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Additional new records for 35 species
of false click beetles (Coleoptera: Eucnemidae)
in the Nearctic region

Robert L. Otto

W4806 Chrissie Circle,
Shawano, WI 54166, U.S.A.

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Additional new records for 35 species of false click beetles (Coleoptera: Eucnemidae) in the Nearctic region

Robert L. Otto

W4806 Chrissie Circle,
Shawano, WI 54166, U.S.A.
tar1672@yahoo.com

🌐 <https://orcid.org/0000-0002-5679-4044>

Abstract. New state records for 35 species of Eucnemidae (Coleoptera: Elateroidea) are reported from the eastern United States based on examination and identification of specimens from several institutional and two private collections in the last year. Images of 18 eucnemid species are provided.

Key words. Elateroidea, United States, Canada, distribution.

Resumen. Se reportan nuevos registros estatales para 35 especies de Eucnemidae (Coleoptera: Elateroidea) del este de los Estados Unidos basados en el examen e identificación de especímenes de varias colecciones institucionales y dos privadas en el último año. Se proporcionan imágenes de 18 especies de eucnemid.

Palabras clave. Elateroidea, Estados Unidos, Canadá, distribución.

ZooBank registration. urn:lsid:zoobank.org:pub:59455AAD-A59A-49BF-BFDE-1C7AD4B232FE

Introduction

Recently, opportunities arose to identify eucnemids from several institutional and two personal collections. The results from these identifications include data to close existing gaps in distributions for many species. There are some unexpected range extensions, especially for *Rhagomicrus thoracicus* (Horn, 1890) taken from Georgia in 2013, Florida in 2022 and a number of Mesoamerican countries. The discovery represents the first known records since 2000 when the last specimen was taken in Texas. As more eucnemids become available for identification, additional range extensions are expected along with continued closures of distributional gaps for many species of false click beetles in the Nearctic region. All of the records given below are considered new country and new state records.

Materials and Methods

Eighteen of the species covered in this study were imaged to help provide additional resources for future identifications. Habitus images were taken with a JVC KY-F75U digital camera attached to a Leica® Z16 APO dissecting microscope with apochromatic zoom objective and motor focus drive, using a Synchronscopy Auto-Montage® Pro System and software version 5.01.0005, resulting image stacks were processed using CombineZP®. All images were captured as TIFF files during the imaging process. Each image was modified through a paint program and Photoshop® Elements 10® software on a Toshiba Satellite® C55 series laptop computer and all were collated into plates. The size of each plate was modified to 300 dpi. Label data are presented near verbatim with selected information omitted in this study. Line breaks on labels are denoted by a single slash (/); breaks between two different labels are denoted by double slash (//); metadata and notes (not written on the labels, themselves) are presented in brackets ([]). Scientific names are uniformly presented in *italics*.

Specimens are deposited in the following collections:

ABSC Archbold Biological Station, Venus, FL

CMNH Carnegie Museum of Natural History, Pittsburgh, PA

CUAC Clemson University Insect Collection, Clemson, SC
DAVC Doug A. Veal Collection, Cedar Rapids, IA
GERP Global Eucnemid Research Project, Dept. of Entomology, Madison, WI
INHS Illinois Natural History Survey, Champagne, IL
KDKC Ken D. Karns Collection, Lancaster, OH
KESC Kyle E. Schnepf Collection, Gainesville, FL

Results

Subfamily Schizophiliinae Muona, 1993

Schizophilus subrufus (Randall, 1838)

This widespread, rarely encountered eucnemid species was previously reported from Alabama, Connecticut, Florida, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, and Wisconsin (Otto 2022b). A **new state record** is confirmed for Georgia, based on a single specimen was taken from a UV light trap placed in a dunes habitat in Georgia. **GEORGIA:** GEORGIA: McIntosh Co./ Sapelo Island, ~400m/ inland from Nanny Goat/ Beach, S of Beach Road/ 31.391686, -81.268616 // 15–18 May 2021/ UV light trap in back/ dunes habitat/ J. Adams & L. Durden (1, CMNH).

Subfamily Melasinae Fleming, 1821

Tribe Melasini Fleming, 1821

Isorhipis ruficornis (Say, 1823)

In Canada, this uncommonly collected eucnemid species has been taken in Nova Scotia, Ontario, and Québec. In the United States, *I. ruficornis* was previously known from Alabama, Arkansas, Connecticut, District of Columbia, Georgia, Illinois, Indiana, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, Texas, Vermont, Virginia, and Wisconsin (Otto 2022b). Herein, I confirm South Carolina as a **new state record**. One specimen was taken from a Lindgren funnel trap. **SOUTH CAROLINA:** USA: SC: Chesterfield Co./ 34.5626° N, 80.2106°W/ Carolina Sandhills NWR/ ii.22–iii.8.2017, Lindgren/ M. Caterino & M. Ferro (1, CUAC).

Tribe Epiphanini Muona, 1993

Hylis frontosus (Say, 1836)

