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## A New Genus *Pseudopelthydrus* gen. n. from Hainan Island, China (Coleoptera : Hydrophilidae : Hydrophilinae) 【Research report】

中國海南島產之牙蟲(牙甲) - 新屬 - 偽東方牙蟲(牙甲)屬(鞘翅目：牙蟲(牙甲)科) 【研究報告】

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### Abstract

*Pseudopelthydrus* gen. n. and *P. longipalpus* sp. n. from Hainan Island of China are described. The new genus belongs to the subfamily Hydrophilinae (tribe Laccobiini). It is closely related to *Pelthydrus* d'Orchymont but can be separable by the head, pronotum and elytra with more distinct systematic punctures; prosternum without fine carina; mesofemora with hydropubesence except the extreme portion; epipleuron almost as wide as pseudepipleuron anteriorly, the former reaching 1st abdominal sternite, the latter thinning posteriorly and almost reaching apex.

### 摘要

本文記述海南島產牙蟲(牙甲)科·牙蟲(牙甲)亞科·長節牙蟲(牙甲)族 - 新屬 - 偽東方牙蟲(牙甲) *Pseudopelthydrus* gen. n. 及 - 新種 - 長須偽東方牙蟲(牙甲) *P. longipalpus* sp. n.。新屬與東方牙蟲(牙甲)屬 *Pelthydrus* 相似，但新屬頭、前胸背板及鞘翅具有明顯的系統刻點(systematic punctures)；前胸腹板無細隆脊；中足腿節被絨毛，僅端部光滑；鞘翅緣折于前部與偽緣折幾乎等寬，緣折後端到達第一腹節，偽緣折後端變細，幾乎到達鞘翅端部可區別。

**Key words:** Coleoptera, Hydrophilidae, Laccobiini, *Pseudopelthydrus* gen. n., China.

**關鍵詞:** 牙蟲(牙甲)科、長節牙蟲(牙甲)族、偽東方牙蟲(牙甲)屬、新屬、中國

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# A New Genus *Pseudopelthydrus* gen. n. from Hainan Island, China (Coleoptera: Hydrophilidae: Hydrophilinae)

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## ABSTRACT

*Pseudopelthydrus* gen. n. and *P. longipalpus* sp. n. from Hainan Island of China are described. The new genus belongs to the subfamily Hydrophilinae (tribe Laccobiini). It is closely related to *Pelthydrus* d'Orchymont but can be separable by the head, pronotum and elytra with more distinct systematic punctures; prosternum without fine carina; mesofemora with hydropubescence except the extreme portion; epipleuron almost as wide as pseudepipleuron anteriorly, the former reaching 1st abdominal sternite, the latter thinning posteriorly and almost reaching apex.

**Key words:** Coleoptera, Hydrophilidae, Laccobiini, *Pseudopelthydrus* gen. n., China.

## Introduction

Analysis of several collecting trips in recent years continues to reveal previously unknown hydrophilid genera in Oriental and Australian Regions (eg. Hansen, 1989, 1990; Bameul, 1993). d'Orchymont (1928) and Gentili (1995) only recorded 2 Chinese genera of the tribe Laccobiini, *Laccobius* and *Oocyclus*. Hansen and Schödle (1997) reported a new genus *Hydrophilomima*, and 1 species was found in Yunnan. When I studied material from Hainan Island I found a new genus *Pseudopelthydrus*. Therefore, 4 genera of the tribe Laccobiini are found in China.

The material used for this study is deposited in the Collection of Research Institute of Entomology, Zhongshan Uni-

versity. All specimens were collected by Mr. Zhihe Huang.

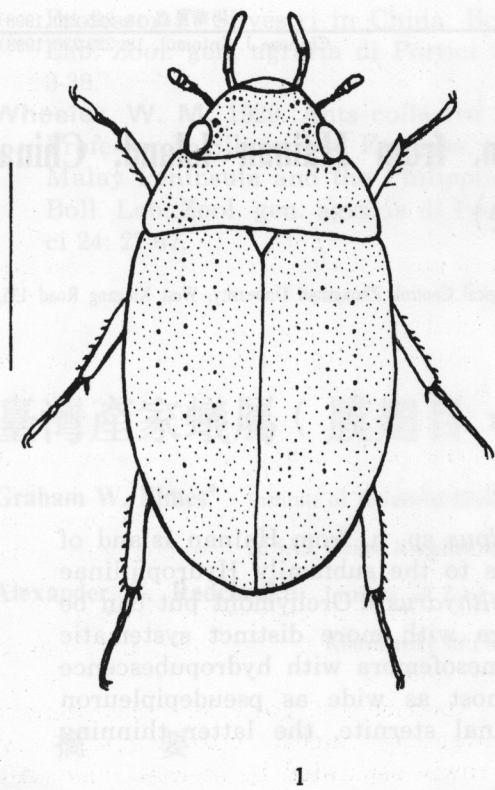
## *Pseudopelthydrus* gen. n.

