

DISCOVERY OF THE GENUS *GLENOSEMA* FROM THE
ORIENTAL REGION WITH DESCRIPTIONS OF THREE NEW
SPECIES (HYMENOPTERA: BETHYLIDAE)

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ABSTRACT

The genus *Glenosema* is newly recorded from the Oriental Region on the basis of three new species *G. siamensis*, *G. Chiangmaiensis*, and *G. doiinthanonensis*. A key to the Oriental species is also given.

Key Words: Hymenoptera, Bethylidae, *Glenosema*, new species, Thailand

RESUMEN

El género *Glenosema* es informado por primera vez de la Región Oriental sobre la base de tres nuevas especies, *G. siamensis*, *G. Chiangmaiensis* and *G. doiinthanonensis*. Se ofrece una clave para las especies orientales.

The genus *Glenosema* Kieffer, 1905, belonging to the subfamily Epyrinae of the family Bethyilidae, is represented by 9 species: 5 from the Palaearctic Region, 1 from the Australian, 2 from the Ethiopian and 1 from the Nearctic (Gordh & Móczár 1990). This genus is easily distinguished from the other genera in this family in having elongate mandibles with a row of denticles of inner margin in females.

In the course of my study on the bethylid fauna of Asia, I have examined several specimens of the genus from Thailand which undoubtedly represent new records from the Oriental Region. After careful examination, I recognize three new species, which are described and illustrated herein.

Measurements and their abbreviations used in this paper follow those in Evans (1964, 1978). All the types are deposited in the collection of the Provincial Museum of Alberta, Canada.

GENUS *GLENOSEMA* KIEFFER

Glenosema Kieffer. 1905. Ann. Soc. Sci. Bruxelles, 29: 100.

(Type species: *Glenosema nigra* Kieffer, designated by Kieffer, 1906).

Arysepyris Kieffer. 1905. Ann. Soc. Sci. Bruxelles, 29: 102.

(Type species: *Arysepyris merceti* Kieffer, monobasic). Synonymy by Berland, 1928.

This genus is characterized by 13-segmented antennae, a very short clypeus, absence of notauli and parapsidal furrows, and 7 apical teeth and a denticulate upper margin on the mandibles of females. The females of all previously described species of this genus have very minute wings which are, at most, only slightly longer than the length of tegulae. The only known males from this genus are of *G. crandalli* Evans, 1964, (Evans 1978). The females of the Oriental species are easily distinguished from the other 9 species by the presence of fully developed wings.

Key to females of *Glenosema* of the Oriental Region

1. Propodeal disc microreticulate in most part; mandibles yellow *siamensis* new species
- Propodeal disc rugose; mandibles blackish brown 2
- 2(1). Head wider than long; propodeal disc with 3 straight discal carinae; gaster black except posterior half of 1st and 2nd gastral tergites reddish brown; trochanters dark brown *chiangmaiensis* new species
- Head as long as wide; propodeal disc with 5 straight discal carinae; gaster castaneous; trochanters yellowish brown *dointhanonensis* new species

Glenosema siamensis Terayama, **new species**

(Figs. 1-5)

DESCRIPTION OF HOLOTYPE

Female. LH 0.45 mm; WH 0.44 mm; WF 0.28 mm; LT 0.75 mm; LFW 1.2 mm; total length 3.1 mm.

Color: Head and thorax black; abdomen castaneous; mandibles, antennae and legs yellow.

Head: Almost as long as wide, with convex posterior border in frontal view; frons and vertex smooth and shining with scattered small punctures. Mandibles elongate, with 7 apical teeth. Anterior border of clypeus transverse, with a minute median

tooth. First segments of antennae in a ratio of about 7:4.5:1.2:2:2 in length; scape strongly curved; 2nd segment $3.0 \times$ as long as wide; 3rd segment wider than long; 4th segment slightly longer than wide. Eyes 0.20 mm long, covered with short erect hairs; WF $1.40 \times$ HE. Ocelli small, forming an acute front angle; DAO 0.06 mm; OOL $2.4 \times$ WOT.

