

## Taxonomy of the genus *Lagria* Fabricius (Coleoptera: Tenebrionidae: Lagriinae) in Korea

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### 한국산 털보잎벌레붙이속(*Lagria* Fabricius)(딱정벌레목 : 거저리과 : 잎벌레붙이아과)에 대한 분류학적 연구

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**ABSTRACT :** A taxonomic review of the genus *Lagria* Fabricius is presented. Two species are identified: *Lagria nigricollis* Hope and a new record, *Lagria rufipennis* Marseul. A key, description, habitus photographs of adults, and illustrations of diagnostic characteristics are provided.

**KEY WORDS :** *Lagria*, Lagriinae, Tenebrionidae, new record, taxonomy, Korea

**초 록 :** 한국산 털보잎벌레붙이속(*Lagria* Fabricius)에 속한 털보잎벌레붙이(*Lagria nigricollis* Hope)와 눈큰털보잎벌레붙이(신칭)(*Lagria rufipennis* Marseul) 등 2종을 분류학적으로 검토하였다. 그 중 눈큰털보잎벌레붙이는 국내에서 처음 보고되는 종이다. 각 종에 대한 검색키, 기재문, 진단형질 그림과 성충사진을 제공하였다.

**검색어 :** 털보잎벌레붙이속, *Lagria* Fabricius, 눈큰털보잎벌레붙이, *Lagria rufipennis* Marseul, 미기록종

The genus *Lagria* Fabricius belonging to the tribe Lagriini Latreille contains approximately more than 70 species (Löbl *et al.*, 2008). The *Lagria* group occur in all the continents with exception of New Zealand (Borchmann, 1910; Watt, 1974; Löbl *et al.*, 2008) This group are especially numerous in the tropics and are not very well represented in temperate regions (Watt, 1974; Löbl *et al.*, 2008). The adults of this genus are

found under the bark of logs, on the ground or on the flowers and grass (Watt, 1974; Jung, 2008). And also most larvae are usually found under the leaf litter, especially in the forest, in the rotten wood, or under bark of dead trees (Hayashi, 1966).

Members of *Lagria* can be identified by the following morphological features: antennomere 2 very short, apical antennomere long and thin, equal to or longer than

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sum of antennomere 9 and 10; elytra usually not striate, fairly closely punctate and weakly rugose; procoxae prominent; prosternal process between coxae absent or very small and thin (Watt, 1974, 1992; Masumoto, 1987; Jung, 2008).

The genus *Lagria* Fabricius contains only two species recorded from Korea. But one species, *Lagria distincticornis* Heyden (1887), was synonymized under *Cerogria janthinipennis* (Fairmaire) (Borchmann, 1909). In this report, we describe two species, including one newly recorded species, *Lagria rufipennis* Marseul, 1876 in Korea.

The purpose of this study was to describe the taxonomic characteristics of Korean *Lagria* species. A Key, diagnoses, habitus photos of adults, and illustrations of diagnostic characters are provided. Specimens for this study were deposited in the Sungshin Women's University Insect Collection (Seoul, Korea). The following abbreviations were used to indicate the provinces in which the various specimens were collected: Gangweondo, GW; Gyeonggido-Seoul, GS; Chungcheongbukdo, CB; Chungcheongnamdo, CN; Gyeonsangnam-do, GN; Gyeonsanbuk-do, GB; Jeollabukdo, JB; Jeollanamdo, JN; JJ, Jeju-do

## Taxonomic Accounts

Subfamily Lagriinae Latreille 잎벌레붙이아과  
Lagriariae Latreille, 1825: 381

Tribe Lagriini Latreille 털보잎벌레붙이족(신칭)  
Lagriariae Latreille, 1825: 381.  
Type species: *Lagria* Fabricius, 1775

Genus *Lagria* Fabricius 털보잎벌레붙이속(신칭)  
*Lagria* Fabricius, 1775: 124  
Type species: *Chysomela hirta* Linné, 1758

