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A New Species of *Harpalus* Latreille (Coleoptera: Carabidae) from Southeastern North America

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Abstract

Harpalus (Pseudoophonus) poncei **new species** is described from Florida, USA, based on three specimens, all collected in 1963. This species may be a Florida endemic overlooked by collectors or an undescribed adventive species.

In the course of my review of the subgenus *Megapangus* Casey (Harpalini: *Harpalus* Latreille) (Will 1997), I found two specimens identified as *H.* (*Megapangus*) *caliginosus* (Fabricius) in the Cornell University Insect Collection, Ithaca, NY (CUIC), that by their relatively pale legs stood out as different from all other specimens I had examined (individuals of *Megapangus* have black legs [Fig. 1]). Upon closer inspection I found that these two individuals had the characteristics of the subgenus *Pseudoophonus* Motschulsky and not *Megapangus*. Comparison with *Harpalus* specimens in museums throughout North America resulted in only a single additional specimen from the United States National Museum, Washington, D.C. (USNM).

North American *Harpalus* species have been treated in several excellent works (Ball and Anderson 1962; Lindroth 1968; Noonan 1991). However, it not surprising that a species of *Pseudoophonus* from Florida would have remained unnoticed. Lindroth's faunal work focuses on the northern North American taxa, Ball and Anderson's monograph on *Pseudoophonus* predates the first collection record known for this species, and Noonan's publication excludes *Pseudoophonus* taxa since those taxa were covered previously.

Methods

General preparation and taxonomic methods and concepts used are the same as previously described by Will (1998) and Will and Liebherr (1997).

Taxonomy

For a general description of the genus *Harpalus* Latreille for North American species see Noonan's monograph (1991). For characteristics of subgenus *Pseudoophonus* see Ball and Anderson's treatment of the subgenus (Ball and Anderson 1962) and Ball's key to *Harpalus* subgenera (Ball 1960:84). Except for increasing the size range of *Pseudoophonus* species from 6.5–16.0 mm to 6.5–23.0 mm, characteristics of this species are consistent with descriptions presented in these works.

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Fig. 1. Comparison of habitus. **left)** *H. katiae* from MS; **middle)** holotype *H. poncei*; **right)** *H. pensylvanicus*, from FL.

Harpalus (Pseudoophonus) poncei **new species**

Recognition. Specimens of *H. poncei* can be distinguished from all other North American *Harpalus* species by their large size in combination with reddish legs, presence of mentum tooth, and pronotum relatively broad at the base with wide lateral margins (Fig. 2). Individuals are large relative to even larger specimens of *Pseudoophonus*, e.g., *Harpalus pensylvanicus* (DeGeer), but are smaller than individuals of the subgenus *Megapangus*, e.g., *H. katiae* Battoni (Fig. 1).

Type Material. HOLOTYPE ♂, ''Naples, FLA., Dec 30 1963, J.B. Williams'' (CUIC). ALLOTYPE ♀, Same data and deposition as holotype (reproductive tract and defensive glands dissected).
PARATYPE ♂, Port Charlotte, FLA. 1963, W. Rosenberg Collection (USNM).

Description. Size and form: 20–23 mm long; body robust and slightly depressed (Fig. 1).

Color: Upper body black; legs, antennae and palpi rufous; mandibles and labrum apically black, paler, nearly rufous basally; ventral surface medially dark rufo-piceous, more darkly infuscated laterally.

Head: In both sexes slightly transverse microsculpture scarcely visible on vertex, slightly more evident in female than male, generally shiny; mentum tooth simple, sagittiform.

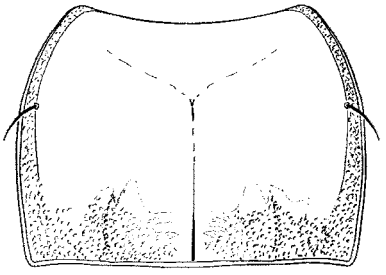

Fig. 2. Pronotum, *H. poncei.*

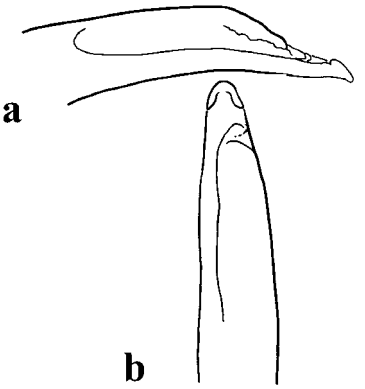

Fig. 3. Median lobe blade, *H. poncei.* **a)** left lateral view; **b)** dorsal view.