Thorax: Pro- and mesonota microreticulate, impunctate. Propodeal disc $0.86 \times$ as long as wide, with parallel sides and straight posterior border, microreticulate in most part; 3 straight discal carinae present; median carina reaching the transverse carina.

Abdomen: Sessile; almost smooth and shining, very faintly microreticulate.

Wings: Closed median and submedian cells present; discoidal vein arising well down on transverse median vein; radial vein long, evenly curved.

TYPE MATERIAL. Holotype: Female, Khao Yai Nat. Park, 40 km S of Pak Chong, Thailand, 10-11-1989 to 17-11-1989, T. W. Thormin leg.

Paratypes: 7 females, same data as holotype.

ETYMOLOGY. This species is named in honor of the country of Thailand (Siam).

Glenosema Chiangmaiensis Terayama, **new species**

(Figs. 6-7)

DESCRIPTION OF HOLOTYPE

Female. LH 0.68 mm; WH 0.73 mm; WF 0.48 mm; LT 1.28 mm; LFW 1.9 mm; total length 4.5 mm.

Color: Head and thorax black; abdomen black except posterior half of 1st and 2nd gastral tergites, and terminal segment reddish brown; mandibles blackish brown; antennae brown; coxae, trochanters and femora dark brown; tibiae and tarsi brown to yellowish brown.

Head: Wider than long, with evenly convex posterior border in frontal view; frons and vertex microreticulate with small but distinct punctures. Mandibles with 7 apical teeth. Anterior border of clypeus transverse, with a small median tooth. First segments of antennae in a ratio of 14:5:3.5:3:3 in length; scape strongly curved; 2nd segment $2.5 \times$ as long as wide; 3rd $1.8 \times$ as long as wide; 4th and 5th segments each slightly longer than wide. Eyes 0.25 mm long, with relatively long erect hairs; WF $1.92 \times$ HE. Ocelli forming a compact triangle; DAO 0.07 mm; OOL $2.3 \times$ WOT.

Thorax: Pronotum coarsely microreticulate with scattered shallow punctures. Mesonotum coarsely microreticulate. Propodeal disc $0.72 \times$ as long as wide, with weakly convex sides and weakly concave posterior border in dorsal view; 3 straight discal carinae present; surface with transverse rugae and weakly reticulate.

Abdomen: Sessile; surface microreticulate and subopaque.

Wings: General shape as in *G. siamensis*.

TYPE MATERIAL. Holotype: Female, Doi Inthanon Nat. Park, 1260 m, 70 km SW Chiang Mai, Thailand, 31-I-1989 to 7-II-1989, T. W. Thormin leg.

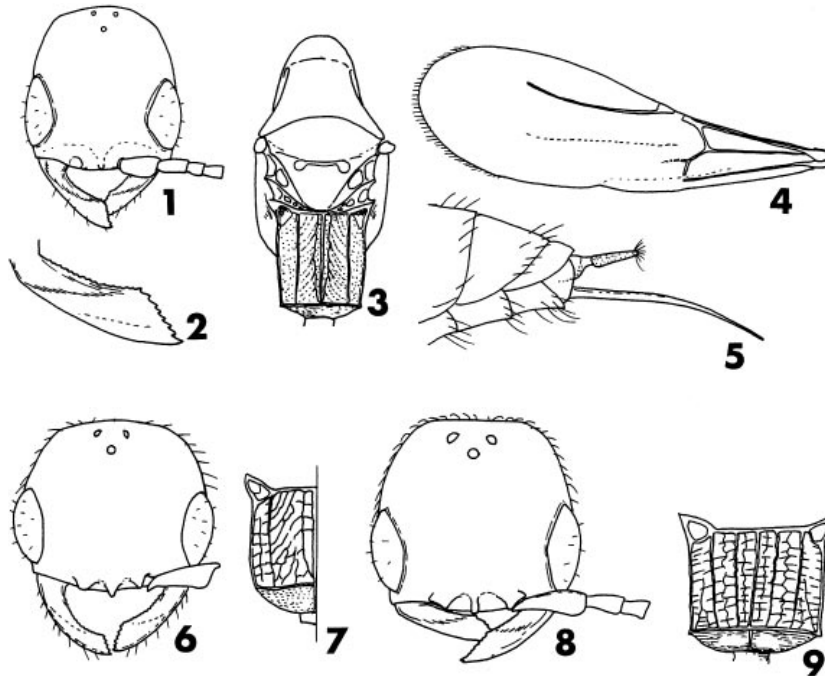
ETYMOLOGY. Named after the province from which it was collected.