Key to the species of Korean *Lagria*

1. Male: Ocular distance about 1.4 times wider than diameter of eye; Antennae almost reach to 1/2 part of

elytra; Apical antennomere about 1/2 of sum from antennomeres 1 to 10 in length (Fig. 8a); Female: Pronotum equal to its length and width; Elytra slightly widened to apex ..... *L. rufipennis*  
- Male: Ocular distance about 1.6 times wider than diameter of eye; Antennae reach to 1/3 of basal elytra; Apical antennomere about 1/3 of sum from antennomeres 1 to 10 in length (Fig. 7a); Female: Pronotum wider than its length; Elytra strongly widened to apex ..... *L. nigricollis*

### *Lagria nigricollis* Hope 잎벌레붙이

(Figs. 1a, 1b, 3, 5a, 5b, 7a, 7b)

*Lagria nigricollis* Hope, 1842: 61; Cho, 1934: 75; Mochizuki and Tsumekawa, 1937: 75; Cho, 1955: 213; Cho, 1963: 207; Ju, 1969: 123; Medvedev, 1992: 621; Kim et al., 1994: 176.

*Lagria vervex* Marseul, 1876: 338.

*Lagria rufipennis* Matsumura, 1905: 132.

### Description

Body gradually enlarge apically. Head, pronotum, scutellum and legs usually brownish black with brown hairs, elytra yellowish brown with yellow hairs.

Head densely rugose, with oval impression at frons; antennae filiform, long and thin; maxillary palpomere 4 cylindrical-triangular. Pronotum almost cylindrical, roughly and densely punctate. Elytra without punctate-striae, gradually widened to subapex and narrowed from apical 1/3 part to apex. All tibia gradually enlarged apically. Male ocular distance about 1.6 times wider than diameter of eyes (Fig. 5a); apical antennomere 5 times longer than antennomere 10 (Fig. 7a); all tibiae weakly curved inward. Female: Ocular distance about 3.5 times wider than diameter of eyes; apical antennomere about 2.5 times longer than antennomere 10; all tibiae not curved inward. Parameres of aedeagus about four times shorter than tegmen, cylindrical dorsally (Fig. 3).

Specimens examined. SSWU: <GW>: 1 ♂ Mt. Seoraksan, 16 VIII 1971; 1 ♂ Mt. Odaesan, Pyeongchang-

gun, 21 VII 1974; 1♂2♀♀ Temp. Samwhasa, Donghae-si, 27 VI 1984, S.-S. Jeong and W.-H. Kim; 1♀ Haksapyeong, Sokcho-si, 3 VII 1984, S.-Y. Yang; 1♂ Jinbu-myeon, Pyeongchang-gun, 30 VI 1985, K.-H. Shin; 1♂2♀♀ Haanmi-ri, Pyeongchang-gun, 1 VII 1985, Yoon *et al.*; 3♀ Taebaek-si Sodo-dong, 22 VII 1986, G.-S. Jang and J.-I. Kim; 1♀ Hongcheon-eup, Hongcheon-gun, 28 VII 1987, J.-H. Jeong; 1♀ Ganhyeon-myeon, Yangyang-gun, 7 VIII 1993, E.-H. Kim; 1♀1♂ Daegwanryeong, 24 VII 1994; 1♂ Mt. Baegunsan, Wonju-si, 5 VII 1996, J.-I. Kim; 1♀ Sinbuk-eup, Chuncheon-si, 10 VIII 1998, S.-S. Jang; 1♂ Mt. Chiaksan, Wonju-si, 19 VI 1999, Dept. Environment; 1♂ Wonju-si, 29 VI 2000, H.-B. Kim; 1♂ Mt. Odaesan, Pyeongchang-gun, 21 VII 2002, S.-J. Jang; 1♂ Podong-ri, Hoengseong-gun, 19 VI 2005, B.-H. Jung; 1♂ Mt. Yeonyeopsan, Chuncheon-si, 6 VII 2006, T.-W. Kim; <GG>: 1♀1♂ Suweonsi, 26 VI 1974, J.-C. Park; 1♀ Mt. Ahasan, Gwangju-gu, 5 VII 1980, S.-H. Kim; 1♀1♂ Mt. Chungryeongsan, Namyangju-si, 12 VIII 1980, G.-S. Jang; 1♂ Buk-ri, Deokjeok-myeon, Incheon-si, 7 VII 1981, M.-H. Seo; 1♂ Eungogae, Hanam-si, 18 VI 1983, M.-H. Choi; 1♂ Gongjureung, Gangbuk-gu, 21 VI 1983, S.-S. Jeong; 1♂ Hyeon-ri, Gapyeong-gun, 15 IX 1984, S.-E. Lee; 1♀ Maseok, Namyangju-si, 1 VIII 1985, M.-G. Hwang; 1♀ Gugi-dong, Jongno-gu, 30 VII 1986, G.-J. Lee; 1♂ Suweon-si, 26 VI 1987, Y.-H. Ko; 1♂ Siam-ri, Gimpo-si, 1 VII 1987, H.-J. Yoo; 1♂ Siam-ri,

