

A List of New World Weevils (Coleoptera: Curculionidae) Intercepted at the Kobe Plant Protection Station, Japan

Author(s): Hiraku Yoshitake Robert S. ANderson Masaaki Genka Source: The Coleopterists Bulletin, 68(3):628-630. 2014. Published By: The Coleopterists Society DOI: <u>http://dx.doi.org/10.1649/072.068.0330</u> URL: http://www.bioone.org/doi/full/10.1649/072.068.0330

BioOne (<u>www.bioone.org</u>) is a nonprofit, online aggregation of core research in the biological, ecological, and environmental sciences. BioOne provides a sustainable online platform for over 170 journals and books published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Web site, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at <u>www.bioone.org/page/</u><u>terms_of_use</u>.

Usage of BioOne content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

SCIENTIFIC NOTE

A LIST OF NEW WORLD WEEVILS (COLEOPTERA: CURCULIONIDAE) INTERCEPTED AT THE KOBE PLANT PROTECTION STATION, JAPAN

HIRAKU YOSHITAKE National Institute for Agro-Environmental Sciences, 3-1-3 Kannondai Tsukuba, Ibaraki 305-8604, JAPAN

ROBERT S. ANDERSON Research and Collections Division, Canadian Museum of Nature, PO Box 3443 Station D, Ottawa, ON K1P 6P4, CANADA

AND

MASAAKI GENKA Narita Sub-station, Yokohama Plant Protection Station, 2159 Tennamino Komaino, Narita, Chiba 282-0021, JAPAN

Plant quarantine is an important measure against alien species. Weevils (Curculionoidea) are often intercepted, but many are difficult to identify due to the absence of modern taxonomic literature. Genka and Yoshitake (2014) studied 219 unidentified weevil interceptions at the Kobe Plant Protection Station, Hyogo, Japan. They analyzed chronological changes of dominant taxonomic groups and provided a list of the examined specimens. However, many could not be identified to species and some not even to genus. Here we provide a revised list of the 15 New World species included in this previous study. All specimens were found during plant inspections and thus bear data on plant association.

Apinocis deplanatus (Casey) (Baridinae: Apostasimerini). 1 ex., USA \rightarrow Kobe port, Hyogo, Honshu, Japan, from white oak log, 24.X.2003, Y. Nomura (identified by J. Prena). This species is widely distributed in the USA (Buchanan 1932). The examined specimen, captured from a log of *Quercus* sp. belonging to the section *Quercus* of the subgenus *Quercus* (Fagaceae), was also listed and figured in Genka and Yoshitake (2014: 19, fig. 29).

Zygops mexicanus Boheman (Conoderinae: Zygopini). 1 ex., Mexico \rightarrow Kobe port, Hyogo, Honshu, Japan, from shitan log, 2.V.1997, S. Tomomatsu (identified by HY and RSA). This species is widespread in Central and South America (O'Brien and Wibmer 1982). The examined specimen, captured from rosewood (*Dalbergia* sp.; Fabaceae), was listed and figured as "*Zygops* sp." in Genka and Yoshitake (2014: 20, fig. 43). **Cossonus impressifrons Boheman** (Cossoninae: Cossonini). 1 ex., San Pedro port, USA \rightarrow Kobe port, Hyogo, Honshu, Japan, from *Paulownia* log, 11.VII.2012, K. Tanaka (identified by RSA and HY). This species is known from eastern Canada and the eastern USA (O'Brien and Wibmer 1982; Bousquet *et al.* 2013) and has been found under the bark of dead chestnuts in Pennsylvania (van Dyke 1915). The examined specimen was listed and figured as "*Macrorhyncolus* sp." in Genka and Yoshitake (2014: 20, fig. 48).

Catolethrus longulus Boheman (Cossoninae: Cossonini). 1 ex., Guatemala \rightarrow Kansai airport, Osaka, Honshu, Japan, from young *Tillandsia juncea*, 8.VIII.2005, M. Okamoto (identified by RSA and HY). This species is widespread in Central and South America (O'Brien and Wibmer 1982). The examined specimen, captured from young *Tillandsia juncea* (Ruiz & Pav.) Poir. (Bromeliaceae), was listed as "Cossonini gen. sp." in Genka and Yoshitake (2014: 20, fig. 55).

Rhyncolus brunneus Mannerheim (Cossoninae: Rhyncolini). 1 ex., Everett, USA \rightarrow Takuma port, Kagawa, Shikoku, Japan, from Douglas fir log, 15.V.1979, T. Tanabe (identified by RSA and HY). This species is known to occur widely in Canada and the USA (O'Brien and Wibmer 1982; Bousquet *et al.* 2013). The examined specimen, captured from a log of *Pseudotsuga menziesii* (Mirb.) Franco (Pinaceae), was listed and figured as "*Cossonus* sp." in Genka and Yoshitake (2014: 20, fig. 46).

