

Collection Records of Pamphiliid Sawflies (Hymenoptera) from Korea

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Abstract Collection data are given for 16 Korean pamphiliid sawflies belonging to *Acantholyda*, *Neurotoma*, *Onycholyda* and *Pamphilius*. Of these, two species of *Pamphilius*, *P. leucocephalus* Takeuchi, 1938, and *P. convexus* Shinohara, 1988, are new to the Korean fauna.

Key words: Hymenoptera, Pamphiliidae, collection records, Korea.

The pamphiliid sawfly fauna of Korea has been studied by Takeuchi (1927, 1938), Kim (1963, 1980), Shinohara (1979, 1980, 1985, 1988 a, b, 1991, 1993, 1995, 1997), Shinohara and Byun (1993, 1996) and others, and a total of 33 species belonging to five genera have been recorded from this country.

In the course of our recent studies on the pamphiliid sawfly collection of the Department of Biology, Yeungnam University, we have determined 16 species belonging to four genera, i.e., three species of *Acantholyda*, three species of *Neurotoma*, three species of *Onycholyda* and eight species of *Pamphilius*, which are enumerated in the following lines. Two species of *Pamphilius*, *P. leucocephalus* Takeuchi, 1938, and *P. convexus* Shinohara, 1988, are new to the fauna of Korea and for the remaining 14 species only scattered records have been published.

All the specimens treated in this paper are kept in Yeungnam University, Kyöngsan, unless otherwise stated.

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Acantholyda erythrocephala (Linnaeus, 1758)

Specimens examined. Kyönggi-do: 1 ♀, Ŭijöngbu-shi, Suraksan, 15. IV. 1989, D. K. Im. Kyöngsangbuk-do: 1 ♀, Kyöngsan-shi, Tae-dong, Yeungnam Univ., 7. V. 1987, J. W. Lee.

Distribution. Korea, Siberia, Europe, North America (introduced).

Remarks. This species was first recorded from Korea by Takeuchi (1927) and further discussed by Shinohara and Byun (1996). It is known as a pest of pine trees in Europe, but no outbreaks have been recorded in Korean forests. The collection data given above as well as in Shinohara and Byun (1996) suggest a wide occurrence of this species in Korea.

***Acantholyda posticalis* (Matsumura, 1912)**

Specimens examined. Kyōnggi-do: 1 ♀, Kwach'ōn-shi, Ch'ōnggyesan, 18. V. 1986, Y. J. Lee; 1 ♀, Namyangju-shi, Ch'ōnmasan, 15. V. 1985, K. W. Ma.

Distribution. Korea, Siberia, Europe, Japan.

Remarks. This is a notorious pest of two-needle pines in Europe and Siberia. Saito (1928) first recorded this species from Korea as a pest of *Pinus densiflora* but no serious damages have been reported since then in this country. *Acantholyda posticalis* has been recorded from Kyōnggi-do and Kyōngsangbuk-do (Shinohara & Byun, 1996).

***Acantholyda parki* Shinohara & Byun, 1996**

Specimen examined. Kyōnggi-do: 1 ♀, Kwangnūng, 8. VII. 1975, S. I. Oh.

Distribution. Korea.

Remarks. This recently described species is closely allied to *A. posticalis* and known as a serious pest of *Pinus koraiensis* in Korea. The specimen given above is from Kwangnūng, Kyōnggi-do, where Lee (1961, etc.) studied the biology of this species in detail. The species is known to occur in Kyōnggi-do and Kangwon-do.

***Neurotoma atrata* Takeuchi, 1930**

Specimen examined. Kangwon-do: 1 ♀, Tonghae-shi, Samhwasa, 27. VI. 1984, K. S. Lee.

Distribution. Korea, Russian Far East (Primorskij Kraj), Japan.

Remarks. This species was first recorded from Korea by Shinohara (1980) on the basis of four old specimens from Suwon, Kyōnggi-do, and no additional collection data have been published. This is the first collection record from Kangwon-do. The larva feeds on *Quercus acutissima* (Shinohara, 1980).

