

**A New Species of *Epitetracnemus* (Hymenoptera, Encyrtidae)  
from Korea**

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**ABSTRACT**

The genus *Epitetracnemus* Girault, 1915 is reported for the first time from Korea. A new species, *E. kosef* Li et Byun sp. nov. is described. The species is internal parasitoid wasp on *Pseudaulacaspis cockerelli* (Cooley) which infests on *Taxus cuspidata* S. et Z.

Key words: Encyrtidae, *Epitetracnemus*, new species, systematics, Korea

**INTRODUCTION**

The genus *Epitetracnemus* Girault, 1915 belonging to the tribe Habrolepidini of the subfamily Encyrtinae. A total of five species has been known to be valid to date: *comis* Noyes et Ren, 1987; *japonicus* (Ishii, 1923); *lindingaspidis* (Tachikawa, 1963); *sexguttatipennis* (Girault, 1915) and *zetterstedtii* (Westwood, 1837) [= *E. intersectus* (Fonscolombe, 1832)]. The genus is closely related to *Adelencyrtus* Ashmead, 1900, and Noyes and Hayat (1984) pointed out that "... further study will show that they should be considered synonymous." The two genera can be separated by the presence (in *Epitetracnemus*) or absence (in *Adelencyrtus*) of a line of silvery setae across the face and the pattern and strength of infuscation of the forewing: in *Epitetracnemus* forewing strongly infuscate from apical one-third of submarginal vein to apex and enclosing at least three hyaline spots; in *Adelencyrtus* forewing with infuscation often rather weak and most with only two hyaline spots in infuscate area. The genus *Epitetracnemus* is widespread in distribution and the species are

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exclusively parasitic on armored scale insects.

In the present paper, the genus *Epitetracnemus* is reported for the first time from Korea and *E. kosef* sp. nov. is described as new to science. The material examined is deposited in the Entomological Collection of Korea National Arboretum.

## SYSTEMATIC ACCOUNTS

Order Hymenoptera 벌목

Family Encyrtidae 깡충좀벌과

***Epitetracnemus* Girault** 무늬날개깡충좀벌속 (신칭)

*Epitetracnemus* Girault, 1915, p. 164. Type-species: *Epitetracnemus sexguttatipennis* Girault, by original designation.

*Anabrolepis* Timberlake 1920, p. 431. Type-species: *Anabrolepis extranea* Timberlake, by original designation.

**Diagnosis.** Female: Body robust, generally blackish. Head triangular in profile, strongly inflexed inwards at top of antennal scrobes and with a distinct transverse line of silvery white setae across face at this point and continuing below eyes. Antennal clava apically rounded. Mandible with two teeth and a truncation. Forewing with well-marked pattern of triangular hyaline areas and radiating infusate areas.

**Hosts.** Diaspididae (Homoptera).

**Distribution.** Cosmopolitan.

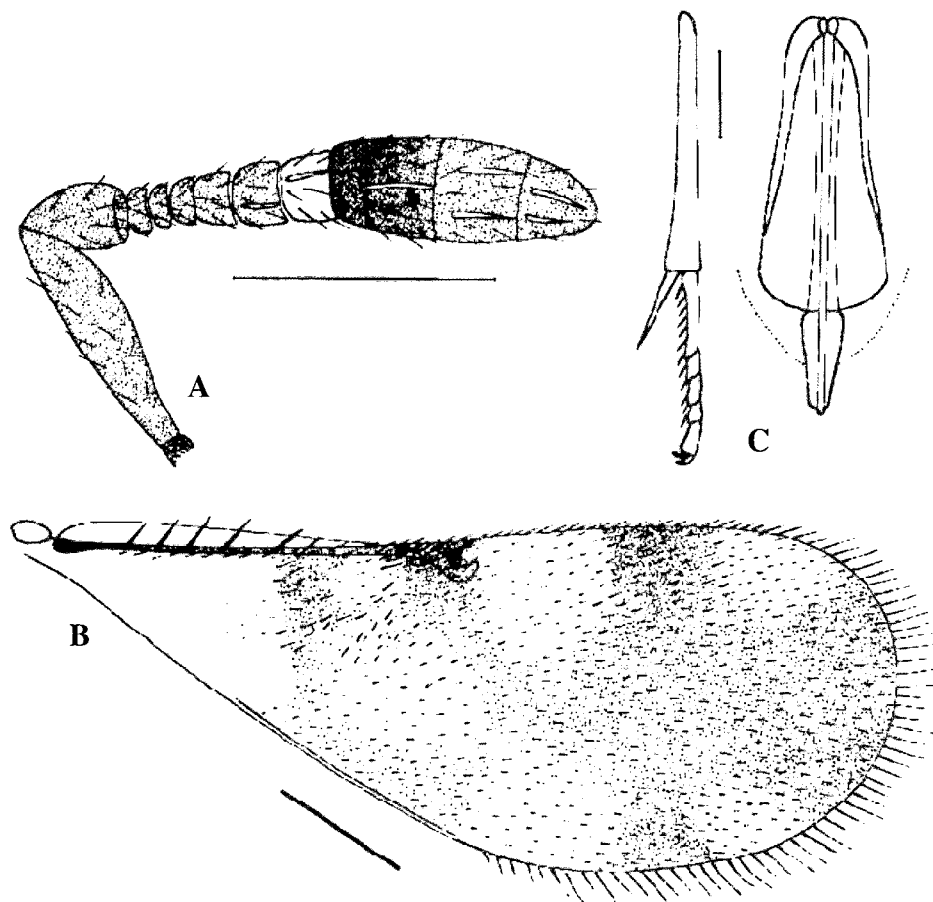
Key to species of *Epitetracnemus* [Females, Based on the key of Noyes and Ren (1987)].