Type species: *Pseudopelthydrus longipalpus* sp. n.

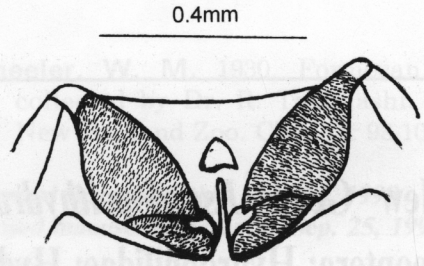
Etymology: The generic name is a combination of Greek "pseudes", false, and "Pelthydrus", a genus of Laccobiini. The gender is masculine.

Description: Body elongate, widest behind pronotal-elytral junction (Fig. 1), rather convex.

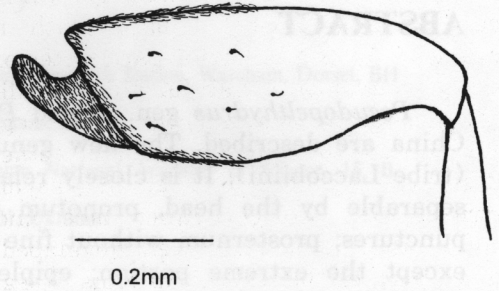
Labrum well sclerotized and well pigmented, fully visible in front of clypeus and deflexed, emarginate anteriorly. Frontoclypeal suture distinct. Clypeus forming a shelf above antennal base, reaching almost to outer edge of eyes,



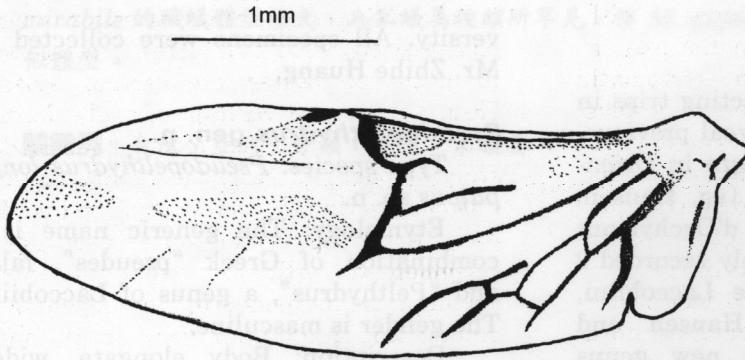
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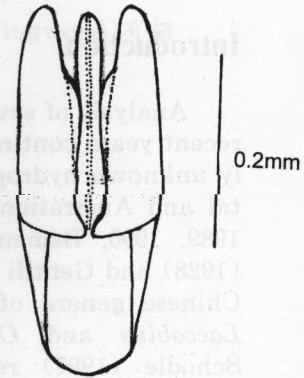
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Figs. 1-5. 1: Habitus of *Pseudopelthydrus longipalpus*; 2: Mesosternum and middle femora; 3: Hind femur; 4: Hind wing; 5: Aedeagus

slightly concave; systematic punctures of clypeus more or less distinct; anterior corner rounded. Eyes of moderate size, separated by about 6x width of 1 eye, moderately protruding from outline of head; anterior margin very slightly emarginate. Systematic punctures of frons distinct. Maxillary palpi almost 2/3x as long as width of head; 2nd segment a little thicker than following segments, apical portion conspicuously thicker than base; 3rd segment shorter than 2nd; 4th somewhat longer than 3rd, almost symmetrical (with slightly straighter inner face). Mentum almost square, with a large depression in anterior part; anterior margin subtruncate. Labial palpi small, slightly shorter than mentum; 2nd segment without subapical wreath of setae; 3rd segment about as long as 2nd, asymmetrical with straight inner face and convex outer face. Gula well developed, almost parallel laterally. Antenna 8-segmented, almost 1/2x as long as width of head; 1st segment moderately long; 2nd about 1/2x as long as 1st; 3rd-8th forming a compact, pubescent club, which is slightly more than 2x as long as wide.

Pronotum widest at base, narrowed anteriorly, surface evenly convex, without transverse series of punctures at posterior margin but with systematic punctures. Prosternum rather well developed, almost planed, not elevated medially and without longitudinal carina, without antennal grooves; prosternal process pointed, reaching midlength of procoxae. Procoxae not closed posteriorly.

