

Discovery of *Bagous ryukyuensis* O'BRIEN et MORIMOTO (Coleoptera, Curculionidae) from Honshu, Japan, with the First Host Record

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Bagous ryukyuensis O'BRIEN et MORIMOTO belonging to the subfamily Bagoinae was described on the basis of the type series caught by a light trap on Iriomotejima Is., the Ryukyus, Japan (O'BRIEN & MORIMOTO, 1994). No information on its host plant association is available. As far as we know, no additional record of *B. ryukyuensis* has been reported after the original description.

In summer of 2011, we collected a number of specimens of a *Bagous* species from paddy rice fields in several localities in Kantou District, Honshu, Japan. We have concluded that it is *B. ryukyuensis*, based on detailed morphological examination including structures of male genitalia. In addition, through our field surveys, we could gather fundamental ecological information on *B. ryukyuensis*. Here we are going to report new distributional records of *B. ryukyuensis* from Kantou District, as well as its biological information including host plant association.

Specimens recorded herein were identified by the authors, and preserved mostly in the National Institute for Agro-Environmental Sciences (NIAES) and partially in the private collection of the second author. The host plant was identified by the first author. Plant nomenclature followed YONEKURA and KAJITA (2003). We thank Prof. Emeritus Dr. K. MORIMOTO (Kyushu University) for his constant guidance and Ms. N. NAKAHARA (Tsukuba) for her assistance in ecological observations.

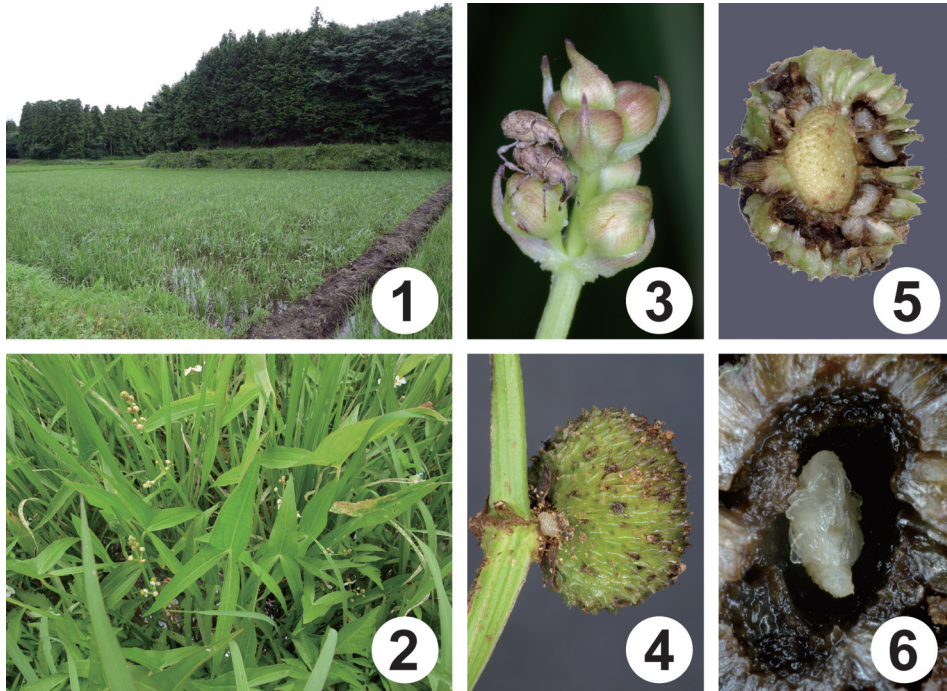
Bagous ryukyuensis O'BRIEN et MORIMOTO, 1994

Bagous ryukyuensis O'BRIEN et MORIMOTO, 1994, 18 (type locality: "Japan, Ryukyu Islands, Iriomote Jima [Island], Sonae"). — KOJIMA & MORIMOTO, 2004, 96 (in catalog).

