

Acknowledgment.—I thank Lee Jang-Hoon and Lee Goen-Hyoung (USDA-ARS, Asian Parasite Lab, Seoul) for photography and discussion; and James Johnson (University of Idaho, Moscow), David Reed (USDA-ARS, Stillwater, Oklahoma) and Lee Jang-Hoon for reviewing the manuscript.

Robert W. Pemberton, *Asian Parasite Laboratory, U.S. Dept. of Agriculture—Agricultural Research Service, Seoul, Korea (% American Embassy, APO San Francisco 96301).*

Received 12 December 1989; accepted 8 January 1990.

PAN-PACIFIC ENTOMOLOGIST
66(2): 174–175, (1990)

Scientific Note

DESTRUCTION OF ELECTRICAL EQUIPMENT BY *SOLENOPSIS XYLONI* McCOOK (HYMENOPTERA: FORMICIDAE)

Many ant species, especially the red imported fire ant (*S. invicta* Buren), attack and destroy electrical equipment (MacKay, W., S. Majdi, S. B. Vinson & C. Messer. 1989. Prevention of fire ant damage to signal control. Research Report 1135-2F, Texas Transportation Institute; Vinson, S. B. & W. MacKay (in press). Effects of the fire ant, *Solenopsis invicta*, on electrical equipment. In Vander Meer, R. & K. Jaffe (eds.). Applied myrmecology, a world perspective. Westview Press). We have demonstrated that ants are attracted to electrical fields generated by such equipment (MacKay et al. 1989). We have found that a native ant, the southern fire ant *S. xyloni* McCook, also causes extensive damage to electrical installations in southern California. This species has been previously reported to cause damage to electrical equipment in Texas (Eagleson, C. 1940. J. Econ. Entomol., 33: 700).

We evaluated damage caused by *S. xyloni* in Monrovia and Temple City, Los Angeles Co., California. The cities of San Dimas and Montclair, in southern California, have reported similar problems. Ants enter the electrical “pull boxes” which contain traffic signal wiring, and remove insulation from wires, causing shorts and signal failure. Most damage is on the load side wiring (120 VAC), and is very costly.

Solenopsis invicta also removes wire insulation, destroys relay switches in signal control cabinets and even enters traffic light housings, but is not directly attracted to the insulation on the wire. We tested seven types of wire (used in traffic control cabinets in Texas) that were known to be heavily attacked by ants (MacKay et al. 1989); insulation on some of these wires was made from a vegetable oil base.

Weighed pieces of wire (lacking electrical current) were placed in laboratory and field colonies of *S. invicta* in eastern Texas, but none lost significant mass during one year. Apparently the ants do not mistake insulation for a food source, or consume the insulation. The attractiveness of electrical fields may cause *S. invicta* to strip insulation from wires. Apparently *S. xyloni* acts similarly.

Acknowledgment.—Research was supported by the Texas State Department of Highways and Public Transportation and the California Department of Food and Agriculture. Publication number TA-24922, Texas Agricultural Experiment Station.

William P. MacKay,¹ David Sparks² and S. Bradleigh Vinson,¹ ¹ *Department of Entomology, Texas A&M University, College Station, Texas 77843;* ² *Southern California Edison, 1440 California Ave., Monrovia, California 91016.*

Received 25 September 1989; accepted 9 February 1990.

PAN-PACIFIC ENTOMOLOGIST
66(2): 175–176, (1990)

Scientific Note

CONFIRMATION OF *HEDYSARUM BOREALE* NUTTALL (LEGUMINOSAE) AS A HOST PLANT FOR *ACANTHOSCELIDES FRATERCULUS* (HORN) (COLEOPTERA: BRUCHIDAE)

I have recently confirmed that the seed beetle, *Acanthoscelides fraterculus* (Horn), uses Utah sweet vetch, *Hedysarum boreale* Nuttall (Leguminosae) as a host plant. This beetle is polyphagous, using a wide range of host plants in the western United States. The use of *H. boreale* by *A. fraterculus* was previously reported only once (Riley, C. V. & L. O. Howard. 1892. *Insect Life*, 5: 165–166); other authors (Cushman, R. A. 1911. *Jour. Econ. Entomol.*, 4: 489–510; Johnson, C. D. 1970. *Univ. Calif. Publ. Entomol.*, 59: 1–116; Zacher, F. 1952. *Zeitschrift Angew. Entomol.*, 33: 460–480) have cited the Riley & Howard record, but have never confirmed the use of this host. I had previously collected several seed lots of this plant from Arizona and Colorado but have not reared *A. fraterculus* or other bruchids from them. I, therefore, erroneously believed Riley & Howard's record to be a misidentification of either the beetle or the host plant. Because *Hedysarum boreale* is one of several plants involved in current research projects aimed at reclamation and revegetation of disturbed lands and deteriorated ranges in Rio Blanco County, Colorado, such attempts to use it in the replantings must now consider the potential seed loss to this bruchid.

Acknowledgment.—The beetles were sent to me for identification by B. C.



Mackay, W P, Sparks, D, and Vinson, S. Bradleigh. 1990. "Destruction of electrical equipment by *Solenopsis xyloni* McCook (Hymenoptera: Formicidae)." *The Pan-Pacific entomologist* 66(2), 174–175.

View This Item Online: <https://www.biodiversitylibrary.org/item/252465>

Permalink: <https://www.biodiversitylibrary.org/partpdf/269574>

Holding Institution

Pacific Coast Entomological Society

Sponsored by

IMLS LG-70-15-0138-15

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Pacific Coast Entomological Society

License: <http://creativecommons.org/licenses/by-nc-sa/4.0/>

Rights: <http://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.