

## Classification of the genus *Pterostichus* Bonelli from Korea (Coleoptera: Harpalidae)

### III. A new species of the subgenus *Phaenoraphis* Tschitschérine

#### 韓國産 길쭉먼지벌레屬의 분류 (딱정벌레목: 먼지벌레과) 3. *Phaenoraphis* 亞屬의 1 新種

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**ABSTRACT** The pterostichid ground beetles of the subgenus *Phaenoraphis* Tschitschérine from Korea are revised here. A new species, *Pterostichus peninsularis* sp. nov., is described. Thus, totally two species of the subgenus are known to Korean fauna. The identification key and distribution data for each species are provided.

**KEY WORDS** Systematics, Coleoptera, Harpalidae, *Pterostichus*, *Phaenoraphis*, Korea

**초 록** 한국산 길쭉먼지벌레속을 정리하던중 *Phaenoraphis* 아속에서 *Pterostichus peninsularis* sp. nov. 의 1 신종을 발견하였으므로 이에 기재 보고한다. 따라서 한국산은 모두 2종이 된다. 그리고 각 종에 대한 검색표 및 분포 기록 등을 작성하였다.

**검색어** 분류, 딱정벌레목, 먼지벌레과, 길쭉먼지벌레속, 한국

Most species of the genus *Pterostichus* are carnivorous because they have well developed mandibles, these are general predator of insects and invertebrates. Thus, this group can be used as natural enemies in biological control for plant feeding pests of agriculture and forests. They usually found on the trees, plants of all environment and under the leaves in forest etc.

Tschitschérine(1901) reported *Pterostichus acuspinus* from Odaesan (=Olgonsa), Korea, After that, Jedlicka (1962) treated subgenus *Phaenoraphis* in his monograph of Pterostichini. There are a few check lists concerned with this subgenus group in Korea, such as given by Kwon et Lee (1986) and Shin *et al.*, (1994). Most pterostichid species is larger in body size, but the subgenus *Phaenoraphis* Tschitschérine is small, usually less than 10 mm in overall length.

The characters of the subgenus *Phaenoraphis* are as follows: size of body small (usually<10 mm), proepisterna with strong punctures, elytral shoulders with

denticles, elytral intervals with 2 pores, elytral stria without punctures, last abdominal sternite with protuberance in male, 5th segment of tarsi without ventral seta, basal fovea of pronotum with 1 longitudinal linear, elytral stria regular, elytra with basal pores, tarsi without dorsal linear, mentum tooth bifurcate.

The new type materials treated herein will be deposited in the Systematic Entomology Laboratory, Department of Agricultural Biology, Kyungpook National University.

The following abbreviations are used here: L: length of body (from median clypeus to elytral apex); HL: length of head; HW: width of head; PA: apical width of pronotum; PW: largest width of pronotum; PB: basal width of pronotum; PLt: distance between apical angle and basal angle; PL: median length of pronotum; EL: length of elytra; EW: width of elytra.

Genus *Pterostichus* Bonelli, 1810 길쭉먼지벌레속

Subgenus *Phaenoraphis* Tschitschérine, 1901

*Phaenoraphis* Tschitschérine, 1901, Rev. Russ. d'Ent. 1: 250.

Type-species: *Platysma acuspinus* Tschitschérine, 1901 (Kor.)

Key to species of Korean *Phaenoraphis*

- 1. Head without punctures in dorsal view, convexity of eyes weak. Last abdominal sternite with distinct protuberance in male. Aedeagus strongly curved  
.....*P. acuspinus*
- 2. Head with weak punctures in dorsal view, convexity of eyes strong. Last abdominal sternite with very short or not distinct protuberance. Aedeagus weakly curved.....*P. peninsularis* sp. nov.

1. *Pterostichus (Phaenoraphis) acuspinus* (Tschitschérine, 1901) 가시길쪽먼지벌레  
*Platysma (Phaenoraphis) acuspina* Tschitschérine, 1901, Rev. Russ. d'Ent. 1(6): 248-250 (Corée)<sup>1</sup>.  
*Pterostichus acuspinus*: Kwon et Lee, 1986, Ins. Kor.

6: 29 (Korea).

*Pterostichus acuspinus*: Shin et al. 1994, Check List Ins. Kor. : 124 (Korea).

Material examined: 1♂, Sōraksan, GW, 12, VI, 1971; 1♂, ibid, 30, VI, 1984.

Locality: GW: Odaesan (=Olgonsa<sup>1</sup>), Sōraksan.