Specimens examined. JAPAN: HONSHU. 10 exs. (Specimen Nos. 24-0473671~24-0473680, NIAES), Teshirogi, Tsukuba, Ibaraki, 3-VII-2011, H. YOSHITAKE leg., on *S. trifolia*. 57 exs. (Specimen Nos. 24-0473681~24-0473737, NIAES), Funako, Miho, Inashiki, Ibaraki, 3-VII-2011, H. YOSHITAKE leg., on *S. trifolia*. 16 exs. (Specimen Nos. 24-0473738~24-0473753, NIAES), Koike, Ami, Inashiki, Ibaraki, 25-VI-2011, H. YOSHITAKE leg., on *S. trifolia*; 164 exs. (Specimen Nos. 24-0473754~24-0473917, NIAES), same locality, 25-VI-2011, H. YOSHITAKE leg.; 78 exs. (Specimen Nos. 24-0473918~24-0473995, NIAES), same locality, 28-VI-2011, H. YOSHITAKE leg.; 8 exs. (Specimen Nos. 24-0473996~24-0474003, NIAES), same locality, 3-VII-2011, H. YOSHITAKE leg.; 31 exs., same locality, 3-VII-2011, A. YOSHIDA leg.; 2 exs. (Specimen Nos. 24-0474004, 24-0474005, NIAES), same locality, 8-VII-2011, H. YOSHITAKE leg., on *S. trifolia*. 29 exs. (Specimen Nos. 24-0474006~24-0474034, NIAES), Kouya, Moriya, Ibaraki, 24-VII-2011, H. YOSHITAKE leg., on *S. trifolia*. 23 exs. (Specimen Nos. 24-0474035~24-0474047, NIAES), Tsukuriya, Inzai, Chiba, 9-VII-2011, A. YOSHIDA leg., on *S. trifolia*. 8 exs., Momura, Inagi, Tokyo, 31-VII-2011, A. YOSHIDA leg., on *S. trifolia*. 21 exs. (Specimen Nos. 24-0474048~24-0474058, NIAES), a sandbank in Sagamigawa River, Ooshima, Midori-ku, Sagamihara, Kanagawa, 23-VII-2011, A. YOSHIDA leg., on *S. trifolia*.

Distribution. Japan (Honshu, Ryukyus).

Host plant. *Sagittaria trifolia* (Alismataceae).



Figs. 1–6. *Bagous ryukyensis*. — 1, A habitat in Ami, Ibaraki, Honshu, Japan; 2, the host plant, *Sagittaria trifolia*; 3, a pair of adults on a flower bud of *S. trifolia*; 4, a fruit of *S. trifolia* infested by weevil larvae; 5, larvae in a fruit of *S. trifolia*; 6, a pupa in a fruit of *S. trifolia*.

Biological note. In all localities surveyed, *Bagous ryukyensis* was associated with *Sagittaria trifolia* in paddy rice fields (Figs. 1, 2). In Koike, Ami, Ibaraki Prefecture, a number of adults of *B. ryukyensis* were observed feeding and copulating on the leaves, stems, flower buds, flowers, and fruits of *S. trifolia* (Fig. 3), of which they were most abundant on the flower buds. Female adults laid their eggs in the unripe fruits of *S. trifolia*. Hatched larvae grew in and fed on the fruits (Figs. 4, 5) and pupated in the fruits when they fully matured (Fig. 6). In our observations, five to eight eggs and/or larvae were found in a fruit. Under laboratory conditions, molting took place two to three days after pupation, and teneral adults emerged from the ripe fruits from late July to early August and then fed on various parts of their host. The voltinism of this species is not clear at this time.

References

- KOJIMA, H., & K. MORIMOTO, 2004. An online checklist and database of the Japanese weevils (Insecta; Coleoptera; Curculionoidea) (excepting Scolytidae and Platypodidae), *Bull. Kyushu Univ. Mus., Fukuoka*, (2): 33–147.
- O'BRIEN, C. W., & K. MORIMOTO, 1994. Systematics and evolution of weevils of the genus *Bagous* GERMAR (Coleoptera: Curculionidae) II. Taxonomic treatment of the species of Japan. *Esakia, Fukuoka*, (34): 1–74.
- YONEKURA, K., & T. KAJITA, 2003. BG Plants. Available from: <http://bean.bio.chiba-u.jp/bgplants/ylistmain.html> (15 August 2011).

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