

A New Record of the tribe Atimiini LeConte (Coleoptera: Cerambycidae: Aseminae) in Korea

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한국산 무늬넓적하늘소족(딱정벌레목: 하늘소과: 넓적하늘소아과)의 미기록종에 대한 보고

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ABSTRACT: *Atimia nadezhdae* Tsherepanov which belongs to tribe Atimiini LeConte (Coleoptera: Cerambycidae: Aseminae) is recognized in Korea for the first time. Diagnosis and photographs of adult and male genitalia of the species are provided herein.

Key words: Coleoptera, Cerambycidae, *Atimia nadezhdae*, New record, Korea

초록: 하늘소과, 넓적하늘소아과의 무늬넓적하늘소족(Atimiini LeConte)에 속하는 무늬넓적하늘소(*Atimia nadezhdae* Tsherepanov)의 한국 분포를 최초로 보고한다. 성충의 외부 형질, 수컷의 생식기 형질, 생태 정보를 함께 제공한다.

검색어: 딱정벌레목, 하늘소과, 무늬넓적하늘소, 미기록종, 한국

Atimiini LeConte contains three genera (*Atimia*, *Paratimia*, *Proatimia*) with 18 species worldwide and most of them distributed in east Palaearctic and Nearctic regions. Ambiguous diagnostic characters of the tribe made coleopterists from 1800s to early 1900s hard to assign its systematic position. First, Say (1827) first recorded a species of Atimiini as *Clytus confusus* in the subfamily Cerambycinae. Halderman (1847) compose a genus *Atimia* with species *Atimia tristis* in the subfamily Lamiinae. Tribe Atimiini had been confusedly treated as either Cerambycinae (Thomson, 1860; LeConte, 1873; Wickham, 1897) or Lamiinae (Melsheimer, 1853; Gahan, 1908). Even some treated the tribe as a separated subfamily (Blatchley, 1910). The tribe

has finally regarded as a member of the subfamily Aseminae based on the larval characters (Webb, 1912; Craighead, 1923), and repeatedly confirmed its status by two successive review of the tribe (Linsley, 1934; 1939). After then the tribe successively treated as a member of Aseminae.

In Korea, tribe Atimiini was reported as *Atimia* sp. (Korean name of the tribe: Munineopjeok-haneulso-jok, genus: Munineopjeok-haneulso-sok, Jang et al., 2015), or *Atimia okayamensis* Hayashi 1972 (Korean name of the genus: Pyobeomhaneulso-sok, Hwang, 2015). Since the two works were conducted without species level identification (Jang et al., 2015) or misidentified (Hwang, 2015), this is the first correct record of the tribe Atimiini.

In this study, we provide diagnosis and illustrations of adult habitus and male genitalia. Hence, we decide Korean name of *Atimia nadezhdae* Tsherepanov, 1973 with tribe Atimiini, genus

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Atimia. The specimens used in this study are deposited in private collection of Seunghyun Lee (SHLC, Seoul) and the Chungnam National University Insect Collection (CNUIC, Daejeon).

Taxonomy

Tribe Atimiini LeConte, 1873 무늬넓적하늘소속

Genus *Atimia* Haldeman 무늬넓적하늘소속

Atimia Haldeman, 1847: 56 Type species *Atimia tristis* Haldeman, 1847 (= *Clytus confusus* Say, 1827)

Myctus Semenov & Plavilstshikov, 1937: 252 Type species *Myctus maculipunctus* Semenov & Plavilstshikov, 1937

Diagnosis. Easily distinguished from its congeners by combination of following characters: densely distributed gray pubescence over whole body; prosternal process broadened, widened toward apex; forecoxa hemispherical (Tsherepanov, 1990; Obayashi and Niisato, 2007).

Atimia nadezhdae Tsherepanov 무늬넓적하늘소(Figs. 1-3)
Atimia nadezhdae Tsherepanov, 1973: 80.

Diagnosis. Length 5.0-7.0 mm, width 1.6-2.0 mm.

Body moderately elongated, blackish, densely covered with yellowish-gray pubescence. Head black, with densely distributed pale pubescence. Frons flattened, densely punctured, without any distinct tubercles. Antennal sockets scarcely developed,

