

Four New Species of Scolytidae (Coleoptera) from Korea

나무좀科 害蟲의 4 新種

Ho Yul Choo¹ and Kun Suk Woo²

秋 浩 烈¹ · 禹 建 錫²

ABSTRACT Following four scolytid species were collected from Korea and described as new to science: *Polygraphus nobuchii* sp. n., *Scolytogenes puerararae* sp. n., *Dryocoetes carpinivorus* sp. n., and *Hypothenemus seoulensis* sp. n.

KEY WORDS Scolytidae, *Hypothenemus*, *Polygraphus*, *Scolytogenes*, *Dryocoetes*

抄 錄 우리나라 나무좀의 분포상 조사과정에서 4新種을 발견하였기에 다음과 같이 命名, 기술 보고한다. *Polygraphus nobuchii* sp. n. (구상나무좀), *Scolytogenes puerararae* sp. n. (쨌나무좀), *Dryocoetes carpinivorus* sp. n. (환라산서어나무좀), *Hypothenemus seoulensis* sp. n. (가슴네빨나무좀)

檢 索 語 나무좀과, *Hypothenemus*, *Polygraphus*, *Scolytogenes*, *Dryocoetes*

The authors discovered four new species of Scolytidae in the course of surveying bark and ambrosia beetles in Korea. Descriptions of new species are given in this paper.

DESCRIPTION

1. *Polygraphus nobuchii* sp. n. (구상나무좀)
(신칭) (Figs. 1~4)

Body 2.7~3 mm, oblong, cylindrical; yellowish brown to black. Antennae and legs reddish brown.

Male: Frons convex with two big tubercles in middle, close and large punctures, with long introvent setae and longer and dense setae above epistoma; vertex shining, with small close punctures and longitudinal line in middle, antennal funicle 6-segmented, club oblong-oval, thick in middle, slightly tapered to apex, but not pointed; eyes biparted. Pro-

notum wider than long, constricted to anteriorly, close punctures intermixed with setae and scales, fine granules, fine granules on around anterior and lateral margin, basal margin slightly sinuate. Scutellum black, shining. Elytra a little wider than pronotum, longer than wide, slightly narrowed to posterior margin, anterior margin tuberculate, granulate around anterior part, striae not impressed, large punctures, interstriae wide, intermixed with short setae and irregular rows of scales, with fine tubercles, 2nd interstriae of declivity impressed, lateral junction part of the 3rd, 4th, and 5th abdominal segment black, hardened, look small nodules.

Female: Similar to the male except the following characters, i.e., frons looks less setae, shining without tubercles, antennal club narrower than that of male.

Holotype: ♂ 2.8 mm. 8. V. 1987, Mt. Hanla 1700 m, Jeju province.

Paratype: 8♂♂, 5♀♀, Same locality as the holotype.

Host: *Abietis koreana* Wils.

1 Dept. of Agricultural Biology, Col. of Agriculture, Gyeongsang Nat'l. University, Chinju, 660-701, Korea (경상대학교 농과대학 농생물학과)

2 Dept. of Agricultural Biology, Col. of Agriculture, Seoul Nat'l. University, Suwon, 440-744, Korea (서울대학교 농과대학 농생물학과)

Remarks: This new species is allied to *Polygraphus gracilis* Nijjima, but distinguished by the shape of antennal club and elytral declivity having fine tubercles.

2. *Scolytogenes puerarae* sp. n. (쨌나무좀)
(신칭) (Figs. 5~7)

Body 17 mm, oblong oval, reddish brown to black. Frons flat with close and rough punctures, sparse setae; antennal funicle 4-segmented, club roundly oval, 1st antennal suture strongly septate; eyes entire, oval. Pronotum round, convex, anterior margin with five large tubercles, anterior roundly narrowed, summit convex, anterior part with several retrovert teeth and these teeth make irregular rows laterally, lateral and posterior part finely punctate with dense scales, basal margin bordered, slightly sinuate. Scutellum black, triangular. Elytra as wide as pronotum, lateral margin parallel, rounded posteriorly, declivity roundly steep, striae not impressed with scales, interstriae intermixed with irregular rows of short and long scales and fine tubercles, posterior margin roundly tapered, declivity with uniserial scales and erect long scales looked uniserial.

Holotype: 1♀, 22. VIII. 1987, Sacheon, Gyeongnam province.

Paratypes: 10 exx. Same locality as the holotype.

