytral humeri; scape thick, clubbed, pedicel spherical, antennomeres 3 and 4 tinny, 4 longer than 3; 5–10 somewhat broadened and flattened, the last segment pointed apically.

Pronotum (Figs. 26-1A; 26-2A) convex, smooth and shiny, base much broader than apex, basal width about 2.3 times of pronotal length. Anterior margin nearly straight. Posterior margin slightly sinuate with fine serration, and produced into right-angle of about 90° at middle. Disc evenly convex, impunctate.

Elytra (Figs. 26-1A; 26-2A) wide to long, humeri somewhat prominent, glabrous, widest slightly behind humerus, feebly rounded at sides and apex. Disc distinctly punctate, with 11 regular striae, intervals with scattered weak and minute punctures. Epipleural lobe (Fig. 26-2B) large, lateral margins distinctly expanded ventrally and with triangular lobe at basal 1/4 of elytron, with both lobe sides forming angle of 110°, epipleura invisible in lateral view.

Venter clothed with sparse short pubescence and dense fine punctures. Prosternum (Fig. 26-2C) trapezoidal,

anterior margin concave; lateral ridge sharp, straight in lateral view; anterior of central ridge elevated, with rounded apex; posterior margin protruding backward. Mesoventrite broad, about 2.5 times as wide as long, lateral margin slightly protruding. The first segment of fore and mid tarsi broadened. The first abdominal ventrite between hind coxae with long and curly hairs. Pygidium with dense coarse punctures.



**FIGURE 26-1.** *Adiscus pubiventris* Medvedev, 2008: A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus; G. rectal pad. (Scale bars: A–B = 1.0 mm, C–G = 0.2 mm).

**Aedeagus.** (Figs. 26-1D–F; 26-2D–F) Median lobe elongate, about 3.1 times as long as wide, nearly parallel-sided. Apex of median lobe slightly narrower than middle, apex narrowly rounded, strongly curved in lateral view; with setae on each side of apex and upper region of ventral side, punctate on ventral side of distal part. Median orifice with median sclerite bending inwards above surface. Inner sac longer than wide, a paired structure, connected at base with duct. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 deep and round, without brush of setae on first ventrite. **Spermatheca** (Figs. 26-1C; 26-2G) falcate, 60°-angled bending halfway, slightly acute at apex, strongly dilated at base 1/3, then narrower downward; duct weakly sclerotized, irregularly coiling 4–6 times. **Rectal sclerites** (Fig. 26-1G) moderately sclerotized, not connected between two clubbed sclerites on ventral side.

Distribution. China (Jiangxi, Guangxi, Guizhou); Vietnam, Laos.

**Diadnosis.** Easily distinguished by the first abdominal ventrite of male with brush of erect hairs.

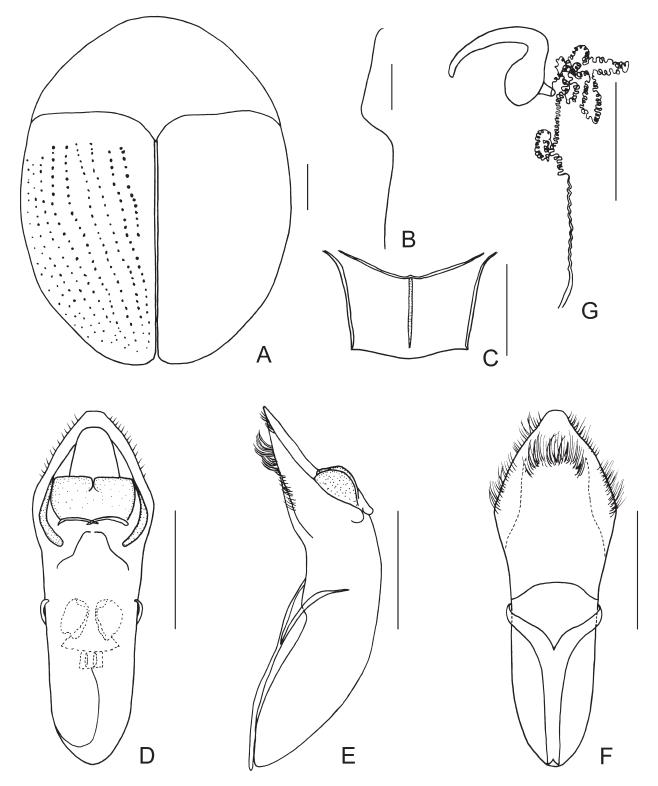


FIGURE 26-2. Adiscus pubiventris Medvedev, 2008: A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

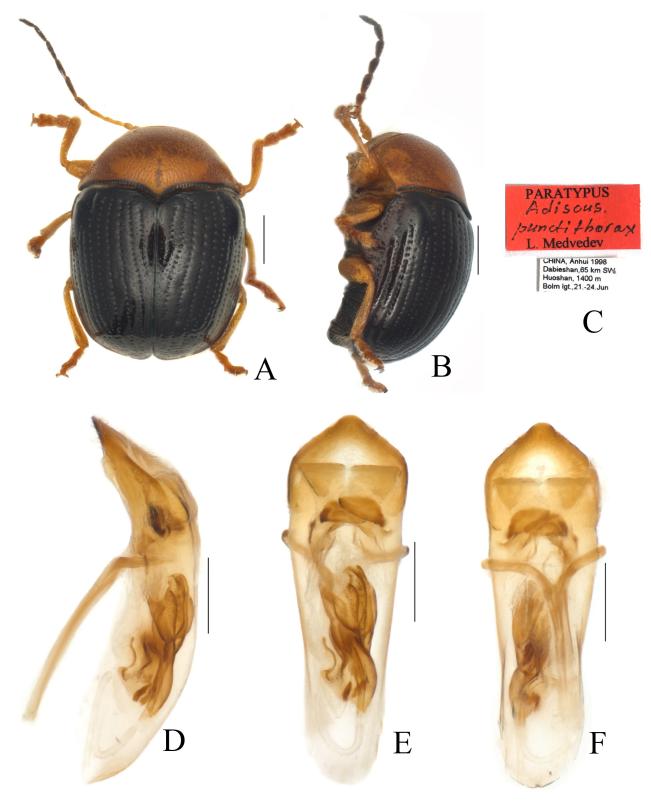
# Adiscus punctithorax Medvedev, 2008

(Figs 27-1; 27-2)

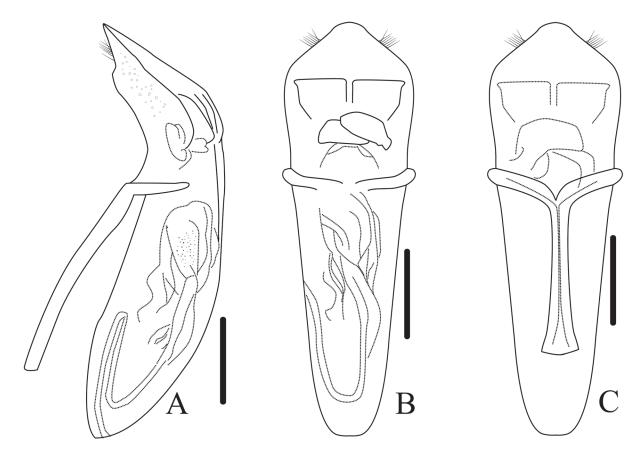
Adiscus punctithorax Medvedev, 2008: 200 (type locality: Anhui; type deposited: NHMB); Schöller et al., 2010: 608 (catalogue).