1. Forewing with both subapical hyaline spots separated from wing margin by darker setae.
  - Australia ..... *sexguttatipennis* (Girault)
  - Forewing with subapical hyaline spots extending to wing margin (as in Fig. 1B) ..... 2
2. First four funicle segments equal in size, each much shorter than either of the fifth or sixth.
  - Holarctic, Bermuda, New Zealand, Hawaii ..... *zetterstedtii* (Westwood)
  - First three funicle segments equal in size, each much shorter than any one of segments four to sixth ..... 3
3. Clava longer than funicle; funicle with only apical joint yellowish. Korea .....
  - ..... *kosef* Li et Byun sp. nov.
  - Clava at least a little shorter than funicle ..... 4
4. Mid tibia completely yellow, or nearly so; forewing with area between dorsal subapical hyaline spot and apex not darker than at apex. China ..... *comis* Noyes et Ren
  - Mid tibia extensively dark brown; forewing with area between dorsal subapical hyaline spot and apex conspicuously darker than at apex ..... 5
5. Funicle with only apical joint yellowish. Japan ..... *lindingaspidis* (Tachikawa)
  - Funicle with three apical joints yellowish. Japan ..... *japonicus* (Ishii)

***Epitetracnemus kosef* Li et Byun sp. nov.** 한국무늬날개강총좀벌 (신칭) (Fig. 1A-C)

**Material examined.** Holotype: 1♀, Korea: Chungcheongbuk-do Province, Cheongju City, 9 Aug. 2001, ex *Pseudaulacaspis cockerelli* (Cooley) on *Taxus cuspidata* S. et Z.

**Description.** *Female:* Body about 0.8 mm long. Colour of body generally green or blue with a metallic lustre. Frontovortex and face purplish green; radicle, scape and pedicel dark brown; flagellum with proximal segments dusky yellow, 6th segment yellow; clava yellowish brown, proximal segment basally dark brown. Dorsum of thorax metallic greenish blue, scutellum basally purplish; mesopleuron and propodeum dark purplish brown; forewing with an infusate pattern as in Fig. 1B; hind wing hyaline; fore legs, including coxae, generally yellow, distal half of femur and basal two-thirds of tibia yellowish brown; mid coxae brown, femur, tibia and tarsus mostly yellow, except middle part of femur and a narrow ring on base of tibia dark brown; hind leg dark brown except for basal third of femur, extreme base and apical third of tibia yellow. Gaster dark, shining, purplish brown; ovipositor sheaths dark brown.



**Fig. 1.** *Epitetracnemus kosef* sp. nov., female. A, antenna; B, forewing; C, part of mid leg and ovipositor. Scales = 100  $\mu$ m.

Head in side view triangular; ocelli forming an acute angle; posterior ocellus separated from occipital margin by about twice its length and touching eye margin; lowermost eye margin with a line of silvery setae adjacent to it; antennal torulus separated from mouth margin by a little more than its own length; antennae (Fig. 1A) with first three funicle segments subequal in size, each much shorter than any one of segments four to six; clava a little longer than funicle (5 : 4); mandible with two teeth and a broad truncation.

Mesoscutum with squamiform-reticulate sculpture; axillae with transversely elongate, reticulate sculpture; scutellum with three pairs of setae, the pair at apex distinctly longer than the other two pairs, medially with reticulate sculpture, laterally more elongate and irregular, the sides and apex more or less polished; forewing with venation and distribution of setae as in Fig. 1B; linea calva open posteriorly and not interrupted; mid tibial spur as long as longer side of corresponding basitarsus.

Gaster about as long as thorax, ovipositor about 1.5 times as long as mid tibia (Fig. 1C); ovipositor sheath a little longer than mid basitarsus (18 : 17); exerted part of ovipositor about half length of mid tibial spur; cerci situated in basal two-fifths of gaster.

*Male*: Unknown.

**Etymology.** The specific name *kosef* is named in honor of KOSEF (Korea Science and Engineering Foundation).

**Remarks.** The new species can easily be separated from all other known species of the genus by the combination of following characters: 1) clava longer than funicle; 2) first three funicle segments equal in size, each much shorter than any one of segments four to sixth; 3) funicle with only apical joint yellowish; 4) infusate pattern, venation and distribution of setae of forewing.

## ACKNOWLEDGEMENTS

This research was carried out under the Brain Pool Program supported by KOFST (Korean Federation of Science and Technology Societies) and KOSEF (Korea Science and Engineering Foundation).

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RECEIVED: 19 March 2002

ACCEPTED: 3 April 2002

무늬날개깡충좀벌속 (벌목, 깡충좀벌과)의 1신종

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요 약

깡충좀벌과의 무늬날개깡충좀벌속 (*Epitetracnemus*)을 우리나라에서 처음으로 보고하며, 또한 이 속에 속하는 1 신종, *E. kosef* sp. nov.를 기재·보고한다.