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Timothy N. King
Highland Lake, AL, timkpest@otelco.net

R. Michael Brattain
Lafayette, IN, rmichaelbrattain@aol.com

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Timothy N. King
1453 Lakeshore Dr.
Highland Lake, AL 35121

R. Michael Brattain
505 Lingle Terrace
Lafayette, IN 47901

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Timothy N. King
1453 Lakeshore Dr.
Highland Lake, AL 35121
timkpest@otelco.net

R. Michael Brattain
505 Lingle Terrace
Lafayette, IN 47901
rmichaelbrattain@aol.com

Abstract. The first Alabama, USA, collection records of the families Micromalthidae and Jacobsoniidae (Coleoptera) are reported.

Discussion

While sorting through a Berlese sample collected from the Highland Lake area in Blount Co., Alabama on July 25, 2009, TNK found a specimen of *Micromalthus debilis* LeConte. This is the first record of this species reported from Alabama. *Micromalthus debilis* is the only species in the family Micromalthidae (Barber 1913, Philips and Young 2001). It is native to the eastern United States and perhaps Belize. While *M. debilis* is known from several states (Downie and Arnett 1996), individual collecting events, as evidenced by collection records, appear rare. The species has been widely distributed by commerce, and its range now includes British Columbia, New Mexico and the overseas localities of Brazil, Cuba, Hong Kong, Hawaii and South Africa (Arnett and Thomas 2000). In early 2011, TNK read a paper authored by Phillips (2001) on Micromalthidae in which he reported the collection of a specimen of *M. debilis* in Belize from a Flight Intercept Trap (FIT). On June 19, 2011 TNK set-up two FITs at his house (Highland Lake, AL) from which 21 specimens of *M. debilis* were collected from August 4 – August 21, 2011.

On June 20, 2011 a specimen of a jacobsoniid beetle was collected in one of the FITs. A second specimen was collected from this same trap on July 20, 2011. The family Jacobsoniidae has not been previously reported to occur in Alabama (Háva and Löbl 2005). The family was first reported in the continental U.S. by Peck and Thomas (1998) from specimens collected in Florida. The Alabama specimens key to *Derolathrus cavernicolus* Peck, described from Florida (Peck 2010). The described species of Jacobsoniidae are widespread, also occurring in Brazil, Fiji, Guadeloupe, Hawaii, Madera, Mauritius and Sri Lanka. Jacobsoniid beetles have been found in leaf litter, wood debris, bat guano and under bark (Philips et al. 2001). Specimens are most often collected from Berlese extractions of litter or FITs.

Materials and Methods

The following institutions and personal collections were contacted in attempting to locate any additional Alabama records of Micromalthidae or Jacobsoniidae: Auburn University Entomology Museum, Auburn, AL (AUEM); Field Museum of Natural History, Chicago, IL (FMNH); Florida State Collection of Arthropods, Gainesville, FL (FSCA); Purdue Entomological Research Collection, W. Lafayette, IN (PERC); Robert H. Turnbow Collection, Enterprise, AL (RHTC); University of Georgia Collection of Arthropods, Athens, GA (UGCA), and the National Museum of Natural History, Washington, DC (USNM). There were no additional Alabama records. Specimens of Micromalthidae will be deposited in each of the contributing collections; the specimens of Jacobsoniidae will remain in the authors' collections.

Acknowledgments

We thank Dr. Michael Thomas for confirming our identification of the jacobsoniid beetle to the genus *Derolathrus* Sharp (1908) and Dr. Robert Turnbow for verifying that this is apparently the first reported Alabama collection record for Micromalthidae and Jacobsoniidae. We also thank the following individuals for their assistance: Edward Hoebeke (UGCA), Dr. Al Newton (FMNH), Arwin Provonsha (PERC), Dr. Charles Ray (AUEM), Dr. Floyd Shockley (USNM), Dr. Paul Skelley (FSCA), and Dr. Robert Turnbow (RHTC). A final thank you to Dr. Robert Turnbow and Robert Brown for their constructive comments on this note.

Literature Cited

Arnett, R. H., Jr., and M. C. Thomas. 2000. Family 78. Jacobsoniidae. p. 446-447. *In*: R. H. Arnett, Jr. American Insects, a handbook of the insects of America north of Mexico. Second edition. CRC Press; Boca Raton, FL. 1001 p.

Barber, H. S. 1913. The remarkable life history of a new family (Micromalthidae) of beetles. Proceedings of the Entomological Society of Washington 15: 31-38.

Downey, N. M., and R. H. Arnett., Jr. 1996. Family 63. Micromalthidae. The Beetles of Northeastern North America, Vol.1. The Sandhill Crane Press; Gainesville, Florida. 880 p.

Háva, J., and I. Löbl. 2005. A world catalogue of the family Jacobsoniidae (Coleoptera). Studies and Reports of District Museum Prague-East, Taxonomical Ser. 1: 89-94.

Peck, S. B., and M. C.Thomas. **1998.** A distributional checklist of the beetles (Coleoptera) of Florida. Arthropods of Florida and Neighboring Land Areas16: 1-180.

Peck, S. B. 2010. *Derolthrus cavernicolus* n. sp., a beetle family new for North America (Coleoptera: Jacobsoniidae). Annals of the Entomological Society of America 103(1): 1-6.

Philips, T. K. **2001.** A record of *Micromalthus debilis* (Coleoptera: Micromalthidae) from Central America and a discussion of its distribution. Florida Entomologist 84(1): 159-160.

Philips, T. K., and D. K. Young. 2001. Family 2. Micromalthidae. p. 22-23. *In*: R. H. Arnett, Jr., and M.C. Thomas (eds.). American Beetles, Vol. 1. CRC Press; Boca Raton, FL. 443 p.

Philips, T. Keith, M. A. Ivie, and J. J. Giersch. 2001. Family 65. Jacobsoniidae. p. 219-220. *In*: R. H. Arnett, Jr., M. C. Thomas, P. E. Skelley, and J. H. Frank (eds.). American Beetles, Vol. 2. CRC Press; Boca Raton, FL. 861 p.

Sharp, D. 1908. *Derolathrus,* gen. nov. p. 430-431 and plate XVI, figs. 8-11. *In*: D. Sharp (ed.). Fauna Hawaiiensis or the Zoology of the Sandwich (Hawaiian) Isles. Vol. 3, part V. Coleoptera III: 367-579.

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