

## A Biological Note on *Cyphauleutes bifasciatus* (VOSS) (Coleoptera, Curculionidae, Ceutorhynchinae)

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*Cyphauleutes bifasciatus* (VOSS, 1958) belonging to the tribe Cnemogonini, subfamily Ceutorhynchinae (COLONNELLI, 2004) is known to occur in Japan, Korea, and China (KOROTYAEV & HONG, 2004). Although this species has been collected on some occasions in Japan and Korea, respectively (MORIMOTO *et al.*, 1977; HIRANO, 2004; HONG *et al.*, 2000), no information on its life history has been reported until now.

Through our observations in Tokyo, Japan in early summer of 2011, we confirmed that *C. bifasciatus* is associated with an herbaceous plant that belongs to the family Primulaceae. Here we report our findings on the ecology of *C. bifasciatus* as the first record of its host plant association.

All specimens recorded herein were identified by the first author and preserved in the National Institute for Agro-Environmental Sciences (NIAES). The host plant was identified by the second author. Plant nomenclature followed YONEKURA and KAJITA (2003). We thank Prof. Emeritus Dr. K. MORIMOTO (Kyushu University) for his kind suggestion on the literature cited and Ms. N. NAKAHARA (Tsukuba) for her assistance in ecological observations.

### *Cyphauleutes bifasciatus* (VOSS, 1958)

*Phytobiomorphus bifasciatus* VOSS, 1958, 65 (in key; type locality: Kuantun, China). – MORIMOTO *et al.*, 1977, 191 (a record from Japan); MORIMOTO, 1989, 514 (in catalog). – HONG *et al.*, 1999, 168 (records from Korea).

*Cyphauleutes bifasciatus*: KOROTYAEV, 1992, 57 (from *Phytobiomorphus*). – COLONNELLI, 2004, 74 (in catalog). – KOROTYAEV & HONG, 2004, 162.

*Cyphauleutes alternans* (lapsus; nec VOSS, 1958): HONG *et al.*, 2000, 108 (diagnosis).

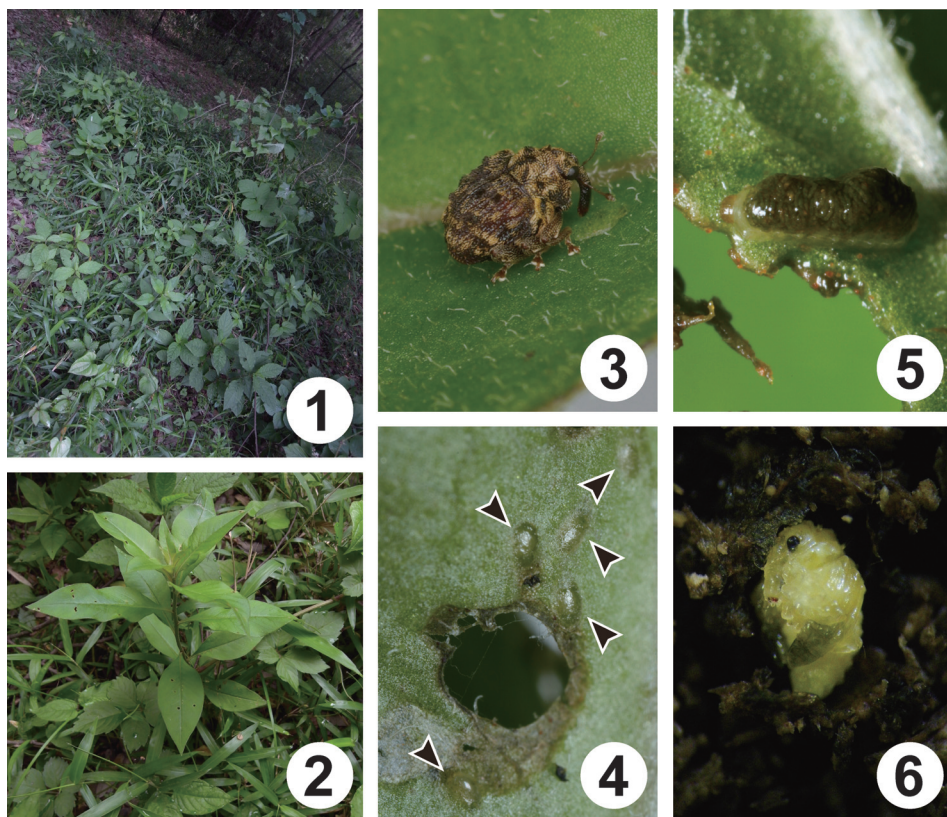
*Cyphauleutes alternans* (nec VOSS, 1958): YOSHITAKE *et al.*, 2004, 103 (in catalog).

*Specimens examined.* 1 ex. (Specimen No. 24-0473670, NIAES), Nagaike-kouen, Bessho, Hachiouji, Tokyo, Honshu, Japan, 8-V-2011, H. TOSAKA leg., on *L. clethroides*; 2 exs. (Specimen Nos. 24-0473661, 24-0473662, NIAES), same locality, 3-VI-2011, H. TOSAKA leg., on *L. clethroides*; 8 exs. (Specimen Nos. 24-0473663~24-0473670, NIAES), same locality, 3-VI-2011, H. YOSHITAKE leg., collected as eggs in *L. clethroides* leaves.