Pronotum: Outline quadrate, sides nearly straight from middle to posterior angles (Fig. 2); anterior angles moderately protruding; lateral marginal groove broad, widening posteriorly; groove and basolateral region punctulate-rugose with evident isodiametric or irregular mesh microsculpture ; posterior bead broad and sharply delimited throughout, or slightly less defined laterally; posterior angles about right and slightly flexed ventrally; laterobasal fovea not separate from lateral groove; mediobasal fovea shallow and broadly impressed; disc convex with microsculpture in both sexes slightly transverse and scarcely visible; median longitudinal impression interrupted on disc, deeper near base and anterad near anterior transverse impression; anterior transverse impression very shallow, scarcely visible.

Legs: Protibial medioapical spur lanceolate or falcate, 5 lateroapical spines; metafemur with 4–6 setae on posterior margin; dorsal surface of all tarsi setose.

Elytra: Slightly depressed, parallel sided, subapical sinuation very slightly evident; humeral angle with small rounded tooth; elytral intervals slightly convex; striae impunctate or shallowly crenulate, sutural stria long; setose punctulae throughout intervals 7–9 and few small setae scattered along base of intervals 5–6; sloping base of elytra with few scattered setae; evident isodiametric or slightly irregular mesh microsculpture in both sexes; surface moderately shiny, female slightly duller from more evident microsculpture.

Abdomen: Sternites II–III with dense setae medially in addition to usual ambulatory setae.

Male genitalia: Blade straight in dorsal view, ostium slightly deflected left; tip scarcely flexed ventrally in lateral view (Fig. 3). The apical portion of the median lobe of the male holotype was exposed and so studied but not further dissected. The genitalia of the paratype male was not intact so was not dissected. The study of the endophallic structures could not be done on these specimens.

Female genitalia and reproductive tract: Bursa copulatrix elongate with large apicoventral lobe and an elongate dorsal sclerotized region terminating in a small lobe (Fig. 4); spermatheca simple, elongate, lightly constricted, inserted apically on bursa; spermathecal appended gland duct inserted basally, gland unknown, apparently lost during dissection; laterotergite broad, asetose; gonocoxite-1 elongate, asetose; gonocoxite-2 with two nematiform setae; median tergite IX with 20 apicomedial setae.

Defensive gland: Gland reservoir large; dorsal lobe well developed; collecting canal more than 2× length of reservoir.

Etymology of name: Genitive name based on Ponce de León, the Spanish explorer (1460–1521). In 1521 he lead an expedition intent on establishing a permanent settlement in the vicinity of Charlotte Harbor, FL. They were fierce-

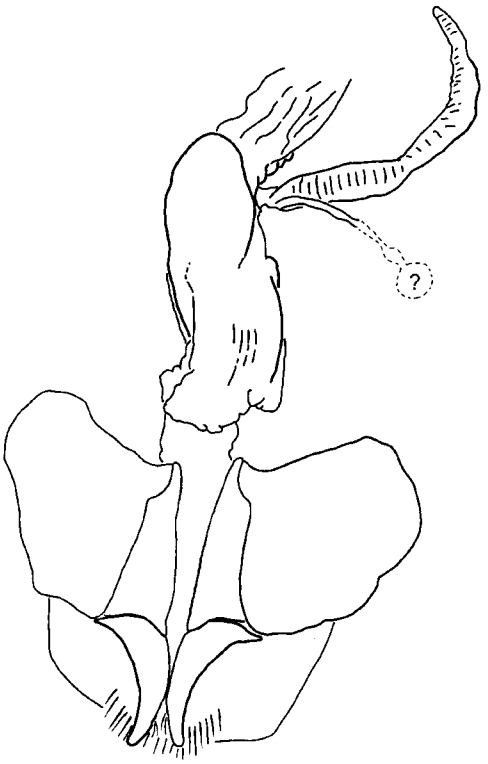

Fig. 4. *Harpalus poncei* Female reproductive tract ventral view.

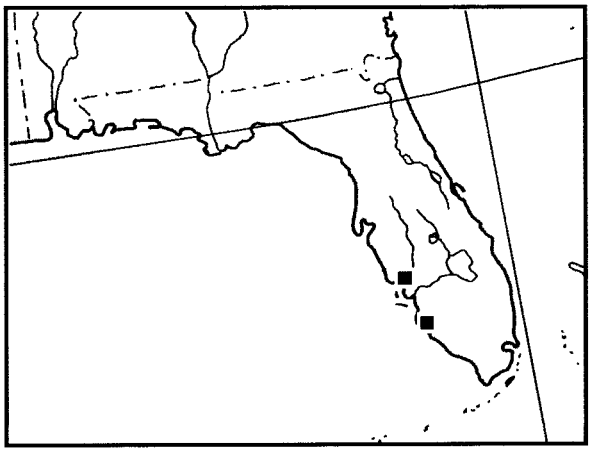

Fig. 5. Collection localities for *H. poncei.*

ly attacked by Native Americans and he was mortally wounded by an arrow during the battle.