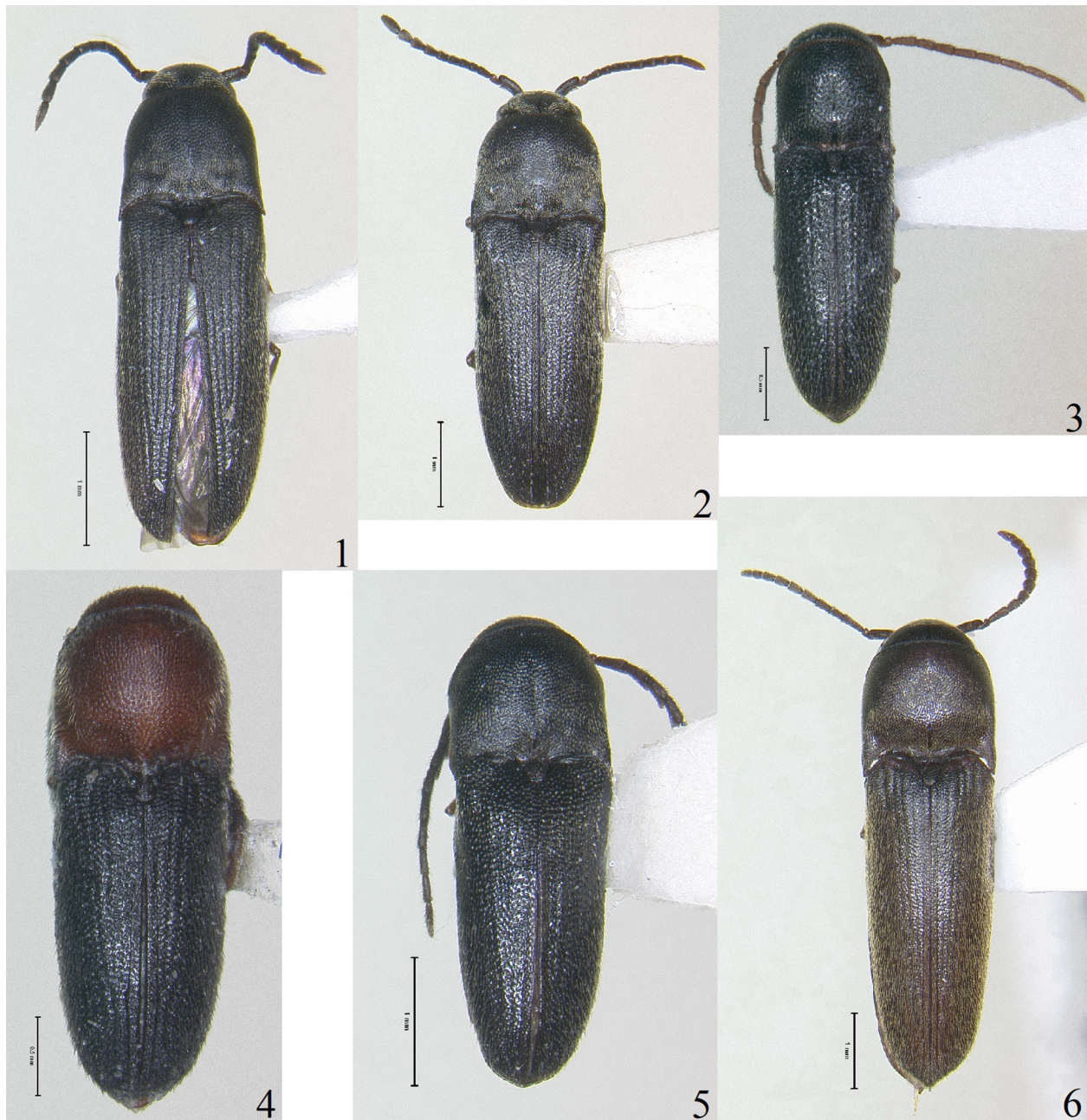
(Fig. 1)

This widespread, uncommonly encountered eucnemid was previously recorded from Connecticut, District of Columbia, Georgia, Illinois, Indiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin (Otto 2022b). I confirm it here as a **new state record** for Kentucky on the basis of a specimen taken from a Malaise trap. **KENTUCKY:** USA: Kentucky: Madison Co./ Berea Col. For.: Horse Cove Rd/ 37.57232° N, 84.22051° W 266m/ 10–17.vi.2013 Trap 6 MT K69/ Chapman & Stedenfield (1, CUAC).

Hylis terminalis (LeConte, 1866)

(Fig. 2)

In Canada, this uncommonly encountered eucnemid species was previously known from Ontario and Québec. In the United States, *H. terminalis* was previously known from Alabama, Connecticut, Delaware, District



Figures 1–6. Nearctic Eucnemidae, dorsal habitus. 1) *Hylis frontosus*. 2) *Hylis terminalis*. 3) *Rhagomicrus bonvouloiri*. 4) *Rhagomicrus thoracicus*. 5) *Microhagus audax*. 6) *Dirrhagofarsus brevis*. (Scale: 3–4 = 0.5 mm; 1–2, 5–6 = 1.0 mm.)

of Columbia, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Texas, Vermont, Virginia, West Virginia, and Wisconsin (Otto and Karns 2017). I confirm the presence of *H. terminalis* as a **new state record** in South Carolina. One specimen was taken from a flight intercept trap. Two specimens were taken from a canopy trap. Two specimens were taken from Lindgren funnel traps baited with *Ips* lure or Platypodinae lure. **SOUTH CAROLINA:** USA: SC: Georgetown Co./ 33.3545° N, 79.2026° W/ Baruch/Hobcaw Barony/ v.12–16.2015, M. Caterino/ S. Myers & A. Deczynski/ canopy trap (bottom) (2, CUAC);

USA: SC: Georgetown Co./ 33.3665° N, 79.2099° W/ Baruch/Hobcaw Barony/ v.12–16.2015, M. Caterino/ S. Myers & A. Deczynski (1, CUAC); USA: SC: Spartanburg Co./ N 34.87978, W –81.86531/ Camp Croft (2)/ iv.16–v.4.2016 BBSC16.BC03/ Lindgren – *Ips* lure (1, CUAC); USA: SC: Spartanburg Co./ N 34.87978, W –81.86531/ Camp Croft (2)/ iv.16–v.4.2016 BBSC16.BC04/ Lindgren – Platypodinae lure (1, CUAC); USA: SC: Chesterfield Co./ 34.5745° N, 80.2232° W/ Carolina Sandhills NWR/ v.3–17.2017, FIT/ M. Caterino & M. Ferro (1, CUAC).

Tribe Dirhagini Reitter, 1911

***Rhagomicrus bonvouloiri* (Horn, 1886)**

(Fig. 3)

In Canada, this commonly encountered eucnemid is known from Ontario. In the United States, *R. bonvouloiri* was previously taken from Alabama, Arkansas, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, Missouri, New Jersey, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, and Wisconsin (Otto 2022b). The **new state record** is for New York. Two specimens were taken from Lindgren funnel traps in New York. **NEW YORK:** NEW YORK: Seneca Co./ 4.6 km S of Seneca Falls, 42.8699, –76.80334, 156m/ 19 Jun–2 Jul 2020/ C. Etsey, LFT (1, CMNH); NEW YORK: Niagara/ County, 2.9 km WNW/ of Sanborn, 190m/ 43.14806, –78.91722 // 30 June–14 July/ 2021, Lindgren FT/ D. Mt Pleasant, coll (1, CMNH).

***Rhagomicrus thoracicus* (Horn, 1890)**

(Fig. 4)

Outside the Nearctic region, this uncommonly encountered eucnemid species has been found in Guatemala and Panama (Horn 1890). Recently, I examined many specimens from Central America and report it here as **new country records** from the following countries: Belize, Costa Rica, Honduras, and Nicaragua. In the United States, *R. thoracicus* was previously recorded in Texas (Muona 2000). It is confirmed here as **new state records** for Florida and Georgia. Two specimens were taken from V-flight intercept trap placed in a state park in Florida. A single specimen was taken from a Lindgren funnel trap placed in Georgia. **FLORIDA :** Florida: Alachua Co./ San Felasco H.P.S.P./ 29.7172, –82.4594/ May 8–15, 2022/ V-flight intercept trap/ Kyle E. Schnepf (GERP); Florida: Alachua Co./ San Felasco H.P.S.P./ 29.7172, –82.4594/ July 3–17, 2022/ V-flight intercept trap/ Kyle E. Schnepf (KESC); **GEORGIA:** GEORGIA: Coffee Co./ 12.2 km W Nicholls/ 31.52044N, 82.7631W/ 62m, 13–26 Aug 2013 // Lindgren funnel trap/ Col: N. Skaggs (KDKC).