Host: *Pueraria thunbergiana* Benth.

Remarks: This new species is allied to *Scolytogenes elongatus* (Nobuchi), but distinguished by flat frons, marginal tubercles of pronotum, and arrangement of tubercles.

3. *Dryocoetes carpiniworus* sp. n. (한라산서어나무좀) (신칭) (Fig. 8~10)

Body 3.6 mm, oblong, cylindrical, blackish brown.

Female: Frons weakly convex, surface shi-

ning, with granulate-punctate and sparse long setae from middle to above epistoma. Pronotum a little wider than long, widest in middle, base truncated, basal angles rounded, anterior roundly narrowed, most of anterior and lateral part with granulate-punctate, posterior part and summit punctate. Scutellum large, flat, blackish shining, shield-shape. Elytra wider than pronotum, lateral margin feebly widened posteriorly, posterior declivity rounded from the three-fourths, striae somewhat impressed, largely punctate, shining, rarely sparse setae, lateral part with long setae, other parts shining, declivity steep, flat, interstriae with a row of fine tuberculate-punctures, 2nd declivital interstriae impressed in middle, lower part elevated

Male: Similar to female but different from the following points, i.e., frons with long dense setae and declivital tubercles larger than those of female.

Holotype: 1♀, 8. V. 1987. Mt. Hanla, Jeju province.

Paratype: 1 ex. Same locality as the holotype.

Host: *Carpinus laxiflora* Bl.

Remarks: This new species is allied to *Dryocoetes hectographus* Reitter, but distinguished by elytral interstriae.

4. *Hypothenemus seoulensis* sp. n. (가슴네뿔나무좀) (신칭) (Figs. 11~13)

Body 2.2 mm, elongate oval, dark brown to black, usually black: Frons convex with somewhat coarse punctures in middle and lower areas, sparse and short setae in middle and longer setae above clypeus. Pronotum wider than long, widest before base, rounded anteriorly, anterior margin with four prominent tubercles, anterior part with several prominent retrovert tubercles, summit convex, dark brown, sparse and largely punctate, posterior

part with concentric setae without tubercles: Scutellum triangular: Elytra longer than wide, striae punctures with a row of short setae, interstriae with long setae, more and longer dense setae from the middle to declivity.

Holotype: 1♀, 25. VIII. 1987, Cheongyangri, Dongdaemum, Seoul.

Paratypes: 5 exx. Same locality as the holotype.

Remarks: This species looks the genus *Trypophloeus* in the tubercle arrangement of pronotum and similar to *Hypothenemus cosmorderoides* Murayama, but distinguished by the five antennal funicles, tubercle arrangement of pronotum, and weakly impressed striae.

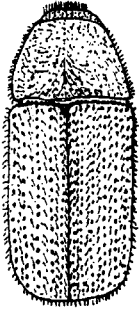
REFERENCES

- Blandford, W.F.H. 1983. The Scolytoplatypini, a new subfamily of Scolytidae Trans. Ent. Soc. London. pp.425~442.
- Blandford, W.F.H. 1984. The Rhynchophorous Coleoptera of Japan Part III. Scolytidae. Trans. Ent. Soc. London. pp.53~141.
- Choo, H.Y. 1983. Taxonomic studies on the Platypodidae and Scolytidae (Coleoptera) from Korea. Seoul Nat'l Univ. Ph. D thesis 128pp.
- Murayama, J. 1956. Polygraphinae (Coleoptera, Ipi-
dae) from the Northern half of Far East. Bull. Fac. Agr. Yamaguti Univ. 7 : 276~292.
- Murayama, J. 1957. Dryocoetinae (Coleoptera, Ipidae) from the Northern half of the Far East. Bull. Fac. Agr. Yamaguti Univ. 8 : 587~632.
- Murayama, J. 1958. Studies in the scolytid-fauna of the Northern half of the Far East (Coleoptera: Ipidae & Platypodidae) IV, new genera and new species. Bull. Fac. Agr. Yamaguti Univ. 10 : 927~936.
- Murayama, J. 1961. Scolytid-beetles from Niigata prefecture, Japan. Akitu 10 : 23~32.
- Nijijima, Y. 1941. Revision and Neubeschreibung der *Polygraphus*-Arten (Coleoptera, Ipidae) in Japan. Ins. Mats. 15 : 123~135.
- Nobuchi, A. 1967. Formosan Scolytoidea (Coleoptera). Bull. Gov. Exp. Sta. 207 : 11~30.
- Nobuchi, A. 1969. A comparative morphological study of the proventriculus in the adult of the superfamily Scolytoidea (Coleoptera). Bull. Gov. For. Exp. Sta. 224 : 39~110.
- Nobuchi, A. 1975. Twenty-one new species of Cryphalini from Japan (Coleoptera). Bull. Gov. For. Exp. Sta. 277 : 41~60.
- Nobuchi, A. 1979. Studies on Scolytidae XVIII. Bark beetles of tribe Polygraphini in Japan (Coleoptera, Scolytidae). Bull. For. & Prod. Res. Ins. 308 : 1~16.
- Wood, S.L. 1982. The bark and ambrosia beetles of North and Central America (Coleoptera; Scolytidae). a taxonomic monograph. Gre. Bas. Nat. Mem. 6 : 1359pp.