Gimpo-si, 1 VII 1987, J.-I. Kim; 2♀♀ Mt. Cheonggyesan, Gapyeong-gun, 7 VI 1991, J.-I. Kim; 1♂ Yeongpyeong-ri, Pocheon-si, 20 VII 1996, J.-I. Kim *et al.*; 1♂ Mt. Bukhansan, Jongno-gu, 5 VII 2006, T.-W. Kim; <CB>: 1♀ Gasan-ri, Danyang-gun, 16 VII 1981, Y.-J. Choi; 1♀ Wonpung-ri, Goesan-gun, 25 VI 1986, H.-S. Lee; 1♂ Mt. Songrisan, Boeun-gun, 7 VIII 1990, T.-J. Kim; <JB>: 1♀ Temp. Seonunsa, Gochang-gun, 27 VI 1990, E.-J. Joh; 1♀ Namwon-si, 18 VIII 1991, D.-G. Park; 1♂ Mt. Naejangsan, Jeongeup-si, 4 VII 2006, D.-J. Jeon; <JN>: 1♀ Duwon-myeon, Goheung-gun, 7 X 1987, Y.-M. Lee; <GB>: 2♀♀ Mt. Juwangsan, Cheongsong-gun, 29 VII 1983, H.-G. Park; 1♀ Mt. Juwangsan, Cheongsong-gun, 24 VII 1984, Y.-S. Kim; 1♂1♀ Mt. Juwangsan, Cheongsong-gun, 24 VI 1986, E.-Y. Choi and H.-S. Kim; 1♀ Gwaneum-ri, Mungyeong-si, 18 VII 1986, M.-S. Jeong; 1♀1♂ Joryong, Mungyeong-si, 22 VI 1989, E.-J. Jeong; 1♀1♂ Mt. Eoraesan, Yeongju-si, 30 VI 1998, J.-I. Kim *et al.*; 1♂ Mt. Sobaeksan, Yeongju-si, 3 VII 1998, J.-I. Kim *et al.*; 1♀ Temp. Baekamsa, Yecheon-gun, 2 VIII 1999, J.-I. Kim *et al.*; 1♂ Cheongun-ri, Cheongsong-gun, 26 VI 2001, H.-C. Park; <GN>: 1♂ Mt. Gajisan, Ulsan-si, 30 VI 1930, H.-J. Kim; 1♀ Mt. Jirisan, Sancheong-gun, 31 VII 1981, J.-I. Kim.

Distribution. Korea, Japan, China, East Siberia, Sachalin.