***Adelothyreus dejeani* Bonvouloir, 1872**

This rarely encountered eucnemid species has been recorded from Alabama, Florida, Georgia, Louisiana, Maryland, and Mississippi (Otto and Karns 2017). It is confirmed here as a **new state record** for South Carolina. One specimen was taken from a Lindgren funnel trap baited with Platypodinae lure. **SOUTH CAROLINA:** USA: SC: Georgetown Co./ 33.3625° N, 79.2270° W/ Baruch/Hobcaw Barony/ v.12–16.2015, M. Caterino/ S. Myers & A. Deczynski (1, CUAC); USA: SC: Spartanburg Co./ N 34.8694, W –81.85119/ Camp Croft (1)/ iv.16–v.4.2016 BBSC16.BC02/ Lindgren – Platypodinae lure (1, CUAC).

***Microrhagus audax* Horn, 1886**

(Fig. 5)

This widespread, but rarely seen eucnemid species was previously known from Alabama, District of Columbia, Georgia, Illinois, Indiana, Iowa, Maryland, Michigan, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Texas, Virginia, West Virginia, and Wisconsin (Otto and Karns 2017). I confirm it here for the first time in South Carolina as a **new state record**. Two specimens were taken from Lindgren funnel traps baited with *Ips* lure. **SOUTH CAROLINA:** USA: SC: Georgetown Co./ 33.3046° N, 79.2381° W/ Baruch/Hobcaw Barony/ v.15.2015, M. Caterino/ S. Myers & A. Deczynski (2, CUAC); USA: SC: Bamberg Co./ N 33.05125, W –81.09961/ River's Bridge/ v.5–v.23.2016 BBSC16.GC03/ Lindgren – *Ips* lure (2, CUAC).

***Microrhagus brunneus* Otto, 2013**

This widespread, uncommon eucnemid species was previously recorded from Alabama, Arkansas, Georgia, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Missouri, New Hampshire, New Jersey, North Carolina, Ohio, Oklahoma, Pennsylvania, Virginia, West Virginia, and Wisconsin (Otto 2022b). Herein, I confirm **new state records** for Iowa, New York, and South Carolina. One specimen was taken from a panel trap placed in a preserve in Iowa. One specimen was taken from a Lindgren funnel trap placed in New York. One specimen was taken from a UV light trap in South Carolina. **IOWA:** IA: Cedar Rapids/ Rock Island Pres./ June 27–July 6 2022/ Panel tr, melange c/ Doug Veal (1, DAVC); **NEW YORK:** NEW YORK: Rensselaer Co./ 2.5 km S of Troy/ 42.705912, -73.687801, 72m/ 5–22 Jun 2020/ E. Caruso, LFT (1, CMNH); **SOUTH CAROLINA:** *Rhagomicrus bonvouloiri* (Horn) [handwritten label] // West Columbia, S.C. 6/7/93 // at U.V./ light // Coll. J.C./ Ciegler (1, CUAC).

***Microrhagus carinicollis* Otto, 2015**

This apparently uncommon, but widespread eucnemid species was previously recorded in Alabama, Florida, Connecticut, Georgia, Illinois, Indiana, Kansas, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, Ohio, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia and West Virginia, and Wisconsin (Otto 2022b). It is reported for the first time from Canada and in two new states in the U.S.: CANADA – Ontario; USA – Kentucky and South Carolina. Eleven specimens were taken from Malaise traps placed in Kentucky and South Carolina. One specimen was taken from a Townes Malaise trap placed in Williamsburg KY. Two specimens were taken from flight intercept traps placed in South Carolina. One specimen was taken from a Lindgren funnel trap baited with *Ips* lure. **CANADA: ONTARIO:** Canada, Ont./ Prescott & Russell Co./ Carillon, 26-VII-1981/ S. Heydon (1, INHS); **USA: KENTUCKY:** USA: Kentucky: Madison Co./ Berea Coll. For.: Horse Cove Rd/ 37.57165° N, 84.21799° W/ 17–24.vi.2013, 276m, MT Trap 2/ K80 Chapman & Stedenfield (1, CUAC); USA: Kentucky: Madison Co./ Berea Coll. For.: Horse Cove Rd/ 37.575676° N, 84.219452° W/ 1–8.vii.2013, 270m, MT Trap 6/ K99 Chapman & Stedenfield (1, CUAC); USA: Kentucky: Madison Co./ Berea Coll. For.: Horse Cove Rd/ 37.57448° N, 84.22023° W/ 15–22.vii.2013, 277m, MT Trap 7/ K116 Chapman & Stedenfield (4, CUAC); USA: Kentucky: Madison Co./ Berea Coll. For.: Horse Cove Rd/ 37.57448° N, 84.22023° W/ 22–29.vii.2013, 277m, MT Trap 7/ K126 Chapman & Stedenfield (1, CUAC); USA: Kentucky: Madison Co./ Berea Coll. For.: Horse Cove Rd/ 37.57165° N, 84.21799° W/ 19–27.vii.2013, 269m, MT Trap 2/ Chapman & Iza de Campos (1, CUAC); KY: Whitley Co./ Williamsburg/ 30 Jun–6 Jul 2018/ L & M Deyrup// Townes trap in/ back yard in/ town, 10th Ave (ABSC); **SOUTH CAROLINA:** USA: SC: Georgetown Co./ 33.3665° N, 79.2099° W/ Baruch/Hobcaw Barony/ v.12–16.2015, M. Caterino/ S. Myers & A. Deczynski/ Malaise trap (1, CUAC); USA: SC: Georgetown Co./ 33.3302° N, 79.2469° W/ Baruch/Hobcaw Barony/ v.13–16.2015, M. Caterino/ S. Myers & A. Deczynski/ flight intercept trap (1, CUAC); USA: SC: Georgetown Co./ 33.3302° N, 79.2469° W/ Baruch/Hobcaw Barony/ v.13–16.2015, M. Caterino/ S. Myers & A. Deczynski (1, CUAC); USA: SC: Florence Co./ N 34.2945, W -79.7238/ Florence, Dargan's Pond/ v.30–vi.13.2016 BBSC16.MH018/ Lindgren – *Ips* lure (1, CUAC); USA: SC: Pickens Co./ 34.756° N, 82.856°W/ Clemson For. Wildcat/ Cyn., vi.20–25.2018/ M. Caterino, M. Ferro & C. Carlton, FIT (1, CUAC); USA: SC: Pickens Co./ 34.7252° N, 82.8245° W/ 5 mi. N. Clemson/ 10–26.vi.2021, Malaise/ M. Caterino (2, CUAC).

