

REPORTS OF RARELY COLLECTED OR PREVIOUSLY UNREPORTED INDIANA COLEOPTERA (INSECTA): CERAMBYCIDAE, CEROPHYTIDAE, HYDRAENIDAE, HYDROPHILIDAE, NITIDULIDAE, SCARABAEIDAE, STAPHYLINIDAE, TROGOSSITIDAE

Robert D. Waltz: Indiana Department of Natural Resources, Division of Entomology & Plant Pathology, Room W-290, 402 West Washington, Indianapolis, Indiana 46204 USA

ABSTRACT. Eleven species of Indiana Coleoptera are newly reported or reported as rarely-collected species in the State. The rare species *Cerophytum pulsator* (Cerophytidae) is noted from southern Indiana. *Tenmoschiela virescens* (Trogossitidae) was first detected in 1989 but has been found in abundance in 2000. *Carpophilus lumeralis* (Nitidulidae) is newly reported and was taken most frequently in bee hives. *Hesperus stehri* (Staphylinidae) has been taken in four collections representing the first Indiana records. *Hesperus apicalis* was thought to be rare but has been encountered throughout southern Indiana. *Quedius terminatus* is reported from southern Indiana. The European adventive *Oonthophagus taurus* (Scarabaeidae) is reported from far southern Indiana. Several common species that have been overlooked in Indiana are reported for the first time including *Dectes texanus* (Cerambycidae), *Gymnochthebius nitidus* (Hydraenidae), *Helophorus linearis* (Hydrophilidae), and *Stictocranius puncticeps* (Staphylinidae). An additional new county record is provided for the rarely collected *Hydraena quadricurvipes* (Hydraenidae), known only from the mouths of caves.

Keywords: Insecta, Coleoptera, Indiana

The Coleoptera of Indiana are generally well known and documented based on historical collections of Indiana beetles by collectors and published treatises by W.S. Blatchley (1910), Downie & Arnett (1996), and others. Collections from infrequently-sampled sites in Indiana, and collections of non-target beetles that were taken as a result of exotic scolytid trapping efforts by the United States Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine (USDA APHIS PPQ) and the Indiana Department of Natural Resources were recently studied. In part, these collections form the basis of this report. Lindgren funnel traps baited with pheromones for exotic bark beetles (Scolytidae) were placed in close proximity to international port sites on Lake Michigan in Indiana (Burns Harbor) and ports along the Ohio River near coniferous forests to detect possible introductions of exotic bark beetles of state and national concern, including *Ips typographus* (L.), *Orthotomicus erosus* (Wollaston), and *Hylurgus ligniperda* (L.). In addition, Lindgren funnel traps baited with the

host volatile, alpha pinene, were placed in counties adjacent to counties regulated for the introduced and federally regulated species pine shoot beetle [*Tomicus piniperda* (L.) (Coleoptera: Scolytidae)] to monitor expansion of established populations of this species throughout Indiana (visit the following National Agricultural Pest Information Service (NAPIS) website for details of pine shoot beetle advancement in North America: <http://www.ceris.purdue.edu/napis/states/wv/psb/wvpsb.html>).

Material reported herein includes collections made through several different techniques including sweeping, pitfall traps, and baited Lindgren funnel traps. Material was identified by use of Downie & Arnett (1996), Arnett & Thomas (2001), Arnett (1960) and current taxonomic revisions. Comparative determinations were made using Blatchley (1910), but final determinations were reliant on more recent literature.

Vouchers for all reported species herein are deposited at Purdue University, Purdue Entomological Research Collection (PERC), West

Lafayette, Indiana. Vouchers were compared with identified material housed at Purdue University. Mike Brattain, West Lafayette, confirmed identifications. Data reported establishes a county voucher; not all specimens taken in any given county are reported.

SPECIES REPORTS

Cerambycidae

***Dectes texanus* LeConte.**—This distinctive species is widespread in North America and in the northeastern states (Downie & Arnett 1996). It is known from both Ohio and Illinois. Its discovery in Indiana is not surprising.

New state report: INDIANA: *Hamilton County*, 6 August 1998, R.D. Waltz and G.R. Jansen, on giant ragweed.

Cerophytidae

***Cerophytum pulsator* (Haldeman).**—Blatchley (1910) did not collect this species in Indiana although he reported its collection by Drury in Ohio and predicted its eventual collection in Indiana. Virtually nothing is known about the biology of this elusive species (Arnett 1960; Arnett, Downie & Jacques 1980). In this study, mixtures of males and females were taken in Lindgren funnel traps using triple lure. Specimens have not been taken in the alpha pinene traps. The species is known to be associated with dead wood, and all new Indiana collections were taken in declining coniferous, and mixed conifer/deciduous woodlands. It was previously reported (Downie 1970) in Indiana on the basis of one male from Montgomery County, 23 May 1970 (PERC).

