

## Two New Species of *Homoeogenus* Waterhouse (Coleoptera: Psephenidae), with Additional Distribution Records on Some Chinese Species

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**Chi-Feng Lee and Ping-Shih Yang (1999)** Two new species of *Homoeogenus* Waterhouse (Coleoptera: Psephenidae), with additional distribution records on some Chinese species. *Zoological Studies*, 38(1): 7-9. Two new species of Psephenidae (Insecta, Coleoptera) are described: *Homoeogenus maai* sp. n. (China: Fujian) and *H. laosensis* sp. n. (Laos). Additional distribution data are recorded for *H. chinensis* Lee and Yang, *H. elongatus* Lee and Yang, and *H. laurae* Lee and Yang. A key to males of all but *Homoeogenus punctatum* Waterhouse is provided.

**Key words:** Coleoptera, Psephenidae, *Homoeogenus*, New species, Distribution data.

The genus *Homoeogenus* comprises 5 species (Lee and Jäch 1995) which are restricted to China and Taiwan. Examination of specimens deposited in the B. P. Bishop Museum, Honolulu (BPBM) and the Naturhistorisches Museum, Basel (NMB) has revealed 2 new species and additional specimens of *H. elongatus*, *H. chinensis*, and *H. laurae*. Collection records also indicate that the distribution of *Homoeogenus* includes Southeast Asia (Laos). It is very possible that there are species remaining to be discovered. The abbreviations used herein follow those of Lee and Yang (1993).

### *Homoeogenus chinensis* Lee and Yang

*Homoeogenus chinensis* Lee and Yang 1993: 352.

**Materials Examined:** 3 ♂♂ + 2 ♀♀ (NMB): "CHINA/Sichuan 103.20el/29.30nw Mt. Emei 500-1200 m 4.-18.V.1989 S. & J. Kolibac leg. \ Freiwilliger Museumsverein Basel 1989".

### *Homoeogenus elongatus* Lee and Yang

*Homoeogenus elongatus* Lee and Yang 1995: 355.

**Materials Examined:** 2 ♀ + 1 ♀ (NMB): "YUNNAN 1800-2500 m 25.10N 100.21E WEISHAN Mt. 22-25/6.92 Vit Kuban leg."; 1 ♂ (NMB), same data as previous, but with "David Kral leg."; 1 ♂ + 1 ♀ (NMB): "YUNNAN 1800-2000 m 25.04N 101.55E YIPINGLANG 17-20.6. Vit Kuban leg. 1994"; 1 ♂ (NMB): "YUNNAN 2500-2700 m 25.58N 100.21E JIZU SHAN 6-10.7. Vit Kuban leg. 1994".

### *Homoeogenus laosensis* sp. n.

**Type Materials:** Holotype ♂: "LAOS: Vientian Prov. Ban Van Eue 15.II.1966 \ Native Collector BISHOP MUS.". Paratypes: 1 ♀, same data as holotype as holotype, but with different date: 3 ♂♂ + 8 ♀♀ (NTU, BPBM): "30.VI.1966"; 2 ♂♂ + 3 ♀♀: "15.VIII.1966"; 4 ♂♂: "30.VI.1967"; 1 ♂: "15.VIII.1967"; 1 ♂: "15.X.1967".

**Male:** Total length 1.8-2.0 mm, width 1.3-1.4 mm. Coloration dark brown except head darker and prosternum paler. Prosternal process slender, apex obtuse. Apex of mesosternal process almost straight. Antenna (Fig. 5) slightly pectinate. LP/WP

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= 2.4-2.7. LE/WE = 1.1-1.2. WP/WE = 0.8.

**Aedeagus** (Fig. 3): Apical half of penis very slender; penis abruptly expanded near middle, then subparallel toward base. Parameres elongate; apices partly recurved, narrowly rounded. Apices of basal piece very weakly recurved.

**Female:** Total length 2.2-2.3 mm, width 1.5-1.6 mm. Similar to male except antenna serrate. Prosternal and mesosternal processes shorter than those of male; apex of mesosternal process emarginate. Maxillary palpus (Fig. 1) slender, apex truncate obliquely, relative lengths of segments 2-4 about 1:0.4:0.8. Labial palpus (Fig. 2) short, segment 2 very slender, terminal segment dilated, apex truncate obliquely, dilated outside, relative lengths of segment 2-3 about 1 : 1.1. Antenna (Fig. 4) serrate from segments 3 to 10; segment 3 longest, very weakly serrate; segments 4-10 similar. LP/WE = 2.6-2.7. LE/WE = 1.2. WP/WE = 0.7-0.8.