***Microrhagus subsinuatus* LeConte, 1852**

In Canada, this uncommonly collected, widespread eucnemid species has been recorded in Nova Scotia, Ontario and Québec. In the United States, *M. subsinuatus* was previously known from Colorado, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, and Wisconsin (Otto and Karns 2017). It is now confirmed as **new state records** for Kentucky and South Carolina. Three specimens were taken from Malaise traps in two states. One specimen was taken from a light trap in South Carolina. **KENTUCKY:** USA: Kentucky: Madison Co./ Berea Col. For.: Horse Cove Rd/ 37.57452° N, 84.21942° W 265m/ 3–10.vi.2013 Trap 7 MT K58/ Chapman & Stedenfield (1, CUAC);

USA: Kentucky: Madison Co./ Berea Coll. For.: Horse Cove Rd/ 37.57165° N, 84.21799° W/ 17–24.vi.2013, 276m, MT Trap 2/ K80 Chapman & Stedenfield (1, CUAC); **SOUTH CAROLINA:** SC: Oconee Co./ TEEC/ 4 June 1993/ Light Trap/ A. Powell (1, CUAC); USA: SC: Pickens Co./ 34.7252° N, 82.8245° W/ 5 mi. N. Clemson, Malaise/ vi.1–5.2020, Caterinos (1, CUAC).

***Dirrhagofarsus brevis* Otto, 2022**

(Fig. 6)

This apparently widespread, very rare and recently described eucnemid species was previously known from Alabama, Florida and Wisconsin (Otto 2022a). Georgia, Louisiana, and South Carolina are now added as confirmed **new state records**. One specimen was taken from a UV light trap in Georgia. Two specimens were taken from a Malaise trap in South Carolina. Four specimens were taken from Lindgren traps in Georgia and South Carolina. One specimen was taken from a combination UV/BL trap in Louisiana. **GEORGIA:** GEORGIA: Fulton Co./ 11.4 km NW Atlanta/ 33.79491N, 84.49783W/ 267m, 5–16 Apr 2012 // Lindgren funnel trap/ Col: J. Orr/ BSF Database/ Sample ID# 43973 (1, KDKC); GEORGIA: Wheeler Co./ 2.1 km N of Lumber City/ Alligator Creek W.M.A./ 31.948605, –82.677927 // 13 June 2021/ UV trap bear pines/ in open sandy area/ R. Androw, K. Karns (1, CMNH); GEORGIA: Chatham Co./ 1.9 km ESE of Garden City/ 32.10783, –81.13543, 3m/ 22 Mar–6 April 2022, LFT/ E. Kennedy (1, CMNH); **LOUISIANA:** USA: LA: Iberville Par./ N. Rosendale, V. Bayless/ N 30.4571, W –91.4699/ 27 May 2018 (390)/ UV/BL M. Ferro (1, CUAC); **SOUTH CAROLINA:** USA: SC: Jasper Co./ 32.4846° N, 81.12° W/ 8 mi W Ridgeland/ iii.25–iv.1.2016, Lindgren/ w/ α -pinene & frontalin/ D. Jenkins (1, CUAC); USA: S. Carolina: Florence Co./ N 34.2945, W 79.7238/ Florence, Dargan's Pond/ iv.19–v.2.2016 BBSC16MH012/ Lindgren – Ips lure (1, CUAC); USA: S. Carolina: Oconee Co./ Seneca, 321 Hickory Ln./ N 34.681, W –82.881/ R.R. Montanucci Col./ 1 Oct 2018 [date handwritten on label] (1, CUAC); USA: SC: Pickens Co./ 34.7252°N, 82.8245°W/ 5 mi. N. Clemson/ 10–16.vi.2021, Malaise/ M. Caterino (2, CUAC).

***Dirrhagofarsus ernae* Otto, Muona and McClarin, 2014**

This widespread, seemingly common eucnemid species was previously known from Alabama, Connecticut, Delaware, Florida, Illinois, Indiana, Iowa, Georgia, Kansas, Maine, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Texas, Vermont, Virginia, West Virginia, and Wisconsin (Otto 2022b). North Carolina and South Carolina are now confirmed as **new state records**. One specimen was taken beneath the bark of a deciduous tree in South Carolina. Three specimens were taken from UV light traps in North Carolina and South Carolina. One specimen was taken from a Lindgren funnel trap baited with *Ips* lure. **NORTH CAROLINA:** N. CAROLINA: Alleghany Co./ Stone Mountain State Park/ Superintendent's House/ May 16, 2015 – UV Light // Isorhipis/ nubila/ (Bonvouloir)/ Det. J. Ciegler [genus, species and author handwritten on label] (1, CUAC); **SOUTH CAROLINA:** Dirrhagofarsus/ lewisi/ Fleutiaux ♀ [handwritten label] // Newberry, S.C./ 4/20/2001 [handwritten label] // Under/ Deciduous/ Bark // Col. J.C./ Ciegler (1, CUAC); SC: Oconee Co./ Clemson Forest/ Ravenel Tract/ May 7, 2006/ at UV light // Microrhagus/ pectinatus/ LeConte/ Det. J. Ciegler [genus, species and author handwritten on label] (1, CUAC); **SOUTH CAROLINA:** Dillon Co., Fork/ UV Light April 15, 2012/ J.C. Ciegler // Microrhagus/ audax/ Horn/ Det. J.C. Ciegler [genus, species and author handwritten on label] (1, CUAC); USA: SC: Charleston Co./ 32.8053° N, 79.9947° W/ Old Town Ck. Co. Pk./ vi.10.2014, CAPS Project (1, CUAC); USA: SC: Georgetown Co./ 33.3302° N, 79.2469° W/ Baruch/Hobcaw Barony/ v.13–16.2015, M. Caterino/ S. Meyers & A. Deczynski (1, CUAC); USA: S. Carolina: Spartanburg Co./ N 34.8694, W –81.85119/ Camp Croft (1)/ iv.16–v.4.2016 BBSC16.BC01/ Lindgren – *Ips* lure (1, CUAC).