Remarks. This species is most abundant on the

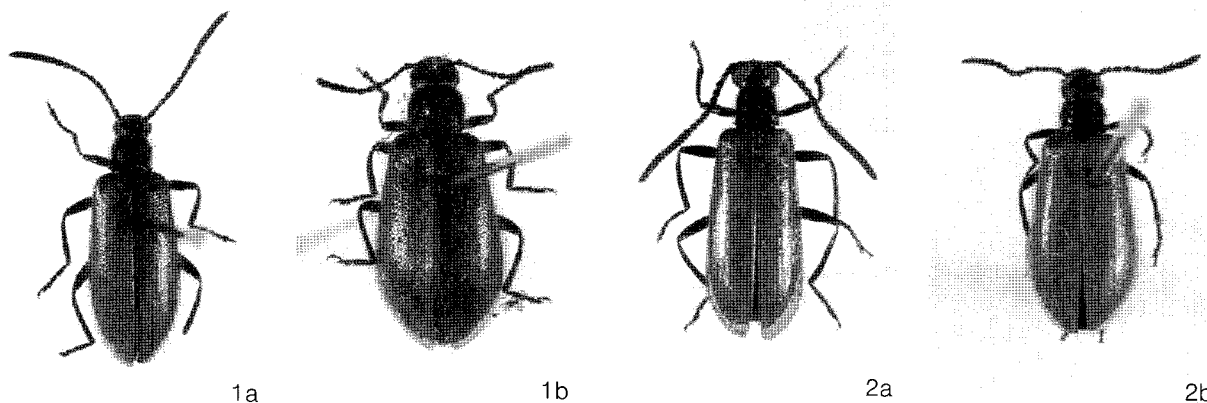
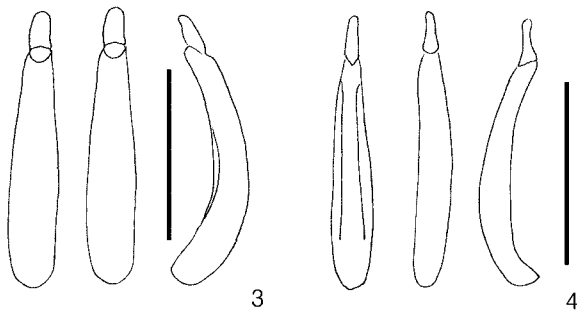


Fig. 1a-6b. Habitus of *Lagria*. 1a. *Lagria nigricollis* (♂); 1b. *Lagria nigricollis* (♀); 2a. *Lagria rufipennis* (♂); 2b. *Lagria rufipennis* (♀).



**Fig. 3-4. Aedeagus of *Lagria*** (Left: ventral view; Middle: dorsal view; Right: lateral view; Each 1 scale bar = 0.5mm). 3. *Lagria nigricollis*; 4. *Lagria rufipennis*; *Lagria rufipennis* Marseul 눈큰털보앞벌레붙이(신칭) (Figs. 2a, 2b, 4, 6a, 6b, 8a, 8b) *Lagria rufipennis* Marseul, 1876: 337. *Lagria vervex* Marseul, 1876: 338.