**Material examined. China: Paratype:** 1 male, "Anhui, Dabeishan, 65km SW Huoshan / 1400 m / 21–24. VI. 1960 / coll. Bolm lgt // PARATYPE". (ZIN).

**Redescription. Measurements. Male.** BL = 2.12-2.54 mm, BW = 1.59-1.95 mm, HL = 0.83 mm, HW = 0.76 mm, PL = 0.82 mm, PW = 1.67 mm, PA =  $105^{\circ}$ , EL = 1.76 mm, EA =  $120^{\circ}$ , AL = 2.31 mm, AW = 0.73 mm.



**FIGURE 27-1.** *Adiscus punctithorax* Medvedev, 2008, paratype: A. habitus; B. lateral view of habitus; C. paratype labels; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus. (Scale bars: A–B = 0.5 mm, D–F = 0.2 mm).



**FIGURE 27-2.** *Adiscus punctithorax* Medvedev, 2008: A. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus. (Scale bars = 0.2 mm).

Body (Fig. 27-1A) short ovate. Head fulvous, antennomeres 1–5 fulvous, 6–11 darkish brown. Pronotum fulvous, basal margin black. Elytra black. Legs including coxae fulvous. Prosternum and metaventrite yellowish brown, ventral side of abdomen largely yellowish brown.

Head dull, densely and coarsely punctate in middle and along side, partly strigose on frons. Eyes reniform; superior eye-lobes separated by same distance as antennal insertions. Clypeus semicircular, with slightly stronger punctures than those on upper portion, anterior margin arched and emarginated. Antennae long, reaching middle of elytra; scape clubbed, pedicel oblong, about half as long as scape, antennomeres 3–5 slender, pedicel and 3–5 about equal in length, 6 longer, but not thickened, 10 about four times as long as broad.

Pronotum (Fig. 27-1A) convex and shiny, base much broader than apex, basal width about twice pronotal length. Anterior margin nearly straight. Posterior margin sinuate with fine serration, and produced into an obtuse angle of about 105° at middle. Disc evenly convex, finely and rather closely and coarsely punctures, with smooth narrow interspaces.

Elytra (Fig. 27-1A) as broad as long, humeri somewhat prominent, glabrous. Disc punctate, with 11 regular striae, intervals with scattered minute punctures, puncture striae irregular on apical slope. Epipleural lobe large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/4 of elytron, with both lobe sides forming angle of 120°.

Venter clothed with shortly silvery pubescence and punctures. Prosternum trapezoidal, lateral ridge elevated, straight in lateral view, anterior and posterior margins concave, hind angles not produced. Mesoventrite broad, about twice as wide as long Pygidium with dense punctures and short pubescence. First segment of fore and middle tarsi moderately widened.

**Aedeagus.** (Figs. 27-1D–F; 27-2) Median lobe elongate, about 3.1 times as long as wide, nearly parallel-sided. Apex of median lobe slightly narrower than middle, acute at apex, moderately curved in lateral view, with several setae on each side of apex, indistinctly punctate on ventral side of apical part. Median orifice with median sclerite bending inwards above surface. Inner sac rather narrow, cylindrical, twisted. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Distribution.** China (Anhui).

**Diagnosis.** This species is similar to A. annulatus, but the elytra are yellowish brown with a black band.

### Adiscus speciosus Tan, 1988

(Figs 28-1; 28-2)

Adiscus speciosus Tan, 1988: 319 (type locality: Xizang; type deposited: IZ-CAS); Schöller et al., 2010: 608 (catalogue).

Material examined. CHINA: Holotype: female, "Tibet: Moto, Gedang [Chinese letters] / 2000 m / Chinese Academy of Sciences [Chinese letters] // 24. IX. 1982 / coll. Yinheng Han [Chinese letters] // HOLOTYPE". (IZ-CAS); Paratypes: 1 male, 1 female, "Tibet: Moto, Gedang [Chinese letters] / 2000 m / Chinese Academy of Sciences [Chinese letters] // 12. IX. 1982 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS); 2 males, 1 female, "Tibet: Moto, Gedang [Chinese letters] / 2000 m / Chinese Academy of Sciences [Chinese letters] // 23. IX. 1982 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS); 6 males, 11 females, same as holotype; 1 female, "Tibet: Moto, Gedang [Chinese letters] / 2000 m / Chinese Academy of Sciences [Chinese letters] // 24–25. IX. 1982 / coll. Zaicai Lin [Chinese letters] // PARATYPE". (IZ-CAS); 5 males, 4 females, "Tibet: Moto, Gedang [Chinese letters] / 2000 m / Chinese Academy of Sciences [Chinese letters] // 26. IX. 1982 / coll. Zaicai Lin [Chinese letters] // PARATYPE". (IZ-CAS); 1 female, "Tibet: Moto, Gedang [Chinese letters] / 2000 m / Chinese Academy of Sciences [Chinese letters] // 27. IX. 1982 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS); 1 female, "Tibet: Moto, Gedang [Chinese letters] / 2000 m / Chinese Academy of Sciences [Chinese letters] // 1. X. 1982 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS); 1 female, "Tibet: Moto, Gedang [Chinese letters] / 2000 m / Chinese Academy of Sciences [Chinese letters] // 6. X. 1982 / coll. Zaicai Lin [Chinese letters] // PARATYPE". (IZ-CAS); 1 male, 3 females, "Tibet: Moto, Gedang [Chinese letters] / 2000 m / Chinese Academy of Sciences [Chinese letters] // 8. X. 1982 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS); 1 female, "Tibet: Moto, Gedang [Chinese letters] / 2000 m / Chinese Academy of Sciences [Chinese letters] // 14. X. 1982 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS); 3 females, "Tibet: Moto, Gejia, Lasa [Chinese letters] /Chinese Academy of Sciences [Chinese letters] // 10. XI. 1982 / coll. Zaicai Lin [Chinese letters] // PARATYPE". (IZ-CAS); 1 male, 6 females, "Tibet: Bomi [Chinese letters] / Chinese Academy of Sciences [Chinese letters] // 1982 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS); 1 male, "Tibet: Bomi, Yigong [Chinese letters] // 2300 m / Chinese Academy of Sciences [Chinese letters] // 16. VIII. 1983 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS); 1 male, "Tibet: Bomi, Yigong [Chinese letters] / 2300 m / Chinese Academy of Sciences [Chinese letters] // 23. VIII. 1983 / coll. Zaicai Lin [Chinese letters] // PARATYPE". (IZ-CAS); 2 males, 1 female, "Tibet: Bomi, Yigong [Chinese letters] / 2300 m / Chinese Academy of Sciences [Chinese letters] // 23. VIII. 1983 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS); 1 male, 2 females, "Tibet: Bomi, Yigong [Chinese letters] / 2300 m / Chinese Academy of Sciences [Chinese letters] // 23. VIII. 1983 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS); 1 male, 3 females, "Tibet: Bomi, Yigong [Chinese letters] / 2300 m / Chinese Academy of Sciences [Chinese letters] // 23. VIII. 1983 / coll. Zaicai Lin [Chinese letters] // PARATYPE". (IZ-CAS); 1 male, "Tibet: Bomi, Yigong [Chinese letters] / 2300 m / Chinese Academy of Sciences [Chinese letters] // 26. VIII. 1983 / coll. Yinheng Han [Chinese letters] // PARATYPE". (IZ-CAS).