***Dirrhagofarsus lewisi* (Fleutiaux, 1900)**

This apparently uncommon eucnemid species was found in Alabama, Arkansas, Connecticut, Florida, Illinois, Georgia, Kansas, Maryland, Missouri, New Jersey, Ohio, Pennsylvania, Texas, Vermont, Virginia, West Virginia, and Wisconsin (Otto 2022b). **New state records** are reported here for four new states: Iowa, Kentucky, South Carolina, and Tennessee. One specimen was taken from a panel trap placed in a preserve in Iowa. One specimen

was taken from a Malaise trap placed in Kentucky. One specimen was taken from a UV light trap in Tennessee. **IOWA:** IA: Cedar Rapids/ Rock Island Pres./ June 27–July 6, 2022/ Panel tr, melange c/ Doug Veal (1, DAVC); **KENTUCKY:** USA: Kentucky: Madison Co./ Berea, Coll. For. Horse Cove Rd./ 37.575676°N 84.219452°W/ 1–8.vii.2013, 270m MT Trap 6/ K99 Chapman & Stedenfeld (1, CUAC); **SOUTH CAROLINA:** USA: SC: Pickens Co./ 34.7252° N, 82.8245° W/ 5 mi. N. Clemson/ vi.17.2014, M. & K. Caterino (1, CUAC); **TENNESSEE:** Dirrhagofarsus/ lewisi/ Fleutiaux ♂ [handwritten label] // Townsend, Tenn./ 8/3/2000 [handwritten label] // at U.V./ Light // Col. J.C./ Ciegler (1, CUAC).

Dirrhagofarsus modestus (Fleutiaux, 1923)

(Fig. 7)

This widespread, commonly encountered eucnemid species was reported from Japan, South Korea, and Russia. In the United States, *D. modestus* have been taken from Connecticut, Florida, Georgia, Indiana, Maine Massachusetts, New Jersey, New York, Ohio, Rhode Island, Vermont, Virginia, West Virginia, and Wisconsin (Otto 2022a). **New state records** are now confirmed for Iowa, Missouri, South Carolina, and Tennessee. Four specimens were taken from a combination UV and blacklight trap in Missouri. One specimen was taken on a tree stump at a state park in Iowa. One specimen was taken from a panel trap placed in a state park in Delaware County Iowa. One specimen was taken at lights in South Carolina. Three specimens were taken from a Malaise trap in South Carolina. Two specimens were taken from a flight intercept trap in South Carolina. One specimen was taken from a tree trunk at night in Missouri. One specimen was taken from a V-FIT placed in Missouri. Four specimens were taken from Lindgren funnel traps either baited with Platypodinae lure or *Ips* lure in South Carolina. One specimen was taken from a log after dark in Tennessee. **IOWA:** IA, Appanoose Co./ Sharon Bluffs SP/ June 27, 2018/ on tree stump/ Doug Veal (1, DAVC); IA, Delaware Co./ Backbone S.P./ June 2–9 2021/ Panel tr. malange c/ Doug Veal (1, DAVC); **MISSOURI:** USA: Missouri: Henry Co./ 10 km NW Clinton, MO/ N 38.423, W –93.807/ 27 May–2 June 2018/ V FIT M Ferro (1, CUAC); USA: Missouri: Henry Co./ 10 km NW Clinton, MO/ N 38.4245, W-93.8097/ 30 May 2018 Dead tree/ trunk at night M. Ferro (1, CUAC); USA: Missouri: Henry Co./ 10 km NW Clinton, MO/ N 38.4245, W-93.8097/ 31 May 2018/ UV/BL MFerro, MChapa (4, CUAC); **SOUTH CAROLINA:** USA: SC: Charleston Co./ 32.8053° N, 79.9947° W/ Old Town Ck. Co. Pk./ vi.10.2014, CAPS Project (1, CUAC); USA: SC: Horry Co./ SC For. Pine Btl Survey, 26-C/ N 34.1447, W –79.1996/ 1–5 May 2015/ Lindgren residue, D. Jenkins (1, CUAC); USA: S. Carolina: Greenville Co./ N 35.0244, W 82.70477/ Table Rock SP/ iv.16–v.4.2016 BBSC16.EH022/ Lindgren – Platypodinae lure (1, CUAC); USA: S. Carolina: Darlington Co./ N 34.3671, W 80.1152/ Hartsville, Kalmia Gardens/ iv.21–v.2.2016 BBSC16MH042/ Lindgren – Platypodinae lure (1, CUAC); USA: S. Carolina: Laurens Co./ N 34.47959, W 82.29333/ Thomas Brothers/ iv.26–v.5.2016 BBSC16TR012/ Lindgren – *Ips* lure (1, CUAC); USA: SC: Chesterfield Co./ 34.5745° N, 80.2232° W/ Carolina Sandhills NWR/ iii.24–iv.17.2017, FIT/ M. Caterino & M. Ferro (1, CUAC); USA: SC: Chesterfield Co./ 34.5626° N, 80.2106° W/ Carolina Sandhills NWR/ iv.17–v.3.2017, Malaise/ M. Caterino & M. Ferro (2, CUAC); USA: SC: Chesterfield Co./ 34.5626° N, 80.2106° W/ Carolina Sandhills NWR/ v.3–17.2017, Malaise/ M. Caterino & M. Ferro (1, CUAC); South Carolina: Newberry Co./ Saluda River & S.H. 121/ May 28, 2017 at light/ Kyle E. Schnepf (1, KESC); USA: SC: Pickens Co./ 34.7252° N, 82.8245° W/ 5 mi. N. Clemson/ 10–16.v.2021, Malaise, M. Caterino (1, CUAC); **TENNESSEE:** USA: TN: Sevier Co./ GSMNP: Roaring Fork MNT/ N 35.681, W –83.462/ 3 June 2019 M. Ferro/ Searching logs after dark (1, CUAC); USA: TN: Sevier Co./ 35.6802°N, 83.4625°W/ Smoky Mts NP, 3170'/ Roaring Fork Motor Tr./ vi.3.2019, M. Caterino (2, CUAC).

Dirrhagofarsus unicolor (Hisamatsu, 1960)

(Fig. 8)

This apparently rare eucnemid species was reported from Japan, Russia, and South Korea. In the United States, *D. unicolor* has been recorded in Connecticut, Massachusetts, New Jersey, Ohio, and Rhode Island (Otto 2022a). Delaware, Florida, and West Virginia are confirmed as **new state records**. Three specimens were taken from Lindgren funnel traps placed in Delaware, Florida and West Virginia. One specimen was taken from a Townes Malaise trap in southern Florida. **DELAWARE:** DELAWARE: Kent Co./ 3.8 km S of Little Creek/ 39.13366,



Figures 7–12. Nearctic Eucnemidae, dorsal habitus. 7) *Dirrhagofarsus modestus*. 8) *Dirrhagofarsus unicolor*. 9) *Stethon pectorosus*. 10) *Onichodon orchesides*. 11) *Fornax bicolor*. 12) *Fornax floridana*. (Scale: 7–12 = 1.0 mm.)