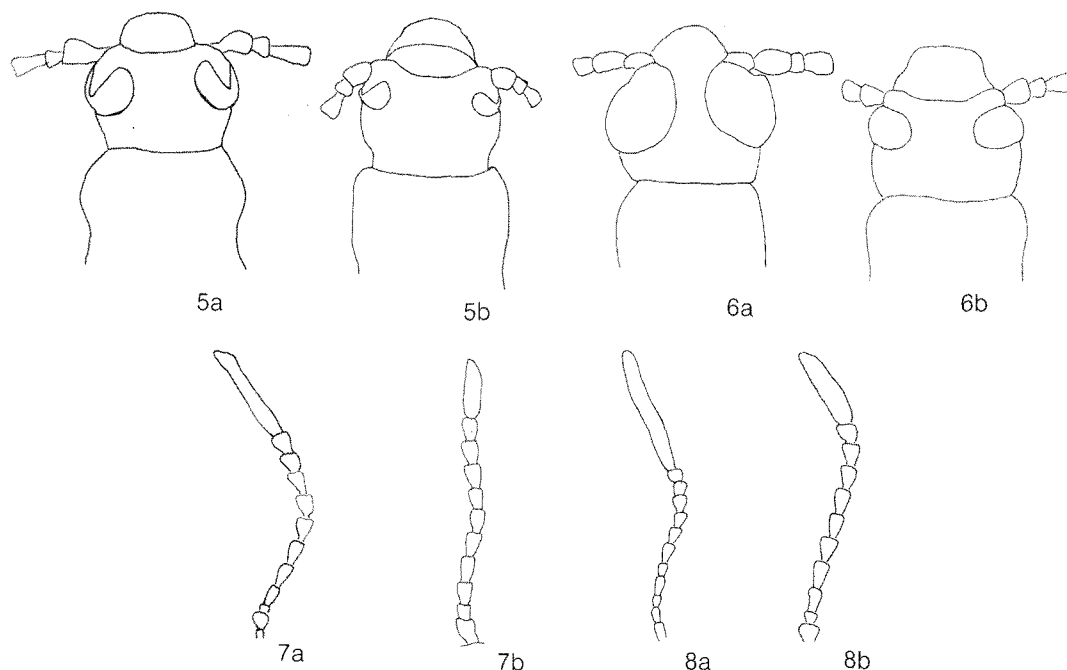
leaves and stems of annual plants. Especially the adults sometimes fed *Rubia akane* Nakai on the grass (Park, H.C., personal communication). It can be distinguished from *Lagria rufipennis* Marseul as follows: Male: Body weakly subparallel-sided; ocular distance about 1.6 times wider than diameter of eye. Antennae reach to 1/3 of basal elytra; apical antennomere about 1/3 of sum from antennomeres 1 to 10 in length. Female: Body strongly and closely punctate dorsally. Pronotum wider than its length. Elytra strongly widened to apex.

## Description

Body brownish black with blackish brown hairs except reddish brown elytra. Head with rough punctures and rugose; antennae filiform, long and thin. Antennomere 3 about twice longer than antennomere 2, almost equal to antennomere 4; maxillary palpomere 4 cylindrical-triangular. Pronotum almost cylindrical, with fine and sparse punctures. Elytra with fine punctures and rugose, without punctate-striae, gradually widened to subapex and narrowed from apical 1/3 part to apex. All tibiae gradually enlarged apically; all tarsi with dense seta ventrally. Male ocular distance about 1.4 times wider than diameter of eyes (Fig. 6a); antennae almost reach to 1/2 of elytra; apical antennomere nine times longer than antennomere 10 (Fig. 8a); all tibiae weakly curved inward. Female: Ocular distance about 2.2 times narrower

than diameter of eyes; apical antennomere about three times longer than antennomere 10; all tibiae not curved inward. Parameres of aedeagus about four times shorter than tegmen, narrowly cylindrical dorsally (Fig. 4).