**Redescription. Measurements. Males.** BL = 3.05-3.46 mm, BW = 2.14-2.56 mm, HL = 0.85 mm, HW = 0.85 mm, PL = 0.92 mm, PW = 2.03 mm, PA =  $100^{\circ}$ , EL = 2.59 mm, EA =  $130^{\circ}$ , AL = 1.41 mm, AW = 0.49 mm.

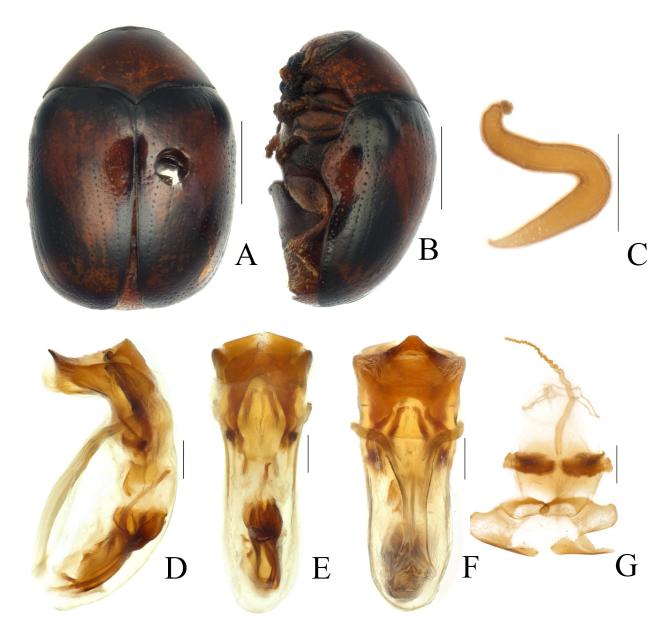
**Females.** BL = 3.38-3.65 mm, BW = 2.42-2.68 mm, HL = 0.93 mm, HW = 0.94 mm, PL = 1.00 mm, PW = 2.20 mm, PA =  $100^{\circ}$ , EL = 2.81 mm, EA =  $130^{\circ}$ , SL = 0.51mm.

Body (Figs. 28-1A; 28-2A) round; dorsum strongly convex, mostly ochraceous. Head pale ochraceous; antennomeres 1–5 or 1–6 fulvous, the rest darkish brown. Pronotum ochraceous, tinged with darkish brown, the longitudinal ridge of prosternum piceous. Elytra reddish brown, with black markings, variegated. Venter reddish or yellowish brown.

Head dull; finely and slightly sparsely punctate. Eyes reniform, superior eye-lobes separated by greater distance than antennal insertions. Clypeus densely granulose and sparsely punctured, with an arcuate line in the basal region of antennae, separated from vertex. Antennae reaching elytral humeri, scape clubbed, pedicel oblong, about half as

long as scape, antennomeres 3 and 4 slender, about as long as pedicel; base of 5 thin, the apex slightly broad, weakly longer than 4; 6–11 somewhat broadened.

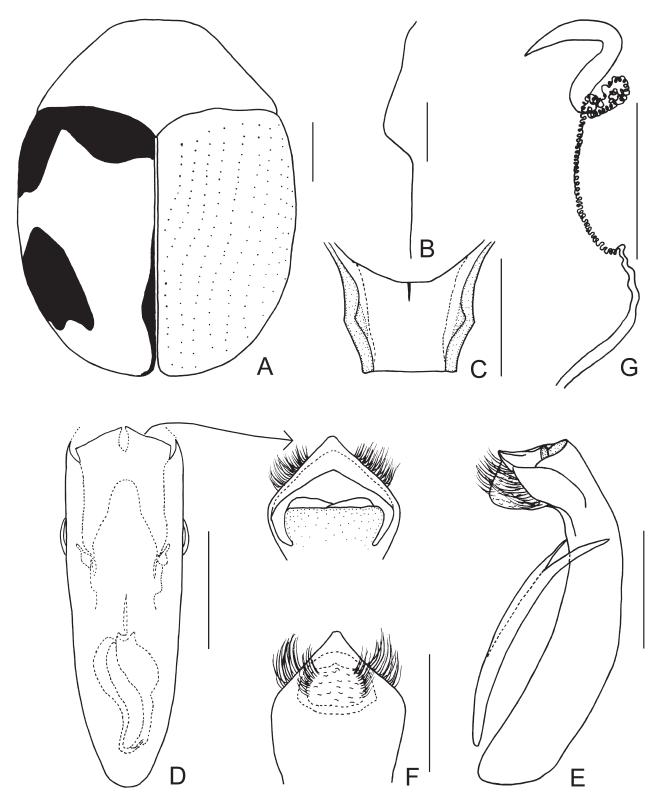
Pronotum (Figs. 28-1A; 28-2A) convex, base much broader than apex, basal width about twice pronotal length. Anterior margin nearly straight. Posterior margin weakly sinuate with fine serration, and produced into an obtuse angle of about 100° at middle. Disc evenly convex, finely and rather closely punctures.



**FIGURE 28-1.** *Adiscus speciosus* Tan, 1988, holotype: A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus; G. rectal pad. (Scale bars: A–B = 1.0 mm, C–G = 0.2 mm).

Elytra (Figs. 28-1A; 28-2A) as broad as prothorax at base, humeri somewhat prominent, glabrous. Disc punctate, with 11 regular striae, with scutellar striole indistinct, intervals with scattered minute punctures, puncture striae irregular and coarser on apical slope. Epipleural lobe (Fig. 28-2B) large, lateral margins distinctly expanded ventrally with rounded lobe at basal 1/4 of elytron, with both lobe sides forming angle about 130°, visible in lateral view.

Venter clothed with pubescence. Prosternum (Fig. 28-2C) subquadrate, slightly narrowed anteriorly, lateral ridge strongly elevated, triangular in lateral view, posterior margin nearly straight. Mesoventrite rectangular, posterior margin slightly arcuate concave. Pygidium with dense punctures and short pubescence.



**FIGURE 28-2.** *Adiscus speciosus* Tan, 1988: A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. apical part of aedeagus in ventral view; G. spermatheca. (Scale bars = 0.5 mm).

**Aedeagus.** (Figs 28-1D–F; 28-2D–F) Median lobe elongate, about 2.8 times as long as wide, nearly parallel-sided. Apex of median lobe slightly narrower than middle, acute at apex, strongly curved in lateral view; with several setae on each side of apex, impunctate on ventral side of distal part. Median orifice with median sclerite bending inwards above surface. Inner sac rather narrow, about 3 times as long as wide, cylindrical, slightly twisted. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 shallow and triangular. **Spermatheca** (Figs. 28-1C; 28-2G) falcate, 45°-angled bending halfway, slightly acute at apex; duct weakly sclerotized, irregularly coiling 3–5 times. **Rectal sclerites** (Fig. 28-1G) moderately sclerotized, sclerite slightly narrow, not connected between two rectangular sclerites on ventral side.