Himatium errans LeConte (Cossoninae: Rhyncolini). 1 ex., Vancouver, Canada \rightarrow Kobe

port, Hyogo, Honshu, Japan, from black walnut log, 16.X.1971, Anonymous (identified by HY and RSA). This species is known to occur in eastern Canada and the eastern USA (O'Brien and Wibmer 1982; Bousquet *et al.* 2013). The examined specimen, captured on a log of *Juglans nigra* L. (Juglandaceae), was listed and figured as "*Himatium* sp." in Genka and Yoshitake (2014: 20, fig. 56). It has slightly wider elytra than the typical form of the species.

Cryptorhynchus fuscatus LeConte (Cryptorhynchinae: Cryptorhynchini). 1 ex., Baltimore, USA \rightarrow unknown port, Japan, from black walnut log, 18.VI.1969, S. Ikeda (identified by RSA and HY). This species is known to occur in eastern Canada and eastern USA (O'Brien and Wibmer 1982; Bousquet *et al.* 2013). The examined specimen, captured from a log of *J. nigra*, was listed and figured as "*Cryptorhynchus* sp.1" in Genka and Yoshitake (2014: 21, fig. 67). The origin was noted by mistake as "Baltimoke" in the literature.

Gerstaeckeria alternata Pierce (Cryptorhynchinae: Cryptorhynchini). 1 ex., USA \rightarrow Kobe port, Hyogo, Honshu, Japan, from young Cactus sp., 20.II.1967, H. Takada (identified by C. W. O'Brien). This species has hitherto been known from Arizona, USA (O'Brien 1970). The specimen examined was listed and figured as "Gerstaeckeria sp.1" in Genka and Yoshitake (2014: 21, fig. 69).

Gerstaeckeria knullorum Sleeper (Cryptorhynchinae: Cryptorhynchini). 1 ex., USA \rightarrow Nagoya port, Aichi, Honshu, Japan, from young *Cactus* sp., 26.VII.1972, H. Nagaki (identified by C. W. O'Brien). The specimen examined was listed and figured as "*Gerstaeckeria* sp.2" in Genka and Yoshitake (2014: 21, fig. 70). According to C. W. O'Brien (2014, personal communication), it fits *G. knullorum* described from the Huachuca Mts., Arizona, USA (Sleeper 1954) but is larger than other specimens he has examined.

Anthonomus (Anthonomus) juniperinus (Sanborn) (Curculioninae: Anthonomini). 1 ex., USA \rightarrow Kansai airport, Osaka, Honshu, Japan, from cut flower of *Juniperus* sp. (Cupressaceae), 1.XI.2007, M. Mizuta (identified by RSA and HY). This species is widely distributed in the USA and is known to be associated with *Juniperus virginiana* L. (Clark and Burke 2010). The examined specimen, captured from a *Juniperus* flower, was listed and figured as "Anthonomus sp. 2" in Genka and Yoshitake (2014: 21, fig. 89).

Listronotus bonariensis (Kuschel) (Cyclominae: Listroderini). 1 ex., USA \rightarrow Kobe port, Hyogo, Honshu, Japan, from rye grass hay, 10.XII.1967, K. Ozaki (identified by HY and RSA). This species, which originates in South America, has been recorded from Argentina, Bolivia, Brazil, Chile, Uruguay, New Zealand, and Australia, and is known to feed on various weedy plants, such as pasture grasses and cereals (EPPO 2013). As far as we know, this species has never been recorded from the USA to date. The specimen examined was listed and figured as *"Listronotus ?bonariensis* (Kuschel)" in Genka and Yoshitake (2014: 22, fig. 114).

Steremnius carinatus (Boheman) (Molytinae: Molytini). 1 ex., USA \rightarrow Kansai airport, Osaka, Honshu, Japan, from young Juniperus sp., 1.XII.1996, K. Fujita (identified by HY and RSA). This species is known to occur in western Canada and western USA (O'Brien and Wibmer 1982; Bousquet *et al.* 2013). The examined specimen, captured from a young Juniperus sp., was listed and figured in Genka and Yoshitake (2014: 25, fig. 170).

Pissodes striatulus (F.) (Molytinae: Pissodini). 1 ex., USA \rightarrow unknown port, Japan, Ex Hemlock log, 2.VI.1968, Wakayama, captured as pupa, emerged on 6. VI. 1968 (identified by D. W. Langor). The species is known to occur widely in Canada and the USA (O'Brien 1989). This examined specimen, reared from a log of *Tsuga* sp. (Pinaceae), was listed as "*Pissodes* sp.3" and figured by mistake as "*Pissodes* sp.2" in Genka and Yoshitake (2014: 25, fig. 172).