***Neurotoma coreana* Shinohara, 1980**

Specimens examined. Seoul/Kyōnggi-do: 1 ♀, Suyu-ri, Hwagyesa, 6. V. 1989, H. S. Cho; 1 ♂, Kwach'ōn-shi, Ch'ōnggyesan, 21. IV. 1991, E. C. Kim; 1 ♀, same locality, 21. IV. 1991, H. K. Kim; 1 ♂, same locality, 21. IV. 1991, K. S. Kim (kept in

National Science Museum, Tokyo (NSMT)); 1 ♂, same locality, 25. IV. 1987, H. K. Kim; 1 ♀, Kwangju, Namhansansŏng, 12. V. 1991, K. Y. Yeun (NSMT); 1 ♀, Namyangju-shi, P'alya-ri, 3. V. 1986, Y. S. Kim; 1 ♂, Kwangch'ŏn-ri, 29. IV. 1984, J. W. Lee. Kyŏngsangbuk-do: 1 ♀, Kyŏngsan-shi, Tae-dong, Yeungnam Univ., 6. V. 1987, S. M. Ryu; 1 ♂, Kyŏngju-gun, Janghang-ri, 11. IV. 1992, S. M. Ryu. Kyŏngsangnam-do: 1 ♀, Milyang, Sajap'yong, 5. V. 1992, S. H. Cha.

Distribution. Korea.

Remarks. This is a Korean endemic species hitherto known to occur in Kyŏnggi-do and Kangwon-do (Shinohara & Byun, 1993) and newly recorded here-with from Kyŏngsangbuk-do and Kyŏngsangnam-do. There is no definite host-plant records, but it may possibly be associated with *Quercus* (Shinohara & Byun, 1993).

Neurotoma sibirica Gussakovskij, 1935

Specimen examined. Kangwon-do: 1 ♀, Inje-gun, Tacamsan, 30. V. 1992, J. W. Lee.

Distribution. Korea, Russian Far East (East Siberia to Sakhalin), Japan.

Remarks. In Korea, this species is known to occur in Hamgyŏngbuk-do and Kangwon-do (Shinohara & Byun, 1993). The larva feeds on *Sorbaria sorbifolia* var. *stellipila*.

Onycholyda viriditibialis (Takeuchi, 1930)

Specimens examined. Kyŏnggi-do: 1 ♀, Iryong, 24. V. 1981, Y. I. Cho; 1 ♀, Sudong-ri, Ch'ungnyŏngsan, 6. IX. 1980, K. S. Jang; 1 ♀, Namhansansŏng, 2. VI. 1974, E. C. Lee. Chŏllabuk-do: 1 ♀, Sŏlch'ŏn-myŏn, Mujuguch'ŏndong, 21. V. 1983, Y. M. Jo. Kyŏngsangbuk-do: 1 ♀, Kimch'ŏn, Chikchisa, 4. VI. 1978, H. B. Kim. Kyŏngsangnam-do: 1 ♀, Hamyang, 5. VII. 1990, S. M. Ryu; 2 ♀, Milyang, Sajap'yong, 22. VI. 1993, H. K. Kim (one in NSMT); 1 ♂, Ch'ŏngdo-gun, Kajisan, 14. VI. 1989, S. M. Ryu.

Distribution. Korea, Russian Far East (Primorskij Kraj), Japan.

Remarks. This species has been recorded only from Hamgyŏngnam-do and Kyŏnggi-do (Shinohara & Byun, 1993), but now it is known to occur widely in Korea. The larva feeds on *Rubus crataegifolius*.

Onycholyda nigroclypeata Shinohara, 1987

Specimens examined. Kyŏnggi-do: 1 ♀, Sŏngnam, Changgok, 23. V. 1984, M. C. Kim. Chŏllabuk-do: 1 ♀, Tŏgyusan, 22. V. 1983, S. S. Han.

Distribution. Korea, Russian Far East (Khabarovskij Kraj, Primorskij Kraj), Northeast China.

Remarks. This species has been recorded from Kyönggi-do, Kangwon-do, Kyöngsangbuk-do and Hamgyöngnam-do (Shinohara & Byun, 1993) and this is the first record from Chöllabuk-do. The host-plant is unknown.