–75.441948, 7m/ 11–22 Jun 2020 // K. Fanning, S. Foster/ A. Strouse, LFT (1, CMNH); **FLORIDA:** FL: Highlands Co./ Archbold Bio. Sta./ 16 April 2020/ Mark Deyrup// Townes trap/ *Quercus myrti-*/ *folia scrub*/ N25.1853, W081.3511 (ABSC); Florida: Alachua Co./ San Felasco H.P.S.P./ 29.7172, –82.4594/ March 20–26, 2022/ Lindgren funnel trap/ Kyle E. Schnepf (KESC); **WEST VIRGINIA:** WEST VIRGINIA:/ Hancock County/ 7.6 km SW Chester/ 40.54232, –80.57566 // Lindgren FT/ Tim Smith (1, CMNH).

Subfamily Eucneminae Eschscholtz, 1829

Tribe Mesogenini Muona, 1993

***Stethon pectorosus* LeConte, 1866**

(Fig. 9)

In Canada, this apparently rare eucnemid species was previously taken from New Brunswick, Ontario, and Québec. In the United States, *S. pectorosus* was previously known from Alabama, Arkansas, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New York, Ohio, Oklahoma, Pennsylvania, Texas, Virginia, and Wisconsin (Otto & Karns 2017). **New state records** are now confirmed in Connecticut and Georgia. Two specimens were taken from a cross-vane panel trap baited with *Trichoferus campestris* Falderman (Coleoptera: Cerambycidae) lure in Connecticut. One specimen was taken from a UV light trap in Georgia. **CONNECTICUT:** CONNECTICUT: Hartford/ Co., 3.8 km ENE of Windsor/ 41.86611, –72.6012, 27m/ 23 Jun–14 Jul 2020 // Cross-vane panel trap/ with *Trichoferus/ campestris* Lure/ S. Carson (2, CMNH); **GEORGIA:** GEORGIA: Whitfield Co./ Rocky Face Ridgeline/ 5.2 km SW of Dalton/ Dug Gap Mountain Rd./ 34.741389, –85.015000 // 30 June–1 July 2021/ 429m, UV light trap/ James K. Adams (1, CMNH).

Subfamily Macraulacinae Fleutiaux, 1922

Tribe Euryptychini Mamaev, 1976

***Euryptychus heterocerus* (Say, 1836)**

This rarely collected eucnemid species is known from Georgia, Illinois, Indiana, Kansas, Maryland, Michigan, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, Virginia, West Virginia, and Wisconsin (Otto and Karns 2017). A **new state record** is confirmed for Connecticut. One specimen was taken from a cross-vane panel trap baited with *Trichoferus* lure. One specimen was taken from a Lindgren funnel trap placed in Connecticut. **CONNECTICUT:** CONNECTICUT:/ Fairfield Co., 9.5 km/ NW of Stamford/ 41.10475, –73.62818/ 10–31 August 2020 // Cross-vane panel/ trap + *Trichoferus/* lure, S. Carson (1, CMNH); **CONNECTICUT:**/ Fairfield County/ 3.1 km W of Danbury/ 41.39346, –73.49073/ 4–20 August 2021 // Lindgren FT/ G. Magana (1, CMNH).

***Euryptychus ulkei* (Horn, 1886)**

This rarely encountered eucnemid species has been previously confirmed in Florida, Georgia, Mississippi, Ohio, Pennsylvania, Rhode Island, Texas, Virginia, and Wisconsin (Otto and Karns 2017; Otto and Young 2017). **New state records** are now confirmed for Connecticut and New Jersey. One specimen was taken from a cross-vane panel trap in Connecticut. One specimen was taken from a Lindgren funnel trap in New Jersey. **CONNECTICUT:** CONNECTICUT:/ New Haven Co./ 9.4 km NNE of Guilford/ 41.367524, –72.640038/ 116m, 30 Jun–15 Jul 2020 // cross-vane panel/ trap, J. Durrell (1, CMNH); **NEW JERSEY:** NEW JERSEY:/ Middlesex County, 1.7/ km W of Jamesburg/ 40.353706, –74.45993/ 20 July–3 August 2020 // Lindgren funnel/ trap, S. McCallister (1, CMNH).

Tribe Macraulacini Fleutiaux, 1922

***Diphytaxis excavata* Horn, 1891**

This widespread, rarely seen eucnemid species has been recorded in Arkansas, Missouri, Ohio, Texas, and Virginia (Otto 2022b). A **new state record** is hereby confirmed for Iowa. One specimen was taken from a panel trap placed in a state park in southeastern Iowa. **IOWA:** IA, Lee Co./ Shimek S.P./ July 17–24, 2022/ Panel tr. melange c/ Doug Veal (1, DAVC).

***Onichodon canadensis* (Brown, 1940)**

In Canada, this apparently rare eucnemid species has been recorded from New Brunswick, Nova Scotia, Ontario, Prince Edward Island, and Québec. In the United States, *O. canadensis* was found in Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New York, Pennsylvania, Vermont, and Wisconsin (Otto & Karns 2017). A **new state record** is reported for New Jersey. Two specimens were taken from a cross-vane panel trap in New Jersey. **NEW JERSEY:** NEW JERSEY:/ Gloucester County/ 4.7 km NE of Sewell/ 39.78454, -75.09454/ 7–21 July 2020 // Cross-van panel trap/ with α -pinene + EtOH/ + monochamol/ M. Parkinson, coll. (2, CMNH).

***Onichodon downiei* Muona, 2000**

In Canada, this widespread, but rarely encountered eucnemid species has been recorded from Ontario. In the United States, *O. downiei* was previously recorded from Arkansas, Connecticut, Illinois, Indiana, Maryland, Massachusetts, Michigan, Missouri, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, and Wisconsin (Otto 2022b). Maine is reported here as a **new state record**. **MAINE:** Orono, Me./ VI-28-1978 [‘28’ and ‘78’ are handwritten on label] (1, CUAC).

***Onichodon orchesides* Newman, 1838**

(Fig. 10)

In Canada, this widespread, apparently uncommonly seen eucnemid species has been taken from New Brunswick, Ontario, and Québec. In the United States, *O. orchesides* was previously recorded from Arkansas, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Vermont, West Virginia, and Wisconsin (Otto 2013). The **new state record** is for Louisiana based on a specimen taken from a Lindgren funnel trap baited with ethanol. **LOUISIANA:** USA: LA: Feliciana Par./ Feliciana Preserve/ N 30.795°, W -91.254°/ 21 June–13 July 2014/ Lindgren w/ EtOH – Farro (1, CUAC).