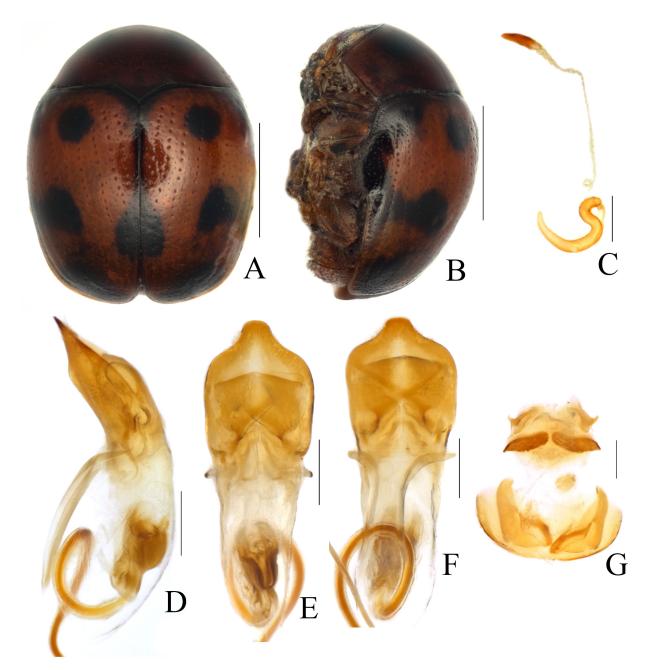
**Distribution.** China (Tibet).

**Diagnosis.** This species is easily distinguished from all its congeners by the markings of elytra and the clypeus.

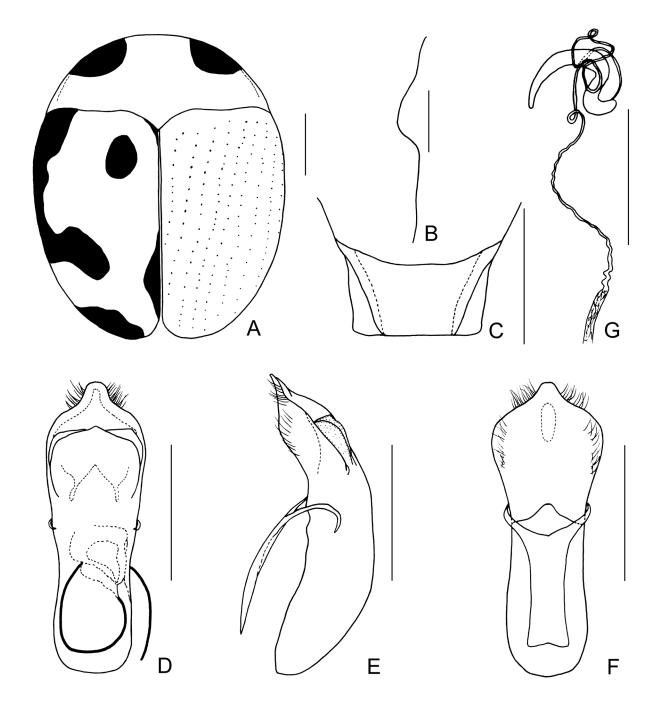
### Adiscus tibialis Chen & Pu, 1980

(Figs 29-1; 29-2)

Adiscus tibialis Chen & Pu, 1980: 111 (type locality: Yunnan; type deposited: IZ-CAS); Schöller et al., 2010: 608 (catalogue).



**FIGURE 29-1.** *Adiscus tibialis* Chen & Pu, 1980, holotype: A. habitus; B. lateral view of habitus; C. spermatheca; D. lateral view of aedeagus; E. dorsal view of aedeagus; F. ventral view of aedeagus; G. rectal pad. (Scale bars: A–B = 1.0 mm, C–G = 0.2 mm).



**FIGURE 29-2.** *Adiscus tibialis* Chen & Pu, 1980: A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

Material examined. CHINA: Holotype: male, "Yunnan: Xishuangbanna Mengzhe [Chinese letters] / Chinese Academy of Sciences [Chinese letters] // 29. VI. 1958 / coll. Shuyong Wang [Chinese letters] // HOLOTYPE". (IZ-CAS); Paratypes: 1 male, "Yunnan: Xishuangbanna Mengzhe [Chinese letters] // Chinese Academy of Sciences [Chinese letters] // 25. VI. 1958 / coll. Shuyong Wang [Chinese letters] // PARATYPE". (IZ-CAS); 1 male, "Yunnan: Xishuangbanna Mengzhe [Chinese letters] // Chinese Academy of Sciences [Chinese letters] // 26. VI. 1958 / coll. Shuyong Wang [Chinese letters] // PARATYPE". (IZ-CAS); 1 female, same data as holotype.

**Redescription. Measurements. Males.** BL = 2.14-2.53 mm, BW = 1.75-1.98 mm, HL = 0.83 mm, HW = 0.75 mm, PL = 0.68 mm, PW = 1.62 mm, PA =  $110^{\circ}$ , EL = 1.83 mm, EA =  $150^{\circ}$ , AL = 1.04 mm, AW = 0.37 mm.

**Female.** BL = 2.55 mm, BW = 2.08 mm, HL = 0.89 mm, HW = 0.81 mm, PL = 0.74 mm, PW = 1.76 mm, PA =  $110^{\circ}$ , EL = 1.97 mm, EA =  $150^{\circ}$ , SL = 0.42 mm.

Body (Figs. 29-1A; 29-2A) nearly round, dorsum convex, mostly ochraceous. Head dark ochraceous; vertex black, antennomeres 1–5 yellowish brown, 6–11 darkish brown. Pronotum ochraceous, basal margin black; two black transverse subquadrate patches along anterior margin. Elytra ochraceous, basal margin and suture black, seven black marks on each elytron in three rows, outer row with two elongate marks along lateral margin, second row with three round or oval spots on middle of disc, third row with two round spots on suture; sometimes four marks on each elytron (Fig. 29-A). Apex of legs and the surface of tibiae black, sometimes metaventrite black.

Head dull, with fine and coarse punctures, vertex with denser and coarser punctures than frons. Eyes reniform; deeply emarginated below middle; superior eye-lobes separated by same distance as antennal insertions. Antennae reaching elytral humeri, scape clubbed, pedicel oblong, about half as long as scape, antennomeres 3–5 slender, 6–11 somewhat broadened and flattened, last segment pointed apically.

Pronotum (Figs. 29-1A; 29-2A) convex, much broader basely than apically, basal width about 2.4 times pronotal length. Anterior margin slightly curved. Posterior margin undulated and produced into an obtuse angle of about 110° at middle. Disc evenly convex, with dense fine and coarse punctures.

Elytra (Figs. 29-1A; 29-2A) as broad as prothorax at base, humeri somewhat prominent, glabrous. Disc punctate, with 11 regular striae, intervals with scattered minute punctures, puncture striae irregular on apical slope. Epipleural lobe (Fig. 29-2B) large, lateral margins slightly expanded ventrally and with rounded lobe at basal 1/4 of elytron, with both lobe sides forming angle of 150°, epipleura invisible in lateral view.

Venter clothed with pubescence and fine punctures. Prosternum (Fig. 29-2C) broad, subquadrate; lateral ridges elevated, and bifurcate, arcuate in lateral view. Pygidium with dense punctures and slightly long pubescence.

**Aedeagus.** (Figs. 29-1D–F; 29-2D–F) Median lobe elongate, about 3 times as long as wide. Apex of median lobe slightly narrower than middle, acute at apex, papillate, moderately curved in lateral view; with several setae on each side of apex, indistinctly and densely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards beyond surface. Inner sac rather narrow, about 1.5 times as long as wide, cylindrical, dilated at base slightly round, but narrowed at apex. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 shallow and triangular. **Spermatheca** (Figs. 29-1C; 29-2G) s-shaped, 70°-angled bending 1/5 from base, and then bending to negative direction at base 2/5, acute at apex; duct weakly sclerotized, irregularly coiling 2–3 times. **Rectal sclerites** (Fig. 29-1G) moderately sclerotized, sclerites slightly narrow, not connected between two rectangular sclerites on ventral side.