***Onycholyda odaesana* Shinohara & Byun, 1993**

Specimens examined. Kyönggi-do: 1 ♀, Namyangju-shi, P'alyari, 3. V. 1986, Y. S. Kim (NSMT); 1 ♀, Yangp'yöng-gun, Yongmunsan, 28. VI. 1992, M. L. Kim; 1 ♀, Namyangju-shi, Ch'önmasan, 12. V. 1991, Y. H. Kim; 1 ♀, P'och'ön, Wangbangsan, 2. VI. 1985, D. J. Jeun.

Distribution. Korea.

Remarks. This recently described species was known only from the holotype collected on Mt. Odaesan, Kangwon-do. The four specimens listed above represent the first record of this species from Kyönggi-do. The host-plant is unknown.

***Pamphilius leucocephalus* Takeuchi, 1938**

(Fig. 1)

Specimens examined. Kyönggi-do: 2 ♀, Pogwangsa, 10. V. 1980, A. & N. Shinohara (NSMT). Kangwon-do: 1 ♀, Mirugam (Puktaesa), 1300 m, Mt. Odaesan, 30. V. 1991, A. Shinohara (NSMT); 2 ♂, same locality, 30–31. V. 1992, A. Shinohara (NSMT); 3 ♂, same locality, 27–28. V. 1993, A. Shinohara (NSMT); 1 ♀, same locality, 6. VI. 1997, J.-W. Kim (kept in Seoul National University, Suwon); 1 ♀, Yanggu-gun, Kach'ilbong, 31. V. 1992, J. W. Lee.

Distribution. Korea [new record], Russian Far East (Primorskij Kraj), Japan.

Remarks. This peculiar species is known to occur in Japan (Takeuchi, 1938) and Primorskij Kraj (Zinovjev, 1992), and this is the first record from Korea. The host-plant is unknown.

Pamphilius leucocephalus (Fig. 1) is a rather small (length 8–9.5 mm in female, 7.5–8 mm in male) but robust species, very easily recognized on its creamy white (with yellow or orange tint in life) and black coloration. The antennae and legs are black and the venation and stigma are creamy white, with only the apical half of the stigma being black. It is also characterized by the short antenna, with the ratio of the 3rd to 4th segments about 1.5–2.0 : 1.0 in the female and 1.2–1.6 : 1.0 in the male, the thin and short 1st radial crossvein (1r) in the forewing, and the hind tibia possessing only two preapical spurs.

***Pamphilius kyutekparki* Shinohara, 1991**

Specimens examined. Kangwon-do: 1 ♂, T'aebaek-shi, Ch'öram 1-dong, 15. V. 1992, S. M. Ryu. Chöllabuk-do: 1 ♀, Sölch'ön-myön, Mujuguch'öndong, 10. VI.