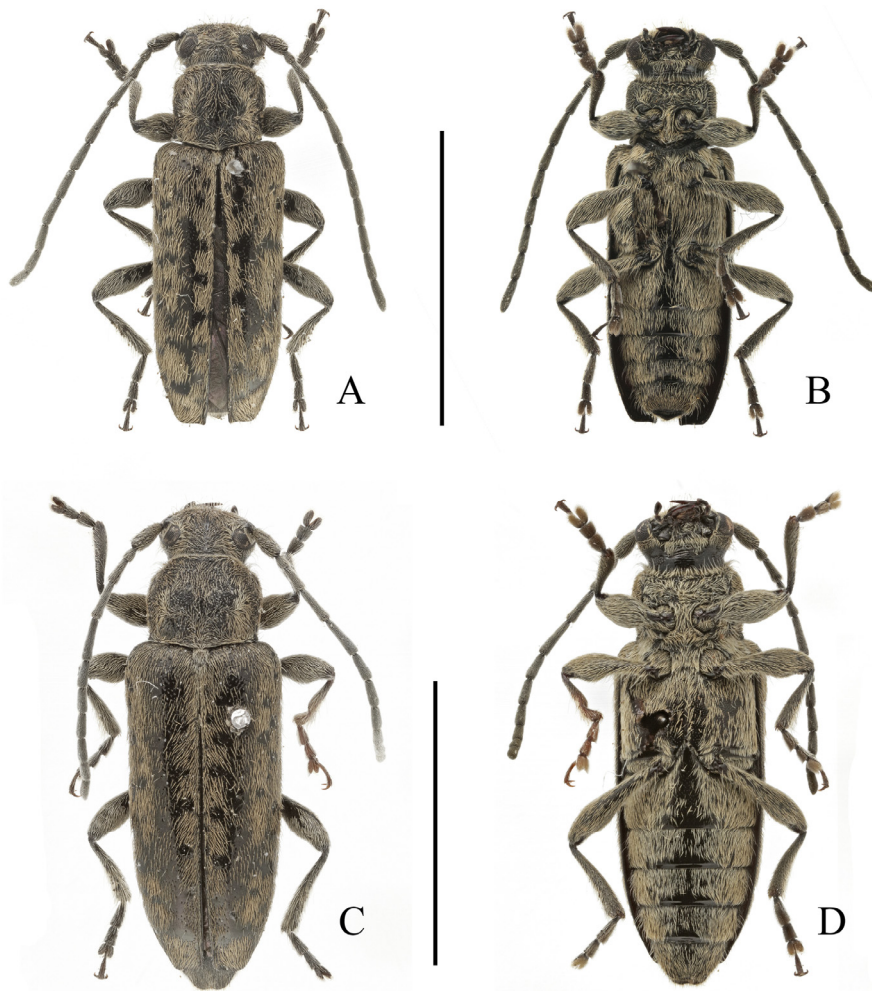


Fig. 1. Adult of *Atimia nadezhdae* A. Dorsal habitus, male. B. Ventral habitus, male C. Dorsal habitus, female. D. Ventral habitus, female (All scale bars: 4 mm).



Fig. 2. Male genitalia of *Atimia nadezhdae*. A. Tegmen, dorsal. B. Tegmen, lateral. C. Median lobe dorsal. D. Median lobe, lateral (Scale bars: 0.5 mm).

distance between two sockets wide, about two times as long as the length of antennomere 1. Antennae 11-segmented, black, with short pale pubescence closely present, without distinct tubercles or spines on any antennomere. Antennae shorter than body length in both sexes (1:0.75 in male, 1:0.71 in female). Antennomere 1 moderately swollen, ratio of each antennomere 2.8:1.0:2.0:2.8:3.1:2.5:2.5:2.4:2.4:2.4:2.9 in male, 2.5:1.0:1.8:2.9:3.0:2.4:2.4:2.2:2.2:2.2:2.5 in female.

Pronotum black, with fine pale pubescence, densely and evenly punctured. Pronotum almost parallel in posterior 2/3, anterior 1/3 narrowed toward base, almost as long as wide (almost 1:0.87 in male, 1:0.8 in female). Prosternal process broadened, widened toward apex, largely developed, covering 2/3 of coxal cavity. Legs black, densely covered with pale hairs, femur moderately swollen.

Elytra black with pale grey pubescence, circular hairless markings make irregularly distributed small black spots. Elytra longer than wide (1: 2.15 in male, 1:2.05 in female), almost parallel with rounded apex, humeral margin slightly round, small punctures moderately and evenly distributed. Scutellum triangular, densely setose with pale pubescence.

Male genitalia. Examined tegmen much longer than wide, 1.55 mm in length, 0.61 mm in width. Lateral lobes distinctly separated into two parts, widened, gradually contracting toward front, medial apex angulated. Fine soft hairs covers tip of lateral lobe, Distal half (except long hairs on apex) consists ring part. Median lobe plus median struts 1.4 mm in length, 0.4 mm in width, moderately curved in lateral view. Median lobe tri-lobed, parallel on side with acute apex. Median struts weakly elongated, taking less than 1/4 of total length.



Fig. 3. Photograph of *Atimia nadezhdae* in nature A. On its host plant *Juniperus rigida* B. Dead pupa in pupal cell and its larval gallery.

Distribution. Korea (new record), Russian Far East.

Material examined. [SHLC] 1♂, 1♀, Ssangyong-ri, Hanbandomyeon, Yeongwol-gun, Gangwon-do, Korea..8.iv.2009. S. H. Lee; 1♀, Geumchang-ri, Sillim-myeon, Wonju-si, Gangwon-do, Korea. 10.v.2009. S. H. Lee; [CNUIC] 1♂, Kangnung National University, Jibyeon-dong, Gangneung-si, Gangwon Province, 30. iii. 2003, S-K Choi.

Biology. All specimens were collected by beating and sweeping on dried branch of *Juniperus rigida* Siebold & Zucc, 1846 (Cupressaceae). Adults occur from September to October, hibernate and emerge on April to March. Larva damages under bark. The last instar made a pupal cell under the bark, not impressing the sapwood, covered with rough fibrous frass.

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