Specimens examined. SSWU: <GW>: 1 ♀ Temp. Samhwasan, Donghae-si, 26 VI 1984, Y.-J. Im; 1 ♀ Seo-myeon Uido, Chuncheon-si, 14 VII 1984, H.-J. Yoo; 1 ♀ Haanmi-ri, Pyeonchang-gun, 1 VII 1985, Y.-H. Choi; 1 ♀ Haanmi-ri, Pyeonchang-gun, 1 VII 1985, H.-J. Kwon; 2 ♂♂ Haanmi-ri, Pyeonchang-gun, 1 VII 1985, H.-Y. Joh; 1 ♀ Pyeonchang-gun, 1 VII 1985, H.-J. Yoon; 1 ♂ Temp. Cheongwonsa, Taebaek-si, 23 VII 1986, K.-H. Kim; 1 ♀ Goseong-gun, 10 VII 1990, J.-I. Kim; 1 ♀ Myeongho-ri, Goseong-gun, 10 VII 1990, J.-I. Kim; 1 ♀ Soyanggang, Chuncheon-si, 23 VII 1993, S.-R. Kim; 3 ♀♀ Mt. Bangtaesan, Inje-gun, 15 VII 1995, J.-I. Kim; 1 ♀ Jogyeong-dong, Inje-gun, 24 VII 2000, S.-Y. Kim and A.-Y. Kim; 1 ♀ Ganseong-eup, Goseong-gun, 26 VIII 2002, Kim et al; 1 ♀ Osack-ri, Yangyang-gun, 24 VII ??, S.-Y. Kwon; <GG>: 2 ♂♂ Suweonsi, 26 VI 1974, J.-C. Park; 1 ♀ Eungogye, Gwangju-si, 13 VI 1981, E.-S. Song; 1 ♀ Mt. Yawolsan, Yeoncheon-gun, 26 VI 1987, H.-J. Yoo; 1 ♀ Gorangpo-ri, Yeoncheon-gun, 27 VI 1987, H.-J. Yoo; 1 ♂ Siam-ri, Gimpo-si, 1 VII 1987, J.-I. Kim; 1 ♂ Suweon-si, 26 III 1990, H.-M. Lee; 1 ♀ Mt. Myeongjisan, Gapyeong-gun, 6 VIII 1991, J.-I. Kim; 1 ♀ Jangheung-myeon, Yangju-si, 8 VIII 1993, G.-J. Kwon; 1 ♀ Namhansanseong, Gwangju-si, 6 VII 1996, J.-H. Kim; 2 ♀♀ Mt. Hwaaksan, Gapyeong-gun, 25 VII 1998, H.-A. Lee; 1 ♂ Olympicgongwon, Songpa-gu, 23 VIII 2005, B.-H. Jung; 3 ♀♀ 1 ♂ Mt. Bukhansan, Jongno-gu, 5 VII 2006, T.-W. Kim; <CB>: 1 ♀ Mt. Songrisan, Boeun-gun, 23 VI 1989, J.-H. Hwang; 1 ♀ Mt. Songrisan, Boeun-gun, 28 VI 1989, B.-J. Kim; 1 ♀ Mt. Woraksan, Jecheon-si, 9 VIII 1991, J.-Y. Na; 1 ♀ Mt. Sobaeksan, Danyang-gun, 13 VIII 1999, D.-S. Ku; 2 ♀♀ Mt. Gyemyeongsan, Chungju-si, 17 VI 2003, K.-D. Han and T.-W. Kim; <JB>: 2 ♀♀ Muju-gun Mt. Minjujisan, 12 VII 1997, H.-J. Park; <JN>: 1 ♀ Mt. Jirisan, Gurye-gun, 3 VII 1984, G.-S. Jang; <GB>: 1 ♀ Daehyeon-ri, Bonghwa-gun, 25 VIII 1986, J.-I. Kim; 2 ♀♀ Dalgipokpo, Cheongsong-gun, 24 VI 1988,



**Fig. 5a-8b. Specific characteristics of *Lagria*.** Head (5a-6b): 5a. *Lagria nigricollis* (♂); 5b. *Lagria nigricollis* (♀); 6a. *Lagria rufipennis* (♂); 6b. *Lagria rufipennis* (♀); Antennae (7a-8b): ; 7a. *Lagria nigricollis* (♂); 7b. *Lagria nigricollis* (♀); 8a. *Lagria rufipennis* (♂); 8b. *Lagria rufipennis* (♀).

J.-H. Kim and M.-Y. Lee; 2 ♀♀ Temp. Huibangsa, Yeongju-si, 2 VII 1994, T.-Y. Mun; 1 ♀ Mt. Seondalsan, Yeongju-si, 29 VI 1998, J.-I. Kim et al.; 4 ♀♀ Sogwang-ri, Uljin-gun, 1 VIII 1999, Kim et al.; 1 ♀ Daehyeon-ri, Bonghwa-gun, ??, G.-S. Jang; <GN>: 1 ♀ Mt. Jirisan, Sancheong-gun, 31 VII 1981, H.-Y. Han; 1 ♀ Mt. Jirisan, Hadong-gun, 1 VIII 1998, T.-M. Han; <JJ>: 1 ♀ Pyeongdae-ri, Bukjeju-gun, 21 VII 2000, Y.-B. Lee;

Distribution. Korea, Japan, China, East Siberia, Sachalin.

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