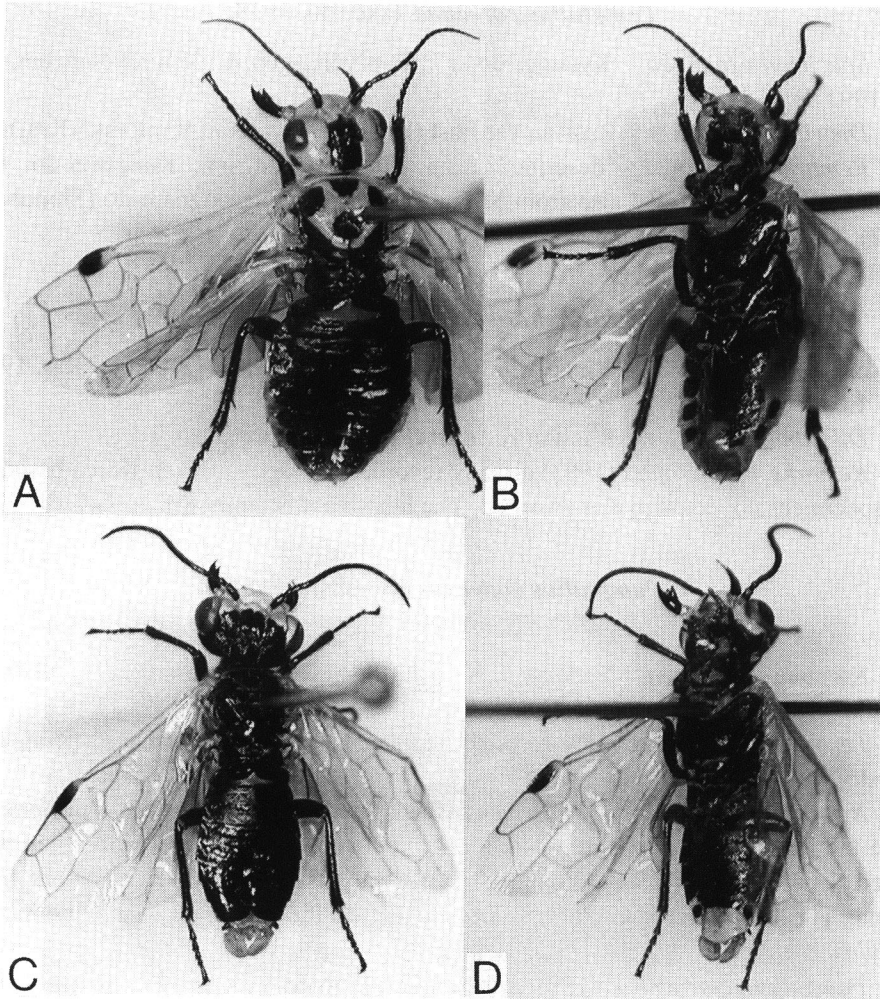


Fig. 1. *Pamphilius leucocephalus* Takeuchi, 1938, dorsal (A, C) and ventral (B, D) views. — A–B, ♀, Pogwangsa; Kyönggi-do; C–D, ♂, Odaesan, Kangwon-do.

1972, J. H. Ryu; 1 ♀, same locality, 9. VI. 1972, J. I. Kim.

Distribution. Korea, Russian Far East (Primorskij Kraj).

Remarks. This species is distributed in the Russian Far East (Primorskij Kraj) and Korea, where it has been recorded from Kyönggi-do and Kangwon-do (Shinohara, 1991). The host-plant is unknown.

***Pamphilius coreanus* Takeuchi, 1938**

Specimen examined. Kyōnggi-do: 1 ♀, Pup'yōng-gun, Ch'ōngp'yōngtaem, 14. VI. 1992, B. Y. H.

Distribution. Korea, Russian Far East (Khabarovskij Kraj, Primorskij Kraj).

Remarks. Originally described from Mt. Kumgangsan, Kangwon-do, this species has been recorded also from Kyōnggi-do and Kyōngsangnam-do (Shinohara, 1993). The host-plant is unknown.

***Pamphilius zhelochovtsevi zhelochovtsevi* Beneš, 1974**

Specimen examined. Kangwon-do: 1 ♂, Yanggu-gun, Kach'ilbong, 31. V. 1992, J. W. Lee.

Distribution. Korea, Russian Far East (Primorskij Kraj).

Remarks. Shinohara (1993) already recorded this species from Korea based on the specimens collected in Kangwon-do. The host-plant is unknown.

***Pamphilius convexus* Shinohara, 1988**

(Fig. 2)

Specimen examined. Seoul: 1 ♀, Kwach'ōn-shi, Ch'ōnggyesan, 12. V. 1990, H. J. Park.

Distribution. Korea [new record], Russian Far East (Khabarovskij Kraj, Primorskij Kraj).

Remarks. Shinohara (1988a) described this species based on four females from the Russian Far East and no additional collection records have since been published. The specimen from Seoul represents the first record of *P. convexus* from Korea. The host-plant is unknown, though one of the paratypes was captured on *Corylus*.

Pamphilius convexus (Fig. 2) is distinguished from the other Korean congeners by the following combination of characters: length 8–9 mm; black with pale yellow marking, no orange areas on the abdomen; head generally smooth with only sparse punctures and hairs, with the exception of rugosely punctate clypeus and gena; frons and facial crest strongly roundly convex; 3rd antennal segment about 1.2 times as long as 4th; cell C of forewing glabrous; sawsheath and its peg very large (Fig. 2 D).

***Pamphilius rhoae* Shinohara, 1988**

Specimen examined. Kangwon-do: 1 ♀, Yanggu-gun, Kach'ilbong, 31. V. 1992, J. W. Lee.