Distribution. China (Fujian, Yunnan).

**Diagnosis.** This species is similar to *A. humeralis*, but the elytral bands are distinctly different; and *A. tibialis* has pronotum with black bands and epipleura invisible in lateral view.

#### Adiscus transversalis Tan, 1992

(Figs 30-1; 30-2)

Adiscus transversalis Tan, 1992b: 783 (type locality: Yunnan; type locality: IZ-CAS); Schöller et al., 2010: 608 (catalogue).

Material examined. CHINA: Holotype: male, "Yunnan, Lushui, Yaojiaping [Chinese letters] / 2800 m / Chinese Academy of Sciences [Chinese letters] // 6. VI. 1981 / coll. Shuyong Wang [Chinese letters] // HOLOTYPE". (IZ-CAS); Paratypes: 2 females, same data as holotype; 1 female, "Yunnan, Dali, Mt. Cang [Cangshan] [Chinese letters] // 2850 m / Chinese Academy of Sciences [Chinese letters] // 30. VI. 1981 / coll. Shuyong Wang [Chinese letters] // PARATYPE". (IZ-CAS).

Redescription (based on females as male holotype in poor condition).

**Measurements. Females.** BL = 2.42-2.81 mm, BW = 1.64-1.96 mm, HL = 0.89 mm, HW = 0.85 mm, PL = 0.69 mm, PW = 1.56 mm, PA =  $90^{\circ}$ , EL = 2.07 mm, EA =  $160^{\circ}$ , SL = 0.85 mm.

Body (Figs. 30-1A; 30-2A) broadly ovate; dorsum mostly yellowish brown. Head dark reddish brown; vertex slightly tinged with black; antennomeres 1–4 yellowish brown, 5–11 dark. Pronotum yellowish brown, anterior middle region and basal margin black. Elytra yellowish brown, with transverse black band extending across whole basal margin. Legs yellowish brown. Venter black, but propleura yellowish brown.

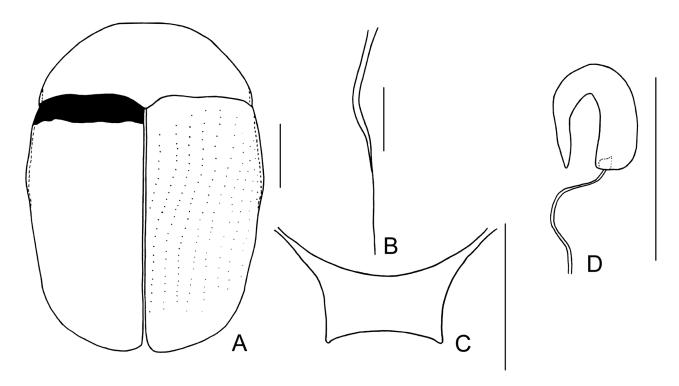
Head shiny; finely and sparsely punctate. Eyes reniform; superior eye-lobes separated by slightly greater distance than antennal insertions. Clypeus densely granulose and sparsely punctate. Anterior margin of labrum with sparse

hairs. Last segment of labial palpus swollen, and apical segment of maxillary palp securiform. Antennae reaching elytral humeri, scape clubbed, pedicel oblong, about 2/3 as long as scape, antennomeres 3–5 slender, cylindrical, about as long as pedicel, 6–11 somewhat broadened, with dense hairs.

Pronotum (Figs. 30-1A; 30-2A) broad, narrowed anteriorly, basal width about 2.3 times of pronotal length. Anterior margin nearly straight. Posterior margin sinuate with fine serration, and its middle portion produced into an obtuse angle of 100°. Disc evenly convex, smooth, impunctate, anterior and hind angles about 90°.



**FIGURE 30-1.** *Adiscus transversalis* Tan, 1992, paratype: A. habitus; B. lateral view of habitus; C. spermatheca; D. rectal pad. (Scale bars: A-B = 0.5 mm, C = 0.2 mm, D = 0.1 mm).



**FIGURE 30-2.** *Adiscus transversalis* Tan, 1992: A. habitus; B. epipleural lobe of elytra; C. prosternum; D. spermatheca. (Scale bars = 0.5 mm).

Elytra (Figs. 30-1A; 30-2A) as broad as prothorax at base, humeri somewhat prominent. Disc distinctly and finely punctate, with 11 regular striae, intervals nearly without minute punctures. Epipleural lobe (Fig. 30-2B) weak, lateral margins slightly expanded ventrally and with weak lobe at basal 1/4 of elytron, with both lobe sides forming angle of 160°, epipleura obliquely placed and visible in lateral view.

Venter clothed with sparse pubescence. Prosternal episternum transversely and coarsely rugose, prosternal

epimeron smooth, prosternum (Fig. 30-2C) broad, surface rugged, anterior and posterior margins concave, hind angles slightly protruding, lateral margin not protruding. Mesoventrite broad, twice as wide as long, hind angle slightly protruding. Pygidium with coarse punctures.

**Female.** Body more robust than male, apical hollow in ventrite 5 shallow. **Spermatheca** (Figs. 30-1C; 30-2D) falcate, 45°-angled bending halfway, acute at apex, strongly dilated at base 1/3, then become narrower; duct weakly sclerotized, weakly and irregularly coiled. **Rectal sclerites** (Fig. 30-1D) strongly sclerotized, not connected between two rectangular sclerites on ventral side.

**Distribution.** China (Yunnan).

**Diagnosis.** Easily distinguished from all its congeners by the distinct broad pronotum and the elytral banding.

## Adiscus variabilis (Jacoby, 1890)

(Figs 31-1; 31-2)

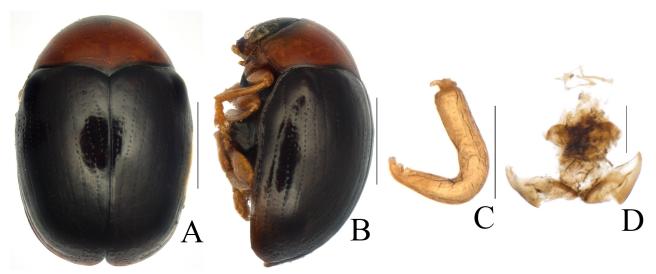
*Dioryctus variabilis* Jacoby, 1890: 114 (type locality: Chang-yang; syntype deposited: MCZ). *Adiscus variabilis*: Gressitt & Kimoto, 1961: 119 (Sikang); Tan *et al.*, 1980: 169; Schöller *et al.*, 2010: 608 (catalogue).

