

ON THE IDENTITY OF *BEMBIDION PURITANUM*
HAYWARD (COLEOPTERA: CARABIDAE: BEMBIDIINI)TERRY L. ERWIN¹ AND DAVID H. KAVANAUGH²

ABSTRACT

Bembidion puritanum Hayward, described from Massachusetts and long the object of search by carabid enthusiasts, is here first recognized as a junior synonym of the European species *Bembidion nigropiceum* Marsham. We suggest that *B. nigropiceum* was accidentally introduced into Massachusetts from England through shipping in the late 1800's, that a population was sustained for a short time, but that it is not likely to have persisted to the present.

In the course of our investigations into various species groups of genus *Bembidion* Latreille, we discovered a new species from California (to be described in a subsequent paper) closely related to *Bembidion laticeps* LeConte. While gathering comparative material from various museums, we took the opportunity to examine the type specimen of *Bembidion puritanum* Hayward (1897:129) [Type in MCZ] because we long believed this species to be related in some way to the "Lymnaeops" group of species.

B. puritanum has long been a mystery to coleopterists, especially those in New England, because except for the original series of 4 or 5 specimens seen and described by Hayward, no one has been able to find specimens or determine where the beetles occur(-red). Labels on specimens of the type series give only "Mass." as locality.

The striking similarity between *B. puritanum* and *B. laticeps* led us to compare the type of the former with specimens of the European species *Bembidion nigropiceum* Marsham. To our amazement, we found concordance of characteristics, including those of the male genitalia—the mysterious *B. puritanum* of Massachusetts is nothing more than *B. nigropiceum* of Europe (see Lindroth 1974; Jeannel 1941). [*Bembidion nigropiceum* Marsham, 1802:466=*Bembidion puritanum* Hayward, 1897:129, new synonymy.]

It is certainly possible, but unlikely, that the *B. puritanum* specimens were mislabelled (i.e. were not collected in North America); however, a second explanation for the presumed occurrence of *B. nigropiceum* in Massachusetts is also plausible. Members of this species live (in part) along the south coast of England, from Cornwall north to Suffolk, and are locally abundant (Lindroth 1974). This stretch of coast had most of the important shipping harbors of the 1800's (Lindroth 1957). Although it was not common for ships with ballast to visit New England, some did; at least one European introduction (the lamellicorn *Aegialia arenaria* Fabricius) occurred (Lindroth 1974).

We suggest that *B. nigropiceum* was a short-term inhabitant of a

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Massachusetts harbor, as evidenced by the specimens collected by Hayward or his colleague(s) (labels do not state who collected the series). The species was probably represented in North America for at least one generation, because the type specimen of *B. puritanum* is teneral; but we doubt that it is still resident on this continent. If *B. nigropiceum* became established and still survives in North America, we suggest it be looked for in natural areas adjacent to harbors that received ships in the 1800's. Unfortunately, such natural areas may now be difficult or impossible to find.

We thank A. F. Newton, Jr., Museum of Comparative Zoology, for making the type specimen of *B. puritanum* LeConte available to us for study.

LITERATURE CITED

- HAYWARD, R. 1897. On the species of *Bembidium* of America north of Mexico. Transactions of the American Entomological Society, 24:32-143.
- JEANNEL, R. 1941. Coléoptères Carabiques, Première Partie. Faune de France, 39:1-571.
- LINDROTH, C. H. 1957. The faunal connections between Europe and North America. Almqvist and Wiksell, Stockholm, 344 pp.
- LINDROTH, C. H. 1974. Coleoptera, Carabidae. Handbook for the Identification of British Insects, 4(2):1-148.
- MARSHAM, T. 1802. Entomologia Britannica, sistens insecta Britanniae indigena, secundum methodum Linnaeanum disposita. White, London, xxxi+548 pp.

BOOK REVIEW

Checklist of the beetles of Canada, United States, Mexico, Central America, and the West Indies, by R. E. Blackwelder, R. H. Arnett, Jr., and Associates. 1977. World Digest Publications, Oxycopis Pond, Wallace Road, Kinderhook, NY 12106. Looseleaf, 5 binders, approximately 1200p., complete set (by subscription), \$200.00.

Subscribers are undoubtedly impressed by the attractive and durable binder, the high quality heavy paper, and the scholarly preparation of the Cupedidae portion and Carabidae portion of this checklist of beetles. Family 1, Cupedidae was compiled by Ross Arnett and is complete in one page. Family 4, Carabidae was compiled by Terry Erwin, Donald Whitehead, and George Ball and is complete in 68 pages. A fourteen page Introduction contains a map of the regions included in the North American Beetle Fauna Project, a systematic list of the beetle families of the world, an alphabetic list of beetle families, common names of families, and a list of the Associates of the Project. There is no question that that which has appeared thus far is a substantial contribution to coleopterology. Of the 113 families covered by this project, manuscripts have been received for 72 families and 17 of them are in various stages of preparation for publication. This is obviously a time consuming project. Now that Ross Arnett has resigned from college teaching and is writing and editing on a full-time basis there should be greater progress toward its completion.

-P.P.S.