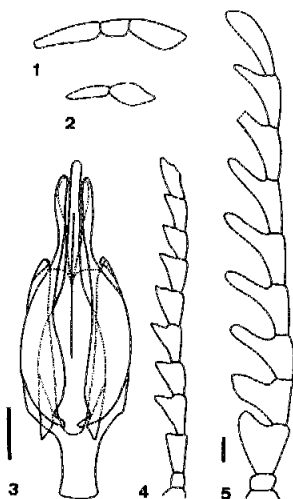
**Diagnosis:** It is very close to *H. elongatus*, but differs by its recurved apices of parameres and the reduced, weakly recurved apices of basal piece.

**Etymology:** This specific name refers to the type locality.

### *Homoeogenus laurae* Lee and Yang

*Homoeogenus laurae* Lee and Yang 1993: 353.

**Material Examined:** 2 ♂♂ + 1 ♀ (BPBM): "TAIWAN: Taipei 24.iii.1958 \ K.S. Lin Collector BISHOP"; 1 ♀ (BPBM): "Pei-tou N. Taiwan, K.S. LIN 2.iv.'58".



**Figs. 1-5.** *Homoeogenus laosensis*. 1) maxillary palpus; 2) labial palpus; 3) aedeagus, dorsal; 4) female antenna; 5) male antenna. Scale = 0.1 mm; figs. 1, 2, 3 large scale, 4 and 5 small scale.

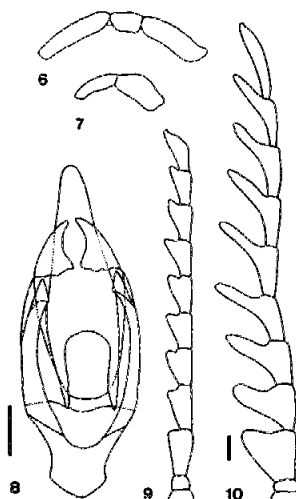
### *Homoeogenus maai* sp. n.

**Type Materials:** Holotype ♂ (BPBM): "Fukien, S. China Chungan Bohea Hills 24.IV.1940 T.C. Maa". Paratypes: 10 ♂♂ + 25 ♀♀ (NTU, BPBM) same data as holotype; 1 ♀, same data as holotype, but with "7.IV.1940"; 2 ♀♀, "14.IV.1940"; 1 ♂, same data as holotype, but with "22.IV.1940"; 1 ♀, same data as holotype, but with "30.IV.1940".

**Male:** Total length 2.7-3.1 mm, width 1.8-2.0 mm. Coloration blackish brown except prothorax, pro-coxae, and femora yellowish brown, antero-median portion of pronotum brown. Prosternal process very slender, apex not dilated. Apex of mesosternal process moderately emarginate. **Antenna** (Fig. 10) pectinate from segments 4 to 10; segment 3 subtriangular. LP/WP = 2.4-3.0. LE/WE = 1.3. WP/WE = 0.8.

**Aedeagus** (Fig. 8): Penis gradually widened from apex to middle, and then gradually narrowed toward base; apex broadly rounded. Apices of parameres reduced and recurved, forming subtriangular apical processes; mesal margins of apical processes moderately emarginate, basal margins with 2 rough teeth. Apices of basal pieces triangular, strongly sclerotized.

**Female:** Total length 2.9-3.0 mm, width 2.0-2.1 mm. Similar to male except antenna serrate. Maxillary palpus (Fig. 6) slender, apex extending outside, relative lengths of segments 2-4 about 1:0.4:0.9. Labial palpus (Fig. 7) short, segment 2 slender, terminal segment with outer margin arcu-



**Figs. 6-10.** *Homoeogenus maai*. 6) maxillary palpus; 7) labial palpus; 8) aedeagus, dorsal; 9) female antenna; 10) male antenna. Scale = 0.1 mm; figs. 6, 7, 8 large scale, 9 and 10 small scale.

ate, apex slightly emarginate, relative lengths of segments 2-3 about 1:1.1. Antenna (Fig. 9) serrate from segments 3 to 10, segment 3 longest but more weakly serrate; segment 4 longer than the following ones but weakly serrate; segments 5-10 similar. LP/WP = 2.6-3.1. LE/WE = 1.1-1.2. WP/WE = 0.7-0.8.