***Onichodon rugicollis* (Fall, 1925)**

This rarely encountered eucnemid species has been taken from Alabama, Florida, Illinois, Iowa, Kentucky, Louisiana, Michigan, Mississippi, North Carolina, Pennsylvania, Texas, and Wisconsin (Otto and Karns 2017). **New state records** are now confirmed for Georgia and New York. Four specimens were taken from a UV light trap placed in a dune habitat in Georgia. One specimen was taken from a lighted sheet placed in a mesic oak/ pine forest. One specimen was taken from a Lindgren funnel trap placed in New York. **GEORGIA:** GEORGIA: McIntosh/ Co., Sapelo Island/ just S of Beach Road/ 31.39057, -81.26514/ Site 2, 5–8 May 2016 // UV light trap in dune/ habitat, J.K. Adams/ SAPELO ISL. MOTH/ FAUNAL STUDY (1, CMNH); **GEORGIA:** McIntosh Co./ Sapelo Island, ~400m./ inland of Nanny Goat/ Beach, S side Beach Rd./ 31.391667, -81.268611 // 16–18 May 2020, UV/ light trap in dunes/ habitat, J. Adams/ Sapelo Moth Survey (2, CMNH); **GEORGIA:** Long Co./ 5.5 km W of Ludowici/ Griffin Ridge W.M.A./ 31.704571, -81.800519 // 14 June 2021, UV/ trap in sandy open/ field with palmetto/ R. Androw, K. Karns (1, CMNH); **GEORGIA:** Long County/ Griffin Ridge WMA/ 13.4 km NE of Jesup/ Off Rt. 38 at Fountain Hole/ 31 42.240N, 81 47.942W/ 16-June-2021/ K.D. Karns, R.A. Androw // MV/UV light Sheet/ Pine/Oak Misc. Hardwood/ Forest with sandy scrub (1, KDKC); **NEW YORK:** NEW YORK: Franklin Co./ 2.5 km NE of Hogansburg/ 44.9921, -74.6441, 52m/ 6–19 July 2021, LFT/ A. Johnson (1, CMNH).

***Fornax bicolor* (Melsheimer, 1844)**

(Fig. 11)

In Canada, this rarely encountered eucnemid species was previously recorded from Québec. In the United States, *F. bicolor* has been taken from Alabama, Florida, Georgia, Illinois, Maryland, Massachusetts, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and Wisconsin (Otto 2020). Kentucky is confirmed as a **new state record**. One specimen was taken from a Malaise trap. **KENTUCKY:** USA: Kentucky: Madison Co./ Berea, Coll. For. Horse Cove Rd./ 37.57165°N 84.21799°W/ 15–22.vii.2013, 269m MT trap 2/ K118 Chapman & Stedenfeld (1, CUAC).

***Fornax floridana* Otto, 2020**

(Fig. 12)

This rarely collected eucnemid species has been recorded in Florida (Otto 2020). A **new state record** is now confirmed in Georgia. One specimen was taken from a UV light trap. **GEORGIA:** GEORGIA: Whitfield Co./ Rocky Face Ridgeline/ 5.2 km SW of Dalton/ Dug Gap Mountain Rd./ 34.741389, –85.015000 // 30 June–1 July 2021/ 429m, UV light trap/ James K. Adams (1, CMNH).

***Fornax parallellicollis* Otto, 2020**

(Fig. 13)

This rarely collected southern eucnemid species was known from Florida and Texas (Otto 2020). Two records are confirmed for Georgia as **new state records**. One specimen was taken from a UV light trap. One specimen was taken from a Lindgren funnel trap. **GEORGIA:** GEORGIA: Coffee Co./ 9 km E of Douglas/ 31.50938, –82.75501/ 9–24 June 2020, LFT/ N. Skaggs, BSF# 94094 (1, CMNH); **GEORGIA:** Whitfield Co./ Rocky Face Ridgeline/ 5.2 km SW of Dalton/ Dug Gap Mountain Rd./ 34.741389, –85.015000 // 30 June–1 July 2021/ 429m, UV light trap/ James K. Adams (1, CMNH).

***Serrifornax infelix* (Horn, 1886)**

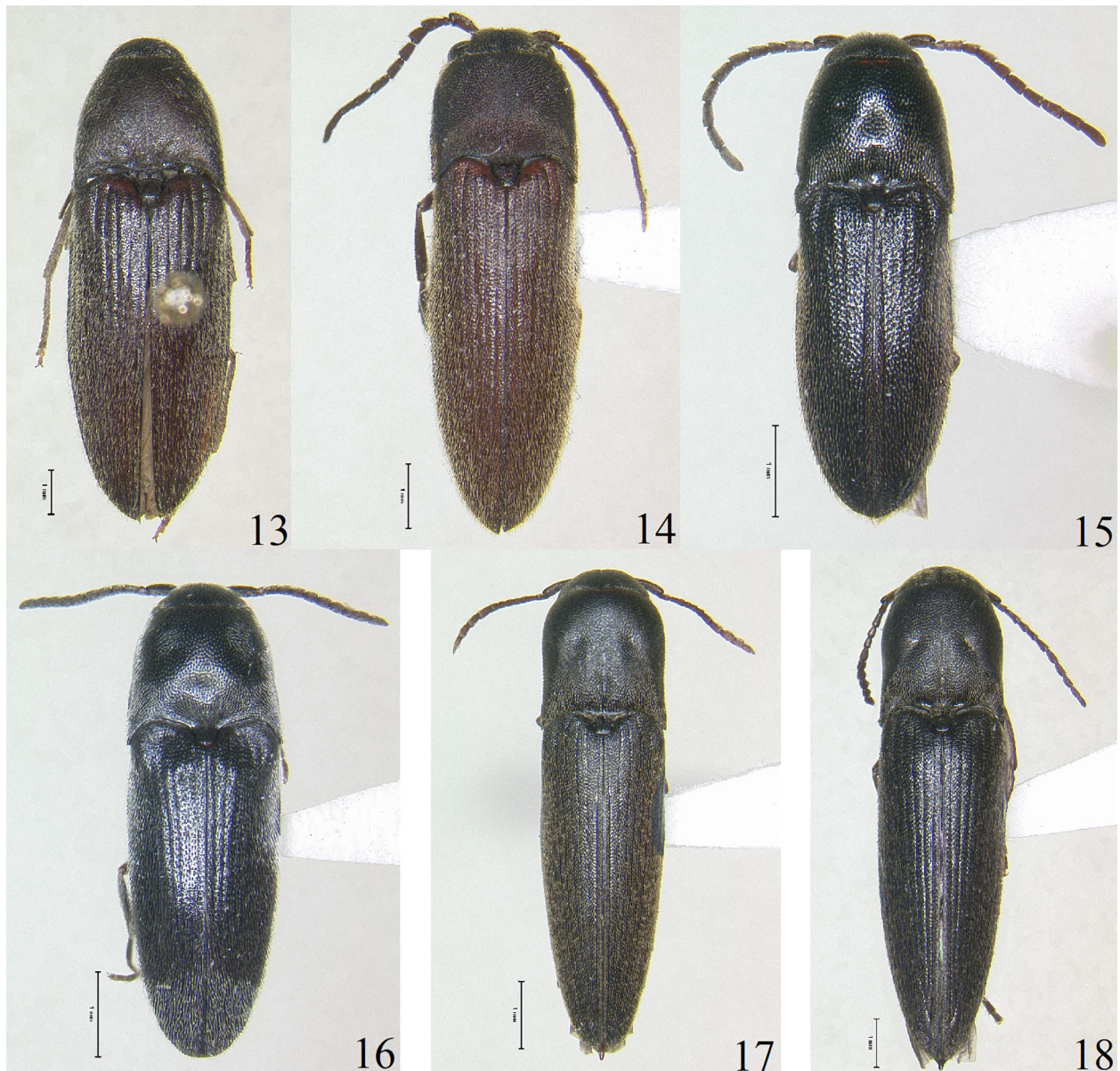
(Fig. 14)