Distribution. Korea.

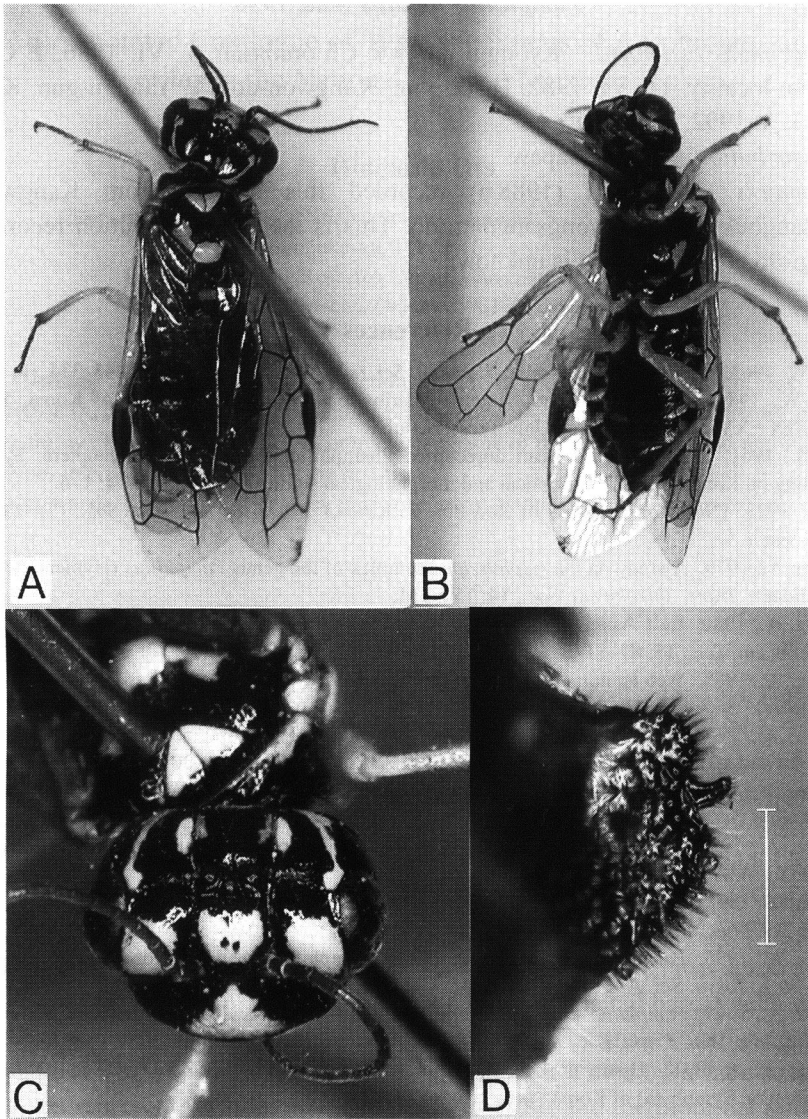


Fig. 2. *Pamphilius convexus* Shinohara, 1988, ♀, Mt. Ch'ŏnggyesan, Seoul. — A, Dorsal view; B, ventral view; C, head, dorsofrontal view; D, sawsheath, lateral view (scale 0.3 mm).

Remarks. This species was originally described on the basis of the specimens from Kwangnŭng, Kyŏnggi-do (Shinohara, 1988 b) and this is the first record of the species from Kangwon-do. The host-plant is unknown.

***Pamphilius lobatus* Maa, 1950**

Specimens examined. Kyōnggi-do: 1 ♀, Ch'ōnmasan, 7. VI. 1986, P. C. Sun; 1 ♂, same locality, 11. VI, 1982, H. D. Yim. Kangwon-do: 1 ♀, Yanggu-gun, Kach'il-bong, 31. V. 1992, J. W. Lee.

Distribution. Korea, Japan.

Remarks. Shinohara (1988b) recorded this species from Kangwon-do, Kyōngsangbuk-do and Kyōngsangnam-do. This is the first distribution record from Kyōnggi-do. The host-plant is unknown.

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