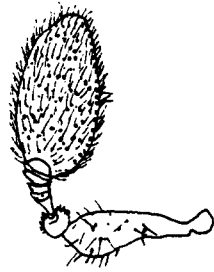
(Received September 30, 1988)

EXPLANATION OF FIGURES

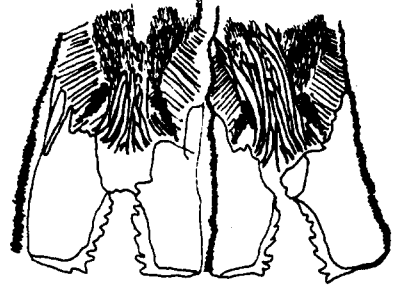
- Fig. 1.** Dorsal view of *Polygraphus nobuchii* sp. n.
2. Antenna of *Polygraphus nobuchii* sp. n.
3. Proventriculus of *Polygraphus nobuchii* sp. n.
4. Head and pronotum of *Polygraphus nobuchii* sp. n.
5. General shape of *Scolytogenes puerariae* sp. n.
6. Antenna of *Scolytogenes puerariae* sp. n.
7. Proventriculus of *Scolytogenes puerariae* sp. n.
8. Dorsal view of *Dryocoetes carpiniivorus* sp. n.
9. Lateral view of *Dryocoetes carpiniivorus* sp. n.
10. Proventriculus of *Dryocoetes carpiniivorus* sp. n.
11. Dorsal view of *Hypothenemus seoulensis* sp. n.
12. Antenna of *Hypothenemus seoulensis* sp. n.
13. Proventriculus of *Hypothenemus seoulensis* sp. n.



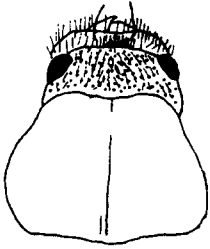
1



2



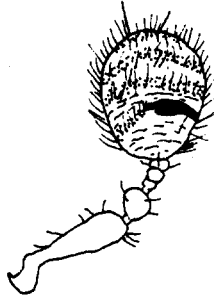
3



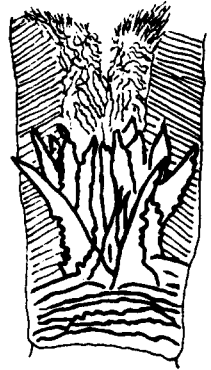
4



5



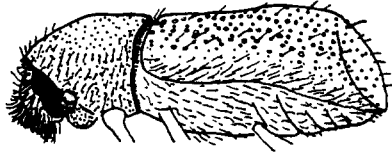
6



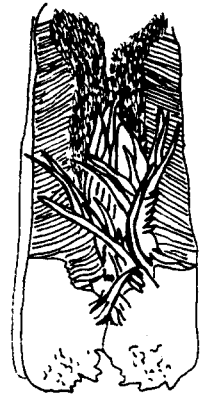
7



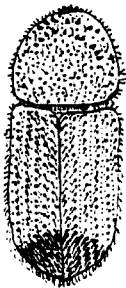
8



9



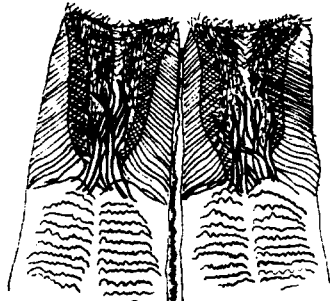
10



11



12



13