*Distribution.* Japan (Honshu, Kyushu), Korea (Central, South), China (Kuantun).

*Host plant.* *Lysimachia clethroides* (Primulaceae).

*Biological note.* In our observations in Hachiouji City, Tokyo from May to July, 2011, *Cyphauleutes bifasciatus* inhabited a secondary broad-leaved forest dominated by *Quercus serrata* (Fagaceae) (Fig. 1) and was associated with *Lysimachia clethroides* growing on shaded floors of forest margins (Fig. 2). Adults of *C. bifasciatus* (Fig. 3), which were not numerous in the locality, were found on the leaves of *L. clethroides*. Female adults laid their eggs into *L. clethroides* leaves (Fig. 4) and hatched larvae fed and grew on the leaves, carrying feces above their backs (Fig. 5). The full-grown larvae pupated singly in a cocoon formed in the soil (Fig. 6). Under laboratory conditions, teneral adults emerged from their cocoons from late June to early July, and then fed on the leaves of their host. The voltinism of this species is not clear at this time, although this species may be univoltine, as are most other ceutorhynchine weevils from temperate regions.



Figs. 1–6. *Cyphauletes bifasciatus*. — 1, A habitat in Hachioji, Tokyo, Honshu, Japan; 2, the host plant, *Lysimachia clethroides*; 3, an adult on a leaf of *L. clethroides*; 4, a leaf of *L. clethroides* containing weevil eggs (arrows); 5, a larva on a leaf of *L. clethroides*; 6, a pupa in a cocoon formed in the soil.

### References

- COLONNELLI, E., 2004. Catalogue of Ceutorhynchinae of the World, with a Key to Genera (Insecta: Coleoptera: Curculionidae). 124 pp. Argania editio, Barcelona.
- HIRANO, Y., 2004. Coleoptera. pp. 335–835. In Kanagawa Konchû Danwakai (ed.), *Insect Fauna of Kanagawa, II* (Megaloptera, Raphidioidea, Neuroptera, Coleoptera, Strepsiptera). 315–836 pp. Kanagawa Konchû Danwakai, Odawara.
- HONG, K.-J., A. B. EGOROV & B. A. KOROTYAEV, 2000. Illustrated catalogue of Curculionidae in Korea (Coleoptera). In PARK, K. T. (ed.), *Insects of Korea*, 5. 340 pp. Korea Research Institute of Bioscience and Biotechnology & Center for Insect Systematics, Korea.
- , ——— & K.-S. WOO, 1999. Taxonomic review of Korean Ceutorhynchinae (Coleoptera, Curculionidae), II. Subtribes Coelioidina, Ceutorhynchina, Hypurina, Mecysmoderina, and tribe Orobolini. *Ins. Koreana*, **16**: 163–195.
- KOROTYAEV, B. A. 1992. [Materials for the curculionid fauna of the subfamily Ceutorhynchinae (Coleoptera, Curculionidae) from the Indo-Malayan region and southeastern part of the Palaearctic region.] *Proc. zool. Inst., St. Petersburg*, **245**: 50–102. (In Russian.)
- & K.-J. HONG, 2004. A revised list of the weevil subfamily Ceutorhynchinae (Coleoptera; Curculionidae) of the Korean fauna, with contribution to the knowledge of the fauna of neighbouring countries. *J. Asia-Pacific Entomol.*, **7**: 143–169.
- MORIMOTO, K. 1989. Curculionoidea. pp. 485–538. In Y. HIRASHIMA (superv.), *A Check List of Japanese Insects*, I. xi +

- 540 pp. Entomological Laboratory, Kyushu University, Fukuoka. (In Japanese.)
- MORIMOTO, K., Z. KURANAGA, A. IWASAKI & S. YOSHIDA, 1977. Insects of Mt. Tatsutayama. pp. 159–200. *In* Kyushu Branch Station of the Government Forest Experiment Station (ed.), [*Commemorative publication of the thirty years history, the Kyushu Branch Station of the Government Forest Experiment Station*]. 242 pp. Kyushu Branch Station, Government Forest Experiment Station, Ministry of Agriculture and Forestry, Kumamoto. (In Japanese.)
- VOSS, E. 1958. Ein Beitrag zur Kenntnis der Curculioniden im Grenzgebiet der orientalischen zur paläarktischen Region (Col. Curcul.). *Decheniana*, **5**: 1–139.
- YONEKURA, K., & T. KAJITA, 2003. BG Plants. Available from: <http://bean.bio.chiba-u.jp/bgplants/ylistmain.html> (15 August 2011).
- YOSHITAKE, H., H. KOJIMA & K. MORIMOTO, 2004. Ceutorhynchinae. pp. 100–106. *In* KOJIMA, H., & K. MORIMOTO (eds.), An online checklist and database of the Japanese weevils (Insecta; Coleoptera; Curculionoidea) (excepting Scolytidae and Platypodidae), *Bull. Kyushu Univ. Mus., Fukuoka*, (2): 33–147.

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