New county reports: INDIANA: *Clark County Pinus* sp. 17 April 1998, T. Vawryk, (1♂, 1♀); *Harrison County Pinus resinosa*, *P. strobus*, April 1999, T. Vawryk, (17 individuals); 5 May 1998, T. Vawryk, (7 individuals); *Jefferson County*, Madison, 21 May 1999, T. Vawryk, (5 individuals); 17 April 1998, T. Vawryk (5 individuals).

Hydraenidae

***Gymnochthebius nitidus* (LeConte).**—This collection containing several individuals was taken in one trap approximately one meter from the stream's edge in grass. The species is widespread in North America (Perkins 1980). Its report from Indiana is not surprising.

New state report: INDIANA: *Wayne County*, Milton, J.W. Hart farm, 21 March 1998 (98-18b) in pitfall trap, mixed glacial till substrate in wooded riparian site.

***Hydraena quadricurvipes* Perkins.**—(Bow-Legged Minute Moss Beetle.) This striking species is known to occur in the mouth of caves in the few instances it has been reported (Perkins 1980). Earlier Indiana records of this species were from Monroe County near Needmore. What little is known about the species' biology is reported by Perkins (1980).

New county report: INDIANA: *Crawford County*, Wyandotte Cave State Recreation area, Jug Hole Pit, 1 June 1998, J. Lewis & V. Lewis.

Hydrophilidae

***Helophorus (Rhopalelophorus) linearis* LeConte.**—This common species was reported from both Ohio and Illinois (Smetana 1988; Downie & Arnett 1996) but had not been previously reported from Indiana. This report is based on a specimen collected from a small, grassy hummock isolated from the shore of a pond. The occurrence of this common species in Indiana is not surprising.

New state report: INDIANA: *Perry County*, Buzzard Roost, pond edge, 3 April 1998, R.D. Waltz, D.R. Waltz, and S. Olsen.

Nitidulidae

***Carpophilus humeralis* (Fabricius).**—This species is known from the southeastern United States and from California where it is known to be a pest of grains. It is a rather distinctive species and would not have been easily overlooked in previous surveys. It is possible that it has been introduced through beekeeping, and has become recently established in northern Indiana. Specimens were almost exclusively found in bee hives.

New state report: INDIANA: *Jasper County*, Remington, *ex* bee hive, 14 June 2000; *Kosciusko County*, Scott Township, Etna Green, *ex* bee hive, 22 May 2000; *Marshall County*, Plymouth, *ex* bee hive, 30 June 2000; *Montgomery County*, Crawfordsville, *ex* bee hive, 17 June 2000; *Montgomery County*, Ladoga, *ex* bee hive, 1 June 2000; *Newton County*, Morocco, *ex* bee hive, 25 May 2000; *Porter County*, port of entry, Burns Harbor, Trap 13, 24 May 1999, C. Gallowitch; *Tippecanoe*

County, Lafayette, *ex* bee hive, 18 August 2000; West Lafayette, *ex* bee hive, 27 May 2000; West Point, *ex* bee hive, 20 May 2000; White County, Brookston, *ex* bee hive, 27 May 2000; White County, Idaville, *ex* bee hive, 26 May 2000.

Scarabaeidae

***Onthophagus taurus* Schreber.**—This European species was first reported in Indiana by Smith (1997) in Tippecanoe County, approximately 100 km south of Chicago. The first North American record of this species was taken in the State of Florida. It has apparently moved steadily northward. Herein I am reporting an additional collection of this species from near the Ohio River indicating that the species is probably, and predictably, widespread in Indiana.

New county report: INDIANA: *Vanderburgh County*, Evansville, port of entry, April 1998, T. Vawryk.

Staphylinidae

***Hesperus apicalis* (Say).**—This distinctive species was reported as rare by Blatchley (1910) and was found to be represented previously by only two specimens in the Purdue Entomological Research Collection, also supporting the perception that it is uncommonly collected. Numerous collections of this species have been made in baited Lindgren funnel traps, and in fact the species is abundant and widespread. Collection data indicates this species is active from early March through September.