Discussion. This species is only known from the type specimens from two sites on the west coast of Florida. The two collecting localities are separated by only 65 miles and the two collecting events occurred in the same year, 1963. This peculiar situation—one collecting season collection, in two, relatively close coastal sites—suggests that this may be adventive rather than a native species. I attempted to identify specimens using the various keys to North American *Harpalus* cited above but found no species to which I could attribute them. Considering the possibility that this is an adventive species, I subsequently attempted to identify specimens using various keys for Palaearctic, Asian, and African faunas (e.g., Basilewsky 1950, 1951; Habu 1973; Trautner and Geigenmüller 1987). After an extensive search through the literature, inspection of specimens in major collections and consultation with people with expertise in *Harpalus* taxonomy, I concluded that even if these specimens represent a nonnative species, it has remained undescribed.

These specimens may represent another vanishing part of Florida's unique fauna or, as is often the case, this species may be difficult to collect. Relatively few winter time collection records for *Harpalus* species are known (Noonan 1991). Perhaps this species has an unusual life cycle and has not been observed because little collecting has been done during its period of activity. I hope that this paper challenges collectors in Florida to look carefully at winter active *Harpalus* that might otherwise be disregarded as uninteresting.

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Literature Cited

Ball, G. E. 1960. Carabidae, Fascicle 4. [pp. 55–210]. *In:* The beetles of the United States (A Manual for identification) (R. H. Arnett, editor). Washington, Catholic University of America Press. xi+1112 pp.

Ball, G. E., and J. N. Anderson. 1962. The taxonomy and speciation of *Pseudophonus.* The Catholic University of America Press, Washington, D.C. xi+94 pp.

Basilewsky, P. 1950. Révision générale des Harpalinae d'Afrique et de Madagascar (Coleoptera Carabidae). Annals du Musée du Congo Belge. Série in 8°. Sciences Zoologiques. Vol. 6.

Basilewsky, P. 1951. Révision générale des Harpalinae d'Afrique et de Madagascar (Coleoptera Carabidae). Annals du Musée du Congo Belge. Série in 8 °. Sciences Zoologiques. Vol. 9.

Habu, A. 1973. Carabidae: Harpalini. (Insecta: Coleoptera). Fauna Japonica. Keigaku Pub. Co., Tokyo. xiii+ 430 pp.

Lindroth, C. 1968. The Ground Beetles (Carabidae, excl. Cicindelinae) of Canada and Alaska. Part 5. Opuscula Entomologica Supplementum 33:649–944.

Noonan, G. 1991. Classification, Cladistics, and Natural History of Native North American *Harpalus* Latreille (Insecta: Coleoptera: Harpalini), Excluding Subgenera *Glanodes* and *Pseudophonus.* The Thomas Say Foundation, Monograph 13.

Trautner, J., and K. Geigenmüller. 1987. Tiger Beetles Ground Beetles. Illustrated Key to the Cicindelidae and Carabidae of Europe. Josef Margraf, Pub. Aichtal, Germany. 488 pp.

Will, K. W. 1997. Review of the species of the subgenus *Megapangus* Casey (Cole-

optera: Carabidae, Harpalini, *Harpalus* Latreille). The Coleopterists Bulletin 51: 43–51.

Will, K. W. 1998. A new species of *Diplocheila* Brullé from North America, with notes on female reproductive characters in selected Licinini and implications for evolution of the subgenus *Isorembus* Jeannel (Coleoptera: Carabidae: Licinini). Proceedings of the Entomological Society of Washington 100:95–103.

Will, K. W., and J. K. Liebherr. 1997. New and little known species of *Loxandrus* LeConte 1852 (Coleoptera:Carabidae). Studies in Neotropical Fauna and Environment 32(4):230–238.

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BOOK REVIEW

VIVES, EDUARD. 2000. **Fauna Iberica. Volume 12. Coleoptera, Cerambycidae.** Museo Nacional de Ciencias Naturales. Consejo Superior de Investigaciones Cientificas. Madrid. Ramos et (Eds.) 716 pp., 204 figs. (5 colored) ISBN 84-00-07887-X. Address for correspondence/purchase: Dpto. Publicaciones, c/ Vitrubio, 8, 28006—Madrid, Spain; email: publ@orgc.csic.es. Price: $45.00.

This is one volume of the series of the Fauna Iberica published by the National Museum of Natural Sciences in Madrid, Spain. Although the book is printed in Spanish, the numerous illustrations make it relatively easy to use. The illustrations are excellent and the paper is of high quality. Each species is completely described, the geographic distribution is listed and biologies are recorded. Keys to genera and species are provided and an extensive bibliography is presented as well as an appendix listing synonomies and combinations. Another appendix lists host plants and their associated species. The book is very well done and is a valuable contribution for students of Cerambycidae. Although the Iberian Peninsula is not one of the faunistically richer areas, the Cerambycidae contain a number of very interesting species not commonly encountered. This work ranks high on the list of geographical faunal studies. It is a must for all interested in longhorns and provides easy determination of the Iberian fauna.

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