Material examined. CHINA: Hubei Province: 1 female, Shennongjia, Mt. Guanmen [Guanmenshan], 23. VII. 1998, coll. Haisheng Zhou (IZ-CAS); Sichuan Province: 1 female, Baoxing, 23. VI. 1963, coll. Leyi Zheng; 1 female, Baoxing, 26. VI. 1963, coll. Leyi Zheng (IZ-CAS); 1 female, Maowen Biological station, 30. VI. 1990, coll. Fusheng Huang (IZ-CAS); 1 female, Mt. Emei [Emeishan], Jiulong Hole, 28. VI. 1957, coll. Zongyuan Wang (IZ-CAS); 1 female, Wan Country, Wang'erbao, 28. V. 1994, coll. Youwei Zhang; Yunnan Province (IZ-CAS): 1 female, Yongsheng, Liude, 18. VII. 1981, col. Shuyong Wang (IZ-CAS); 1 female, Lushui, 11. VI. 1981, col. Shuyong Wang (IZ-CAS); 1 male, Weixi, Pantiange, 24. VII. 1981, col. Shuyong Wang (IZ-CAS); 1 male, Tengchong, 10. V. 1955, col. Le Wu leg (IZ-CAS); 1 female, Zhenkang, Mengban, 15. V. 1955, Tianrong Huang (IZ-CAS); 1 female, Dali, Mt. Cang [Cangshan], 27. VI. 2005, col. Aimin Shi (IZ-CAS).

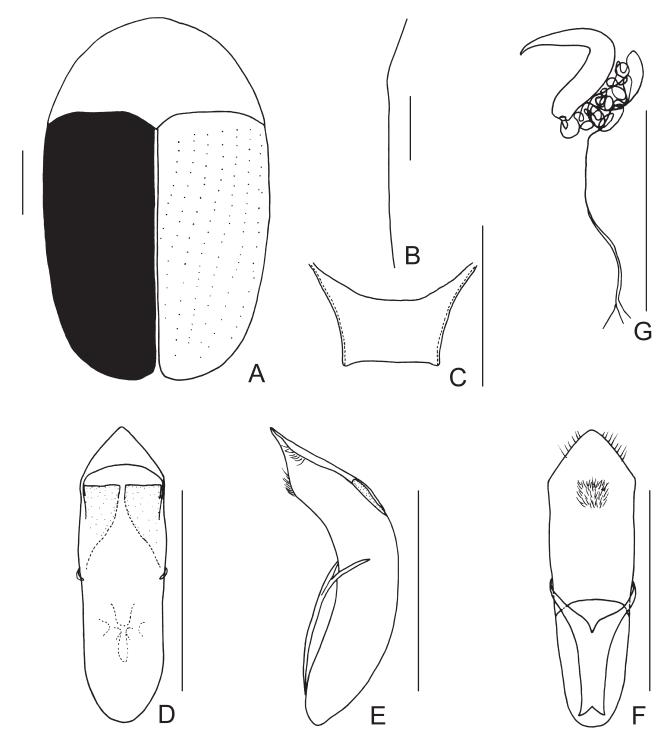
**Redescription. Measurements. Males.** BL = 2.58-2.92 mm, BW = 1.78-2.06 mm, HL = 0.77 mm, HW = 0.82 mm, PL = 0.67 mm, PW = 1.60 mm, PA =  $120^{\circ}$ , EL = 2.20 mm, EA =  $160^{\circ}$ , Al = 0.74 mm, AW = 0.22 mm.

**Females.** BL = 3.00 mm, BW = 2.11 mm, HL = 0.84 mm, HW = 0.89 mm, PL = 0.73 mm, PW = 1.74 mm, PA =  $120^{\circ}$ , EL = 2.38 mm, EA =  $160^{\circ}$ , SL = 0.45 mm.

Body (Figs. 31-1A; 31-2A) small and ovate. Head fulvous, apical region partly yellow; antennomeres 1–6 fulvous, 7–11 tinged with brown, apex of mandibles black. Pronotum fulvous, basal margin black. Elytra black. Legs fulvous, claws black. Venter darkish brown.



**FIGURE 31-1.** *Adiscus variabilis* (Jacoby, 1890): A. habitus; B. lateral view of habitus; C. spermatheca; D. rectal pad. (Scale bars: A–B = 1.0 mm, C–D = 0.2 mm).



**FIGURE 31-2.** *Adiscus variabilis* (Jacoby, 1890): A. habitus; B. epipleural lobe of elytra; C. prosternum; D. dorsal view of aedeagus; E. lateral view of aedeagus; F. ventral view of aedeagus; G. spermatheca. (Scale bars = 0.5 mm).

Head round, extremely finely and sparsely punctate. Eyes reniform, slightly and broadly rounded, emarginated below middle; superior eye-lobes separated by greater distance than antennal insertions. Antennae short, reaching apical region of elytra, scape oval, its centre round, pedicel short ovate, antennomeres 3 and 4 shortest and thinnest, 6–11 slightly broadened, each segment about equal in length, slightly longer than 5<sup>th</sup>, last segment pointed apically.

Pronotum (Figs. 31-1A; 31-2A) convex and smooth, base much broader than apex, basal width about 2.4 times of pronotal length. Anterior margin nearly straight. Posterior margin undulated, and produced into an obtuse angle of about 120° at middle. Disc evenly convex, impunctate.

Elytra (Figs. 31-1A; 31-2A) about as broad as long, humeri slightly prominent. Disc weakly and finely punctate,

with 11 indistinct regular striae, intervals without minute punctures. Epipleural lobe (Fig. 31-2B) weakly developed, lateral margins feebly expanded ventrally and nearly straight, epipleura obliquely placed and visible in lateral view

Venter clothed with sparse short pubescence and fine punctures. Prosternum (Fig. 31-2C) trapezoidal, broader than length, lateral ridge slightly elevated, anterior margin straight. Legs thick. Pygidium with dense long pubescence.

**Aedeagus.** (Figs. 31-2D–F) Median lobe elongate, about 3.4 times as long as wide. Apex of median lobe slightly narrower than middle, acute at apex, moderately curved in lateral view; with several setae on each side of apex, densely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards below surface. Inner sac rather slender, cylindrical. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Female.** Body more robust than male, apical hollow in ventrite 5 deep and triangular. **Spermatheca** (Figs. 31-1C; 31-2G) falcate, 70°-angled bending nearly halfway, slightly acute at apex, from 1/3 of apex become narrower, duct weakly sclerotized, irregularly coiled 3–4 times. **Rectal sclerites** (Fig. 31-1D) weakly sclerotized, closely connected between two rectangular sclerites on ventral side.

**Distribution.** China (Hubei, Sichuan, Yunnan, Gansu, Shaanxi); VietnamThis species is also found in Henan, Fujian and Xinjiang, China (M. Schöller, *pers. com.*)

### Adiscus yunnanus Medvedev, 2008

(Figs 32-1; 32-2)

Adiscus yunnanus Medvedev, 2008: 205 (type locality: Yunnan; type deposited: NHMB).

**Material examined. China: Holotype:** 1 male, "Yunnan: Lijiang / 2600 m / 30. VI–2. VII. 1960 / coll. L. M. Bocak leg. // HOLOTYPE". (ZIN).

**Redescription. Measurements. Male.** BL = 2.91 mm, BW = 1.96 mm, HL = 1.05 mm, HW = 0.95 mm, PL = 1.01 mm, PW = 2.05 mm,  $PA = 110^{\circ}$ , EL = 2.20 mm,  $EA = 120^{\circ}$ , AL = 0.97 mm, AW = 0.33 mm.

Body (Fig. 32-A) ovate, dorsum mostly yellowish brown. Head black; antennomeres 1–4 piceous, 5–11 brown; frons and vertex black. Pronotum fulvous, basal margin black. Elytra pale fulvous, basal region and suture black; with four large black spots; two near the suture, anterior dumbell-shaped, posterior oblong; two laterally, anterior oblong, along the anterior margin, posterior oblong, and larger.