Distribution: Korea (Central).

2. *Pterostichus (Phaenoraphis) peninsularis* sp. nov. Park et Kwon 해동길쪽먼지벌레(신칭)

Generally dark brown; antennae, legs and palpi reddish brown. Body size small(8~10 mm).

Head smooth, frontal impressions straight, paralleled, not reaching the level of anterior supraorbital seta. Eyes medium-size. Tempora not convex. Hind supraorbital seta situated a little behind of posterior margin of eyes. Clypeus trapezium-shaped; apical margin of clypeus almost straight and with one setae on each side. Latro-apical margins of larbrum slightly emarginate to lateral part and bearing six setae along it. Mandible more or less long.

Pronotum weakly cordate, widest at about 1/3 from anterior angles (PW/HW 1.17, PW/PLt 0.93, PW/PL 1.

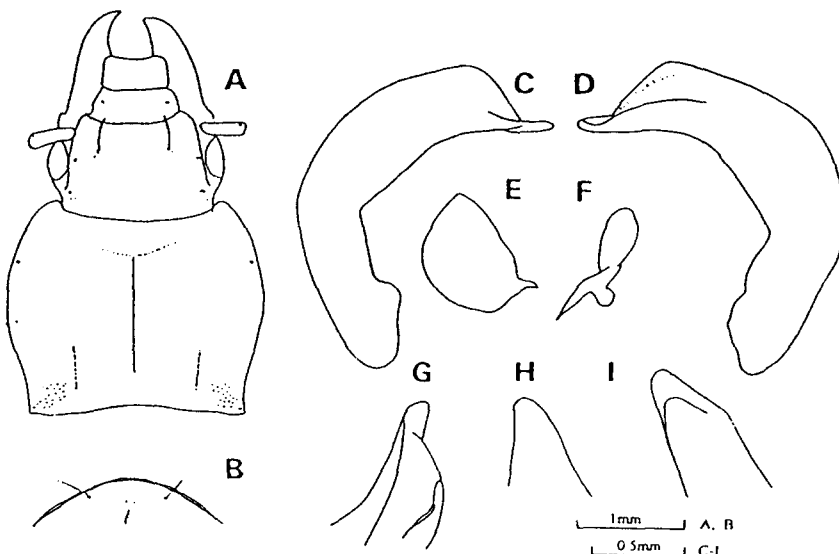


Fig. 1. *Pterostichus (Phaenoraphis) peninsularis* sp. nov. A: head and pronotum in dorsal view; B: last abdominal sternite in ventral view; C,D: median lobe in lateral view, male genitalia; E: left paramere, ditto; F: right paramere, ditto; G: apex in latero-dorsal view, ditto; H: apex in ventral view, ditto; I: apex in dorsal view, ditto.

00), weakly narrowed posterad (PW/PB 1.29, PW/PA 1.13). Lateral margins of pronotum slightly sinuated before basal apex. Hind angles almost rectangular, without denticles. Hind marginal width of pronotum shorter than forntal one (PB/PA 0.88). Basal fovea of pronotum with 1 longitudinal linear on each side, almost paralleled to median line, with strong punctures at outer plate of linear. Pronotal process without border at tip.

Elytra oval, (EL/EW 1.41, EL/PL 2.46, EW/PW 1.74), shoulders with strong tooth. Elytral Stria regular. Intervals between striae feebly convex; interval 3 with 2 setiferous discal pores in both side of elytron.

Ventral side of body with punctures in lateral view. Last abdominal sternite with weak or very small protuberance at the middle of sternite.

Legs short and slender; segment 5 of tarsi glabrous at ventral side.

Aedeagus of male genitalia simple, strongly curved, tubercular, without additional lobe. Lamella twisted to right side, rather long, round at tip. Left paramere wide and oblong. Right paramere long.

The body size are as follows(in mm): L 9.68, HL 0.98, HW 1.45, PA 1.50, PW 1.70, PB 1.32, PLt 1.81, PL 1.70, EL 4.18, EW 2.55.

Material examined: Holotype ♂, P'algongsan, GB,

Korea, 28, V, 1983, Y. J. Kwon; paratype 1♂, Chirisan, GN, Korea, 6, VI, 1983, Y. J. Kwon.

Distribution: Korea (South).

Remarks: This new species is very similar to *P. acuspinus*. But it is separated from the allied species by the morphological differences in the last sternite, of which the protuberance is obscure and smaller than that of *P. acuspinus*.

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