Mesosternum not fused to mesepisterna, broadly reaching anterior mesothoracic margin; gradually raised posteromedian, not arrowhead-shaped; behind elevation with a lower longitudinal carina which reaches posterior margin of mesotrochanter (Fig. 2); mesosternum without anteromedian groove for reception of prosternal process.

Metasternum rather large, with rather raised middle portion, without fine

median carina. Metasternum with fine and dense pubescence except on postomedian glabrous portion; no femoral lines. Metepisterna about 5x as long as wide, with parallel sides.

Abdomen with 5 ventrites of subequal length, slightly convex; all sternites rather dull and with uniform, fine and dense pubescence; 1st ventrite with sharp median carina; 5th sternite simply rounded, not emarginate.

Elytra entirely without distinct striae or series of punctures, margined throughout, with systematic punctures, at least on basal half. Epipleura well developed nearly horizontal, relatively wide anteriorly, narrowed posteriorly, reaching 1st abdominal sternite; pseudepipleura oblique almost as wide as epipleura anteriorly, narrowed posteriorly to apex. Scutellum of moderate size, triangular, longer than wide.

Anterior and posterior coxae almost contiguous; middle coxae moderately narrowly separated by sternal ridge. All trochanters with dense pubescence. Anterior and middle femora with dense pubescence except apical portion (Fig. 3); hind femora with pubescence on 1/2 basal portion along anterior and posterior margins, but with only a few pubescences in large punctures on ventral surface (Fig. 4). Femora without sharply defined tibial grooves on inner face. Tibiae moderately slender, as long as femora, slightly flattened, with moderately long and moderately dense spines on outer face. Tarsi 5-segmented, with very fine and inconspicuous setae beneath; 1st segment of middle and hind tarsi very short, much shorter than the very long 2nd segment; claws moderately large and moderately curved.

Hind wing (Fig. 5) almost 1.7x as long as elytra; radial cross vein r4 from about middle radial cell; medial spur rising from apex of medial loop: basal cell elongate, wedge cell present, only a little shorter than basal cell; before radial cell

with a fine vein; anal lobe well developed, demarcated from remainder of wing by a sharp excision at posterior wing margin.

Discussion: This genus has diagnostic features of Laccobiini as given by Hansen (1991): Head, pronotum and elytra with distinct systematic punctures, at least detectable; pseuepipleura almost as wide as epipleura anteriorly; posterior margin of 5th ventrite simply rounded, without apical emargination. But the middle femora with dense pubescence except apical portion, hind femora with pubescence on basal 1/2 along anterior and posterior margins. These features show that this genus perhaps is related to tribe Anacaeni. It is similar to *Pelthydrus* d'Orchymont in having relatively long maxillary palpi, mesosternum rather broadly reaching anterior mesothoracic margin and femora without distinct tibial grooves. It differs from *Pelthydrus* by pubescent middle and hind femora; with distinct systematic punctures on head, pronotum and elytra; epipleura not delimited from pseudepipleura by a fine ridge appearing as a series of small arcs; prosternum almost planed and without carina. The new genus can be separated from *Hydrophilomima* Hansen & Schödle (1997) by prosternum planed and without longitudinal carina; metasternum not raised to form a median carina; middle femora with dense pubescence except apices (only with few hairs at extreme base in *Hydrophilomima*); hind femora with pubescence along anterior and posterior margins at about 1/2 basal portion. *Pseudopelthydrus* differs from *Laccobius* Erichson by having only 5 sternites; epipleura not delimited from the pseuepipleura by a fine ridge appearing as a series of small arcs and normal (not enlarged) posterior trochanters, and the pubescent middle and hind femora. *Pseudopelthydrus* can easily be distinguished from the genera *Scolipsis* d'Orchymont and *Tritonus* Mulsant by the absence of sutural stria on the elytra, by

having 8-segmented antennae, by entirely pubescent ventrites, and by pubescent middle and hind femora. The new genus differs from *Beralitra* d'Orchymont and *Oocyclus* Sharp by non-carinate prosternum, by pubescent middle and hind femora, and by the carinate 1st ventrite.