Head shiny; densely punctate, partly strigose on frons. Eyes reniform; superior eye-lobes separated and wider than antennal insertions. Anterior margin of clypeus straight. Antennae short, reaching base of pronotum, scape swollen, clubbed, pedicel minute, about as half as the scape, apical 6 segments broad, about 1.6 times as long as wide.

Pronotum (Fig. 32-A) convex and shiny, base much broader than apex, basal width about 2.0 times of pronotal length. Anterior margin nearly straight. Posterior margin sinuate with fine serration, and produced into an obtuse angle of about 110° at middle. Disc evenly convex, impunctate.

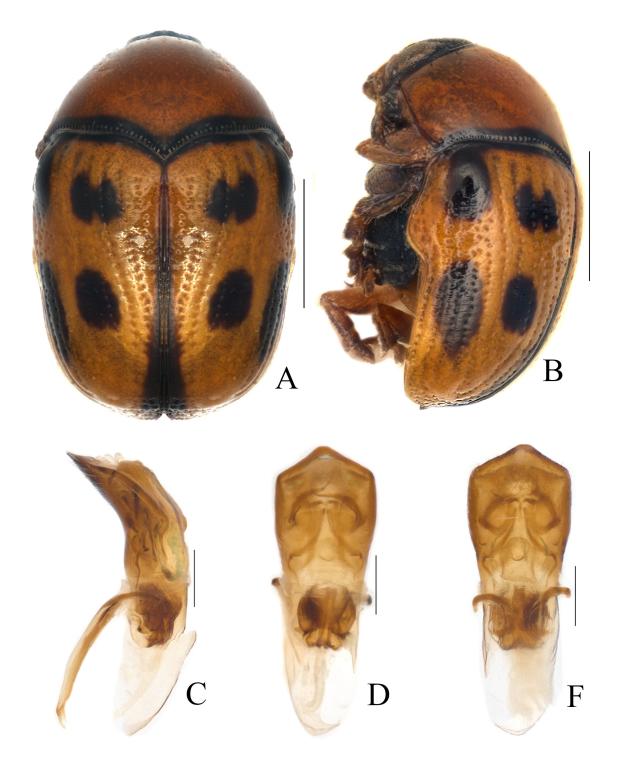
Elytra (Fig. 32-A) as broad as long, humeri slightly prominent. Disc finely punctate, with 11 regular striae; intervals flat, except two outermost, with scattered minute punctures and microscopically transverse striation. Lateral margins distinctly expanded ventrally with rounded lobe at basal 1/4 of elytron, with both lobe sides forming angle of 120°, epipleura weak, obliquely placed and visible in lateral view.

Venter clothed with pubescence. Prosternum trapezoidal, lateral ridge sharply and arcuately elevated, posterior margin nearly straight. Mesoventrite broad, twice as wide as long. The first segment of fore and mid tarsi broadened in male. Pygidium with dense punctures.

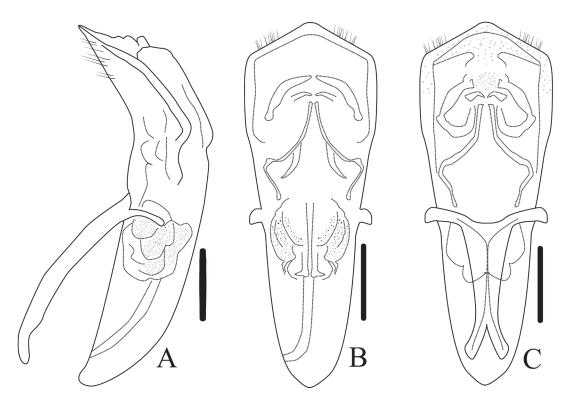
**Aedeagus.** (Figs. 32-1C–D; 32-2C–D) Median lobe elongate, about 2.8 times as long as wide, nearly parallel-sided. Apex of median lobe slightly narrower than middle, acute at apex, moderately curved in lateral view; with several setae on each side of apex, sparsely punctate on ventral side of distal part. Median orifice with median sclerite bending inwards above surface. Inner sac rather round, dilated at apex nearly round, but bilobed and acute at base, base slightly narrow. Tegmen Y-shaped, weakly sclerotized, almost translucent.

**Distribution.** China (Yunnan).

**Diagnosis.** This species is similar to *A. occipitalis*, but the latter has fine and dense punctures on pronotum, its elytra with epipleura hardly visible in lateral view, and venter is yellowish brown.



**FIGURE 32-1.** *Adiscus yunnanus* Medvedev, 2008, holotype: A. habitus; B. lateral view of habitus; C. lateral view of aedeagus; D. dorsal view of aedeagus; E. ventral view of aedeagus. (Scale bars: A–B = 1.0 mm, C–E = 0.2 mm).



**FIGURE 32-2.** *Adiscus yunnanus* Medvedev, 2008: A. lateral view of aedeagus; B. dorsal view of aedeagus; C. ventral view of aedeagus. (Scale bars = 0.2 mm).

#### Acknowledgements

We want to thank the editors and three anonymous reviewers for their valuable suggestions to improve the manuscript. We thank Dr Matthias Schöller (Berlin, Germany) for information on the species. This study was supported in part by the Ministry of Ecology and Environment, China (No. 2019HJ2096001006), the Ministry of Science and Technology of China (2015FY210300), and the Second Tibetan Plateau Scientific Expedition and Research Program (STEP, No. 2019QZKK0501). Insect Diversity Observation Network of Sino BON (CAS, China) offered help for the field investigation. We also want to thank to Dr. Feng-yang Wang for help in preparing some line drawing plates.

### References

Baly, J.S. (1877) Descriptions of new genera and species of Cryptocephalidae. *The Transactions of the Entomological Society of London* 1877: 36.

Bezděk, J. (2012) Taxonomic and faunistic notes on Oriental and Palaearctic Galerucinae and Cryptocephalinae (Coleoptera: Chrysomelidae). *Genus (Wrocław)*, 23(3), 375–418.

Bezděk, J. (2020) Review of the genus-level names proposed by Johannes Gistel in Chrysomelidae (Coleoptera). *Acta Entomologica Musei Nationalis Pragae*, 60(1), 173–188.

Chapuis, F. (1874) Famille des Phytophages. *In:* Lacordaire, T. & Chapuis, F. (Eds.), *Histoire naturelle des Insectes. Genera des Coléoptères, ou exposé méthodique et critique de tous les genres proposés jusqu'ici dans cet ordre d'insectes. Tome dixieme.* Paris, Roret, IV + 455 pp.

Chen, S.H. (1941) New Leaf beetles from China. Sinensia, 12, 189–198.

Chen, S.H. & Pu, F.J. (1980) New species of Cryptocephalinae beetles from Yunnan and Fujian (Coleoptera: Eumolpidae). *Entomotaxonomia*, 2, 109–115.

Chûjô, M. (1938) H. Sauter's Formosa-collections: Subfamily Cryptocephalinae. (Coleoptera-Chrysomelidae III). *Arbeiten über Morphologische und Taxonomische Entomologie*, 5, 294.

Chûjô, M. (1954). A taxonomic study on the Chrysomelidae (Insecta-Coleoptera) from Formosa. Part VII Subfamily Cryptocephalinae. *Quarterly Journal of the Taiwan Museum*, 7, 143–166.