New county reports: (All taken in Lindgren funnel traps baited with triple lure or alpha pinene.) INDIANA: *Brown County*, April 2000, K. Kerras; *Clark County*, 14 May 1999, T. Vawryk; *Fayette County*, May 1999, M. Chandler; *Harrison County*, 9 June 1999, T. Vawryk; *Jefferson County*, 21 April 1999, T. Vawryk; *Martin County*, May 1998, T. Vawryk; *Morgan County*, May 2000, K. Kerras; *Perry County*, 11 June 2001, T. Vawryk; *Pike County*, 5 May 2001, D. Fisher; *Porter County*, 13 April 1999, C. Gallowitch; *Posey County*, 19 April 2001, D. Fisher; 6 May 1999, T. Vawryk; *Putnam County*, June 2000, T. Vawryk; *Scott County*, 8 March 2000, T. Vawryk; *Spencer County*, 11 July 2001, T. Vawryk; *Union County*, May 2000, K. Dickerson; *Vanderburgh County*, Evansville,

port of entry, July 1999, T. Vawryk; *Vigo County*, May 2000, K. Kerras.

***Hesperus stehri* Moore.**—This species, the largest of North American *Hesperus* species, is not well represented in collections. Smetana (1995) reported only 11 specimens studied, from Arkansas, Georgia, Kansas, Ohio, Oklahoma, Tennessee, and Texas. The species has been taken in Lindgren funnel traps using triple lure bait and alpha pinene bait from pine areas in southern Indiana.

New state report: INDIANA: *Clark County*, 29 April 1998, in *Pinus*, (pheromone trap), T. Vawryk; *Harrison County*, April 1998, (pheromone trap), T. Vawryk; *Morgan County*, (alpha pinene trap), May 2000, K. Kerras; *Vanderburgh County*, Evansville, port of entry, (pheromone trap), July 1999, T. Vawryk.

***Quedius (Microsaurus) terminatus* Melsh-eimer.**—This rarely reported species (Smetana 1971) was taken in this study with collections of *Hesperus apicalis*, *H. baltimorensis*, and *H. stehri*. The species shares with *H. apicalis* and *H. stehri* the reddish terminal segments of the abdomen. Previously reported in Indiana from Turkey Run State Park in Parke County, Marshall (Smetana 1971).

New county reports: INDIANA: *Clark County*, 17 April 1998, T. Vawryk; *Harrison County*, April 1999, T. Vawryk; *Jefferson County*, April 1998, T. Vawryk. All collections taken in Lindgren funnel trap, baited with triple lure.

***Stictocranium puncticeps* LeConte.**—Widespread in the eastern United States (Puthz 1974), this species has been overlooked in previous Indiana collections. It occurs with limited frequency in Tullgren extraction and leaf litter samples. It is been known for several years in Indiana but not formally reported or vouchered.

New state reports: INDIANA: *Fayette County*, Manlove Woods, Tullgren extraction, sample drawn from old, fallen tree, 1 May 2000, J.W. Hart; *Tippecanoe County*, 9 October 1974, R.D. Waltz.

Trogossitidae

***Temnoscheila virescens* (Fabricius).**—This distinctive, bright metallic green species is widespread in more southern regions of the nation (e.g., Leschen 2002) and has not been reported previously from Indiana (Downie & Arnett 1996), nor was it represented in the

Purdue University insect collection (the Indiana state insect collection). It has been taken within the past two years from triple lure traps in Indiana and is a species known to be attracted to bark beetle pheromones (Billings & Cameron 1984). Based on a virtually identical survey conducted in 1989, one individual of this species was discovered in Crawford County, taken in a Lindgren funnel trap baited with alpha pinene, but was previously unidentified among non-target species taken. A similar survey conducted in 1990 did not result in collections of *T. virescens* in any county. In the years 2000 and 2001, this species was found in significant numbers in counties adjoining the Ohio River. It appears to be recently adventive in Indiana. Available data indicate this species is active in Indiana from early March through September.

New state reports: (All specimens in Lindgren funnel traps with triple lure except 1989 report.) INDIANA: *Clark County*, 29 April 1998, T. Vawryk; *Crawford County*, Lindgren funnel trap, alpha pinene, 23 May to 9 June 1989; *Dubois County*, 19 April 2000, D. Fisher; *Harrison County*, April 1998, T. Vawryk; *Jackson County*, red pine, March 2000, T. Vawryk; *Jefferson County*, Madison, 22 June 1999, T. Vawryk; *Perry County*, Hoosier National Forest, 11 June 2000, T. Vawryk; *Pike County*, 5 April 2001, D. Fisher; *Scott County*, ardy Lake State Recreation Area, 21 May 2001, T. Vawryk; *Spencer County*, Lincoln State Park, 11 June 2000, T. Vawryk; *Vanderburgh County*, port of entry, July 1999, T. Vawryk.

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