Pissodes nemorensis Germar (Molytinae: Pissodini). 1 ex., USA \rightarrow Sakai-minato port, Tottori, Honshu, Japan, from hemlock log, 12.V.1964, S. Sugahara. 1 ex., Astoria, USA \rightarrow Kishiwada port, Osaka, Honshu, Japan, from spruce log, 23.I.1971, S. Tomomatsu (identified by D. W. Langor). This species is known to occur in eastern Canada and eastern USA (O'Brien 1989). The specimen, which was captured at the Sakai-minato port on a log of Tsuga sp., was listed as "Pissodes sp.2" and figured by mistake as "Pissodes sp.3" in Genka and Yoshitake (2014: 25, fig. 173). Another specimen, which was captured at Kishiwada port from Picea sp. (Pinaceae), was listed and figured as "Pissodes sp.4" in Genka and Yoshitake (2014: 25, fig. 174).

Heilipodus sp. (Molytinae: Hylobini). 1 ex., Belem, Brazil \rightarrow Kobe port, Hyogo, Honshu, Japan, from jutai log, 15.III.1973, Anonymous (identified by RSA and C. W. O'Brien). According to a key provided by Kuschel (1955), this species fits diagnostic characters of *Heilipodus* Kuschel, a South American genus comprising more than 80 species (Wibmer and O'Brien 1986). We have been unable to identify the specimen to the species level. The examined specimen, captured from *Hymenaea* sp. (Fabaceae), was listed and figured as "Molytinae gen. sp.8" in Genka and Yoshitake (2014: 25, fig. 182).

ACKNOWLEDGMENTS

We would like to express our cordial thanks to D. W. Langor (Edmonton, Canada), J. Prena (Rostock, Germany), and C. W. O'Brien (Green Valley, Arizona, USA), who helped us with the species identifications.

References Cited

- Bousquet, Y., P. Bouchard, A. E. Davies, and D. S. Sikes. 2013. Checklist of Beetles (Coleoptera) of Canada and Alaska. Second Edition. Pensoft Series Faunistica (109). Pensoft Publishers, Sofia, Bulgaria.
- Buchanan, L. L. 1932. A new barine curculionid injurious to sugarcane in Louisiana with synopses of *Anacentrinus* and *Oligolochus* (Coleop.). Annals of the Entomological Society of America 25(2): 328–336.
- Clark, W. E., and H. R. Burke. 2010. The Anthonomus juniperinus group, with descriptions of two new species (Coleoptera: Curculionidae). Insecta Mundi 0119: 1–10.
- **EPPO. 2013.** EPPO A1 List of pests recommended for regulation as quarantine pests. Available from: www.eppo.int/QUARANTINE/listA1.htm (Accessed 9 July 2014).
- Genka, M., and H. Yoshitake. 2014. Chronological change of taxonomic composition of exotic weevils (Coleoptera, Curculionoidea) intercepted

by Japanese plant quarantine. Research Bulletin of the Plant Protection Service Japan 50: 17–46. (In Japanese, with English title and abstract)

- Kuschel, G. 1955. Nuevas sinonimias y anotaciones sobre Curculionoidea (Coleoptera). Revista Chilena de Entomología 4: 261–312.
- O'Brien, C. W. 1970. A taxonomic revision of the genus *Gerstaeckeria* north of Mexico (Coleoptera: Curculionidae). Annals of the Entomological Society of America 63(1): 255–272.
- O'Brien, C. W., and G. J. Wibmer. 1982. Annotated checklist of the weevils (Curculionidae sensu lato) of North America, Central America, and the West Indies (Coleoptera: Curculionoidea). Memoirs of the American Entomological Institute 34: ix–382.
- O'Brien, L. F. 1989. A catalog of Coleoptera of America North of Mexico. Curculionidae: Pissodinae. USDA Agriculture Handbook (529-143d). USDA-ARS, Washington, DC.
- Sleeper, E. L. 1954. New Rhynchophora II (Coleoptera, Curculionidae). The Ohio Journal of Science 54(3): 180–186.
- van Dyke, E. C. 1915. The species of *Cossonus* Clairv. (Coleoptera) of America north of Mexico. Bulletin of the Brooklyn Entomological Society 10(1): 1–23.
- Wibmer, G. J., and C. W. O'Brien. 1986. Annotated checklist of the weevils (Curculionidae sensu lato) of South America (Coleoptera: Curculionoidea). Memoirs of the American Entomological Institute 39: xvi–563.

(Received 21 March 2014; accepted 18 July 2014. Publication date 18 September 2014.)