Glenosema doiinthanonensis Terayama, **new species**

(Figs. 8-9)

DESCRIPTION OF HOLOTYPE

Female. LH 0.58 mm; WH 0.60 mm; WF 0.40 mm; LT 0.93 mm; LFW 1.7 mm; total length 3.0 mm.



Figs. 1-5. *Glenosema siamensis*, female. 1, head, frontal view. 2, mandible, 3, mesosoma, dorsal view. 4, forewing. 5, tip of gaster, lateral view.

Figs. 6-7. *Glenosema chiangmaiensis*, female. 6, head, frontal view. 7, propodeum, dorsal view.

Figs. 8-9. *Glenosema doiinthanonensis*, female. 8, head, frontal view. 9, propodeum, dorsal view.

Color: Head and thorax black; abdomen castaneous; mandibles blackish brown; antennae brown; coxae brown; trochanters yellowish brown; femora dark brown except yellowish apical portion; tibiae and tarsi yellowish brown.

Head: Almost as long as wide, with shallowly concave posterior border in frontal view; frons and vertex microreticulate and impunctate. Mandibles with 7 apical teeth. Anterior border of clypeus transverse, with a small median projection. Eyes 0.23 mm long, with short erect hairs; WF 1.74 × HE. Ocelli small, forming a regular triangle; OOL 2.0 × WOT.

Thorax: Pro- and mesonotum microreticulate and impunctate. Propodeal disc 0.75 × as long as wide, with very weakly convex sides and straight posterior border, and 5 straight discal carinae which reach the transverse carina; anterior half of disc strongly reticulate; posterior half with oblique rugae.

Abdomen: Sessile; very weakly microreticulate, rather smooth and shining.

Wings: As in *G. siamensis*.

TYPE MATERIAL. Female: Doi Inthanon Nat. Park, 1260 m, 70 km SW Chiang Mai, Thailand, 31-I-1989 to 7-II-1989, T. W. Thormin leg.

ETYMOLOGY. This species is named for its type locality Doi Inthanon, Chiang Mai Province.

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REFERENCES CITED

- BERLAND, L. 1928. Fauna de France 19. Hyménoptères Vespiformes II. Office Central de Faunistique. Paul Lechevalier. Paris. 206 pp.
- EVANS, H. E. 1964. A synopsis of the American Bethylidae (Hymenoptera, Aculeata). Bull. Mus. Comp. Zool. 132: 1-222.
- EVANS, H. E. 1978. The Bethylidae of America North of Mexico. Mem. Am. Entomol. Inst. 27: 1-332.
- GORDH, G., AND L. MÓCZÁR. 1990. A catalog of the world Bethylidae (Hymenoptera: Aculeata). Mem. Am. Entomol. Inst. 46: 1-364.
- KIEFFER, J. J. 1905. Description de nouveaux Proctotrypides exotiques avec une planche et une figure dans le texte. Ann. Soc. Sci. Bruxelles 29: 95-142.
- KIEFFER, J. J. 1906. Description de nouveaux Hyménoptères. Ann. Soc. Sci. Bruxelles 30: 136-140.