- Gistel, J.N.F.X. (1857a) Achthundert und zwanzig neue oder unbeschriebene wirbellose Thiere. Vacuna, 2, 513-606.
- Gistel, J.N.F.X. (1857b) Achthundert und zwanzig neue oder unbeschriebene wirbellose Thiere. *Verlag der Schorner'schen Buchhandlung, Straubing*, 92 pp. [separatum from *Vacuna* with different pagination].
- Gressitt, J.L. (1942) Plant-beetles from south and west China. III. Clytrinae, Cryptocephalinae and Chlamydinae. *Lingnan Science Journal*, 20, 325–334.
- Gressitt, J.L. & Kimoto, S. (1961) The Chrysomelidae (Coleopt.) of China and Korea, part 1. *Pacific insects Monograph*, 1, 114–119.
- Jacoby, M. (1890) Descriptions of new species of *phytophagous* Coleoptera received by Mr. J. H. Leech, from Chang-Yang, China. *The Entomologist*, 23, 84–89, 2 pls.
- Jacoby, M. (1908) *The Fauna of British India, including Ceylon and Burma. Coleoptera, Chrysomelidae. Vol. 1.* Taylor and Francis, London 534 pp., 2 pls.
- Kimoto, S. (1964) The Chrysomelidae of Japan and the Ryukyu Islands. I–III. *Journal of the Faculty of Agriculture, Kyushu University (Fukuoka)*, 13, 141–142.
- Kimoto, S. (1969) Notes on the Chrysomelidae from Taiwan II. Esakia, 7, 1–5.
- Kimoto, S. & Gressitt, J.L. (1981) Chrysomelidae (Coleoptera) of Thailand, Cambodia, Laos and Vietnam. 2. Clytrinae, Cryptocephalinae and Chlamisinae, Lamprosomatinae and Chrysomelinae. *Pacific Insects*, 23 (4), 323–326.
- Kimoto, S. (1987) Descriptions of two new species of Chrysomelidae (Coleoptera) collected by the Nagoya University Scientific Expedition to Taiwan in 1986. *Entomological Review of Japan*, 42, 95–98.
- Kimoto, S. (1996) Notes on the Chrysomelidae from Taiwan China XIII. Entomological Review of Japan, 51 (1), 27-51.
- Kimoto, S. & Chu, Y.I. (1996) Systematic catalog of Chrysomelidae of Taiwan (Insecta: Coleoptera). *Bulletin of the Institute of Comparative Studies of International Cultures and Societies*, 16, 1–152.
- Kollar, V. & Redtenbacher, L. (1844) Aufzählung und Beschreibung der von Freiherrn Carl von Huegel auf seiner Reise durch Kaschmir und das Himalayagebirge gesammelten Insecten, pp. 393–564. *In*: Hügel, K.F. von (Ed.), *Kaschmir und das Reich der Siek. Vierter Band. Zweite Abtheilung. Stuttgart: Hallbergischer Verlag, 586 pp.*
- Löbl, I. & Smetana, A. (2013) Catalogue of Palaearctic Coleoptera. Volume 8. Curculionoidea II. E.J. Brill, Leiden, 700 pp.
- Medvedev, L.N. (2008) To the knowledge of the genus *Adiscus* Gistel, 1857 (Coleoptera: Chrysomelidae: Cryptocephalinae). *Russian Entomological Journal*, 17, 193–205.
- Medvedev, L.N. (1992) New and interesting species of Chrysomelidae (Coleoptera) from South Asia. *Entomologica Basiliensia*, 15, 379–385.
- Monrós, F. & Bechyně, J. (1956) Über einige verkannte Chrysomeliden-namen. *Entomologischen Arbeiten aus dem Museum G. Frey*, 7, 1118–1123.
- Pic, M. (1922a) Nouveautés diverses. Mélanges Exotico-Entomologiques, 35, 1–32.
- Pic, M. (1922b) Nouveautés diverses. Mélanges Exotico-Entomologiques, 36, 1-32.
- Pic, M. (1922c) Nouveautés diverses. Mélanges Exotico-Entomologiques, 37, 1–32.
- Pic, M. (1922d) Notes diverses, descriptions et diagnoses (Suite). L'Échange, Revue Linnéenne, 38, 17–19.
- Pic, M. (1926a) Nouveautés diverses. Mélanges Exotico-Entomologiques, 45, 1–32.
- Pic, M. (1926b) Nouveautés diverses. Mélanges Exotico-Entomologiques, 47, 1–32.
- Pic, M. (1932a) Quatre nouveaux coléoptères de Chine et du Tonkin. Bulletin de la Société Entomologique de France, 37, 206–208.
- Pic, M. (1932b) Nouveautés diverses. Mélanges Exotico-Entomologiques, 59, 10-36.
- Pic, M. (1932c) Nouveautés diverses. Mélanges Exotico-Entomologiques, 60, 1–36.
- Pic, M. (1935) Nouveautés diverses. Mélanges Exotico-Entomologiques, 66, 1–36.
- Pic, M. (1955) Coléoptères Nouveaux de Chine. Bulletin de la Société Entomologique de Mulhouse, 1955, 21–23.
- Schöller, M. (2008) Comparative morphology of sclerites used by Camptosomatan leaf beetles for formation of the extrachorion (Chrysomelidae: Cryptocephalinae, Lamprosomatinae). *In*: Jolivet, P., Santiago-Blay, J. & Schmitt, M. (Eds.), *Research on Chrysomelidae, Volume 1*. Brill, Leiden, The Netherlands, 432 pp.
- Schöller, M., Löbl, L. & Lopatin, I.K. (2010) Chrysomelidae: Cryptocephalinae: remaining Cryptocephalini. *In*: Löbl, I. & Smetana, A. (Eds.), *Catalogue of Palaearctic Coleoptera*, *Vol. 6. Chrysomeloidea*. Stenstrup: Apollo Books. pp. 607–608.
- Suffrian, E. (1860) Berichtigtes Verzeichniss der bis jetzt bekannt gewordenen Asiatischen Cryptocephalen. *Linnaea Entomologica*, 14, 1–3.
- Takizawa, H. (1978) Notes on Taiwanese chrysomelid-beetles 2. Kontyû, 46: 596–602.
- Tan, J.J., Yu, P.Y., Li, H.X., Wang, S.Y. & Jiang S.Q. (1980) Economic Insect Fauna of China. Fasc. 18. Science Press, Beijing, 213pp.
- Tan, J.J. (1988) Coleoptera: Eumolpidae. Insects of Mt. Namjagbarwa region of Xizang, 1988, 309–333.
- Tan, J.J. (1992a) Coleoptera: Eumolpidae. Iconography of forest insects in Hunan, China, 590-607.
- Tan, J.J. (1992b) Coleoptera: Eumolpidae. Insects of the Hengduan Mountains region. Vol 1. Science Press, 865pp.
- Weise, J. (1903) Verzeichniss der von Dr. Horn auf Ceylon gesammelten Chrysomeliden I. Eupoda et Camptosomata. *Deutsche Entomologische Zeitschrift*, 1903, 17–34.
- Weise, J. (1904) Über bekannte und neue Chrysomeliden. *Archiv für Naturgeschichte*, 70, 157–178. https://doi.org/10.1007/BF01941458
- Weise, J. (1912) Beitrag zur Kenntnis der Chrysomeliden. Archiv für Naturgeschichte, 78, 76–98.
- Weise, J. (1922) Chrysomeliden der indo-malayischen Region. Tijdschrift voor Entomologie, 65, 39-130.