Therefore, the key to the tribe Laccobiini (Oocyclusini) by Hansen (1991) should be modified as follows:

1. Head, pronotum and elytra without or only with fine and inconspicuous systematic punctures; epipleura delimited from pseudepipleura by a fine ridge appearing as a series of small arcs; 1st ventrite with sharp carina.....2
- Head, pronotum, and elytra with distinct systematic punctures, if systematic punctures inconspicuous, then 1st ventrite not carinate; epipleura not delimited from pseudepipleura by a fine ridge appearing as a series of small arcs .....4
2. Abdomen with 6 distinct ventrites; trochanters of posterior legs very large, not completely abutted to femora but with bluntly projecting apex; hind tibiae curved (except in the subgenus *Notoberosus*); maxillary palpi less than 1/2x as long as width of head ..... *Laccobius*
- Abdomen with 5 visible ventrites; trochanters of posterior legs of moderate size, not freely projecting apically, hind tibiae straight; maxillary palpi more than 2/3x as long as width of head ....3
3. Maxillary palpi 2/3x as long as width of head; meso- and metasternal elevations fused to a longitudinal carina; femora with well-developed tibial grooves on inner face, tarsi without long swimming hairs.....*Hydrophilomima*
- Maxillary palpi as long as width of head; elevations of meso- and metasternum not fused to a longitudinal carina; femora without distinct tibial groove on inner face, tarsi with long swimming hairs.....*Pelthydrus*
4. Elytra with sharp sutural striae in

- about posterior half. The 2nd-5th ventrite with large, well-defined, glabrous and almost impunctate area medially.....5
- Elytra without distinct sutural striae, but sometimes with the suture a little elevated posteriorly; ventrites uniformly pubescent and punctate.....6
5. Posterior corners of pronotum angulate, not produced into a long spine; pro- and mesosternum without spine; eyes barely oblique in dorsal view..... *Tritonus*
- Posterior corners of pronotum produced posteriorly into a long acute spine; pro- and mesosternum with some strong spines medially; eyes oblique in dorsal view..... *Scoliopsis*
6. Maxillary palpi 2/3x as long as width of head; prosternum almost planed without carina medially; middle femora with dense pubescence except on apical portion, hind femora with pubescence along anterior and posterior margins on 1/2 basal parts; femora without defined tibial grooves.... *Pseudopelthydrus*
- Maxillary palpi only 1/3x as long as width of head, prosternum bulging medially and with a longitudinal carina; middle and hind femora glabrous; femora with sharply defined tibial grooves.....7
7. Elytra a little explanate towards margins, sutural distinctly raised posteriorly; body weakly convex..... *Beralitra*
- Elytra not explanate towards margins, sutural not raised; body often more convex..... *Oocyclus*

***Pseudopelthydrus longipalpus* sp. n.**  
(Figs. 1-5)

Type locality: Tianchi of Jianfengling, Hainan Pro., China.

Type material: Holotype male, CHINA: HAINAN: Jianfengling, 11 Nov. 1983. Paratypes (2 males + 3 females), same locality as holotype.

Description: Length 2.0-2.2 mm; Piceous brown to black. Head, pronotum and elytra yellowish towards lateral margins. Fron sometimes only somewhat

darker than preocular pale spots. Legs reddish, maxillary palpi and antenna yellow, the latter with brownish club. Head, pronotum, and elytra shiny, without microsculpture, very finely and sparsely, rather uniformly punctate; ventral surface dull and with dense pubescence except glabrous area of metasternum. Mentum yellow, with indistinct punctures. Prosternum with a transverse shallow furrow along anterior margin, sometimes furrow indistinct. Hind femora with a few large punctures on basal half. All tibiae with spines on inner and outer faces.

Aedeagus stout. Penis slender and slightly thinned apically. Paramere as long as penis but thicker than penis, abruptly thickened to base on apical 1/3, on inner face slightly narrowed towards apex, evenly rounded apically (Fig. 6).

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## 中國海南島產之牙蟲（牙甲）一新屬—偽東方牙蟲 （牙甲）屬（鞘翅目：牙蟲（牙甲）科）

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### 摘 要

本文記述海南島產牙蟲（牙甲）科，牙蟲（牙甲）亞科，長節牙蟲（牙甲）族一新屬—偽東方牙蟲（牙甲）*Pseudopelthydrus* gen. n. 及一新種—長須偽東方牙蟲（牙甲）*P. longipalpus* sp. n.。新屬與東方牙蟲（牙甲）屬 *Pelthydrus* 相似，但新屬頭、前胸背板及鞘翅具有明顯的系統刻點(systematic punctures)；前胸腹板無細隆脊；中足腿節被絨毛，僅端部光滑；鞘翅緣折于前部與偽緣折幾乎等寬，緣折後端到達第一腹節，偽緣折後端變細，幾乎到達鞘翅端部可區別。

**關鍵詞：**牙蟲（牙甲）科、長節牙蟲（牙甲）族、偽東方牙蟲（牙甲）屬、新屬、中國。