**Diagnosis:** It is very close to *H. obscurus* (Pic), but differs by its yellowish-brown pronotum, the toothed basal margins of apical processes of parameres, and the strongly sclerotized apices of basal piece.

**Etymology:** This species is dedicated to the late entomologist, Mr. T. C. Maa.

#### Key to males of *Homoeogenus* species

**Notes:** *Homoeogenus punctatum* Waterhouse was described from a single female without exact location data (Lee and Yang 1993, Lee and Jäch 1995). It is close in morphology to *H. elongatus*, *H. chinensis*, and *H. laurae*, as all share a dark brown coloration. But *H. laurae* is the most likely a synonym of *H. punctatum* as both species have an acute apex of the prosternum. However, since insects collected from Taiwan were labelled as "Formosa" or "Taiwan" and the type locality of *H. punctatum* was given as China, we think it is reasonable to conclude that they may not be synonymous due to apparent species allopatry. The question of synonymy will remain unresolved until males are discovered for *H. punctatum*. Until that time we regard *H. punctatum* as *incertae sedis*.

1. Apices of parameres elongate ..... 2.
- 1a. Apices of parameres short, mesally widened, ventrally holding penis ..... 3.
2. With 1 denticle on apex of each paramere; apices of basal piece well developed, armed with many teeth; Yunnan ..... *H. elongatus*

- 2a. Without denticles on apices of parameres; apices of basal piece reduced, slightly recurved; Laos ..... *H. laosensis*
3. Apices of basal piece recurved; Taiwan ..... *H. laurae*
- 3a. Apices of basal piece not recurved ..... 4.
4. Pronotum paler than elytra, apices of basal piece strongly sclerotized (dark brown); Fujian ..... *H. maai*
- 4a. Pronotum and elytra unicolorous, or pronotum darker than elytra; apices of basal piece normal (light brown or tan) ..... 5.
5. Latero-apical processes of apices of parameres rectangular; Shandong ..... *H. obscurus*
- 5a. Latero-apical processes of apices of parameres obtuse, Sichuan ..... *H. chinensis*

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#### REFERENCES

- Lee CF, MA Jäch. 1995. Psephenidae: 1. Check list of the Psephenidae of China (Coleoptera). In MA Jäch, L Ji, eds. Water Beetles of China. Vol. 1. Wien: Zoologisch-Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, pp. 349-354.
- Lee CF, PS Yang. 1993. A revision of the genus *Homoeogenus* Waterhouse with notes on the immature stages of *H. laurae* sp. n. (Coleoptera: Psephenidae: Eubriinae). Syst. Entomol. 18: 351-361.
- Lee CF, PS Yang. 1995. Psephenidae: 2. Notes on the genus *Homoeogenus* Waterhouse from China (Coleoptera). In MA Jäch, L Ji, eds. Water Beetles of China. Vol. 1. Wien: Zoologisch-Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, pp. 355-357.

## 點刻扁泥蟲屬（鞘翅目：扁泥蟲科）之二新種， 並附記一些中國產種類之採集記錄

李奇峰<sup>1</sup> 楊平世<sup>1</sup>

本文處理了美國夏威夷 B. P. Bishop 博物館及瑞士巴塞爾自然史博物館 (Naturhistorisches Museum, Basel) 所館藏的標本，共發現了兩新種：寮國點刻扁泥蟲 *Homoeogenus laosensis*、馬氏點刻扁泥蟲 *H. maai*；及三種已知種：雲南點刻扁泥蟲 *H. elongatus* Lee and Yang、四川點刻扁泥蟲 *H. chinensis* Lee and Yang 及臺灣大點刻扁泥蟲 *H. laurae* Lee and Yang 新的採集記錄。

**關鍵詞：**新種，點刻扁泥蟲屬，扁泥蟲科，鞘翅目，分布記錄。

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