This uncommon eucnemid species has been recorded from Alabama and Florida (Otto 2012). The **new state record** is for Georgia. One specimen was taken from a UV light trap placed in a sandy open field. One specimen was taken from a lighted sheet placed in a mesic oak/pine forest. **GEORGIA:** GEORGIA: Long Co./ 5.5 km W of Ludowici/ Griffin Ridge W.M.A./ 31.704571, –81.800519 // 14 June 2021, UV/ trap in sandy open/ field with palmetto/ R. Androw, K. Karns (1, CMNH); **GEORGIA:** Long County/ Griffin Ridge WMA/ 13.4 km NE of Jesup/ Off Rt. 38 at Fountain Hole/ 31 42.240N, 81 47.942W/ 16-June-2021/ K.D. Karns, R.A. Androw // MV/UV light Sheet/ Pine/Oak Misc. Hardwood/ Forest with sandy scrub (1, KDKC).

***Isarthrus calceatus* (Say, 1836)**

(Fig. 15)

In Canada, this uncommonly encountered eucnemid species was taken in Ontario and Québec. In the United States, *I. calceatus* was previously recorded from Arkansas, Connecticut, District of Columbia, Georgia, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Rhode Island, Texas, Vermont, and Wisconsin (Otto 2022b; Wickham 1911). Herein, I confirm **new state records** for this species from North Carolina, South Carolina, and West Virginia. One specimen was obtained through sifting litter in North Carolina. Five specimens were extracted from a *Pinus* log in South Carolina. Twenty-three specimens were taken from Lindgren funnel traps in South Carolina, including one specimen from Lindgren funnel trap baited with α -pinene. Nine specimens were taken from flight intercept traps placed in South Carolina. One specimen was taken from UV light trap in South Carolina. One specimen was taken from a Lindgren funnel trap in West Virginia. **NORTH CAROLINA:** Dromaeolus/ striatus/ LeConte [handwritten label] // SC: Calhoun Co./ Wannamaker NP/ St. Matthews/ at UV light/ April 6, 2010 // Col. J.C./ Ciegler (1, CUAC); **USA:** NC: Graham Co./ 35.3441° N, 83.9660° W/ Joyce Kilmer Mem.



Figures 13–18. Nearctic Eucnemidae, dorsal habitus. **13)** *Fornax parallelicollis*. **14)** *Serrifornax infelix*. **15)** *Isarthrus calceatus*. **16)** *Dromaeolus turnbowi*. **17)** *Nematodes humphreyi*. **18)** *Nematodes rugosipennis*. (Scale: 13–18 = 1.0 mm.)

Forest/ vi.24.2015, S. Myers & M./ Caterino, Sifted litter (1, CUAC); **SOUTH CAROLINA:** CSC APL 2 050331/ USA: SC: Chichland Co. Columbia/ 3737 Martin St./ Carolina Wood Products/ coll. Friedman 31mar2005/ alp-hapinae; Lindgren (1, CUAC); USA: SC: Kershaw Co./ SC For. Pine Btl Survey, 28-A/ N 34.4328, W –80.6047/ 7–14 April 2015/ Lindgren residue, D. Jenkins (2, CUAC); USA: SC: Kershaw Co./ SC For. Pine Btl Survey, 28-B/ N 34.3483, W –80.6967/ 7–14 April 2015/ Lindgren residue, D. Jenkins (2, CUAC); USA: SC: Kershaw Co./ SC For. Pine Btl Survey, 28-C/ N 34.4756, W –80.8036/ 7–14 April 2015/ Lindgren residue, D. Jenkins (1, CUAC); USA: SC: Fairfield Co./ SC For. Pine Btl Survey, 20-A/ N 34.3083, W –81.0252/ 7–15 April 2015/ Lindgren residue, D. Jenkins (3, CUAC); USA: SC: Chesterfield Co./ 34.5855° N 80.2690° W/ Carolina Sandhills NWR/ ii.8–22.2017, Lindgren/ M. Caterino & M. Ferro (1, CUAC); USA: SC: Chesterfield Co./ 34.5745° N 80.2232° W/ Carolina Sandhills NWR/ ii.22.2017, in *Pinus* log/ M. Caterino, M. Ferro & R. Hopp (5, CUAC);

USA: SC: Chesterfield Co./ 34.5855° N 80.2690° W/ Carolina Sandhills NWR/ ii.22–iii.8.2017, Lindgren/ M. Caterino & M. Ferro (5, CUAC); USA: SC: Chesterfield Co./ 34.5855° N 80.2690° W/ Carolina Sandhills NWR/ ii.22–iii.8.2017, FIT/ M. Caterino & M. Ferro (2, CUAC); USA: SC: Chesterfield Co./ 34.5476° N 80.2433° W/ Carolina Sandhills NWR/ ii.22–iii.8.2017, FIT/ M. Caterino & M. Ferro (2, CUAC); USA: SC: Chesterfield Co./ 34.5855° N 80.2690° W/ Carolina Sandhills NWR/ ii.22–iii.8.2017, Lindgren/ M. Caterino & M. Ferro (5, CUAC); USA: SC: Chesterfield Co./ 34.5626° N 80.2106° W/ Carolina Sandhills NWR/ ii.22–iii.8.2017, FIT/ M. Caterino & M. Ferro (3, CUAC);); USA: SC: Chesterfield Co./ 34.5626° N 80.2106° W/ Carolina Sandhills NWR/ ii.22–iii.8.2017, Lindgren/ M. Caterino & M. Ferro (2, CUAC); USA: SC: Chesterfield Co./ 34.5855° N 80.2690° W/ Carolina Sandhills NWR/ iii.8–24.2017, Lindgren/ M. Caterino & M. Ferro (1, CUAC); USA: SC: Chesterfield Co./ 34.5476° N 80.2433° W/ Carolina Sandhills NWR/ iii.8–24.2017, FIT/ M. Caterino & M. Ferro (1, CUAC); USA: SC: Chesterfield Co./ 34.5745° N 80.2232° W/ Carolina Sandhills NWR/ iii.8–24.2017, FIT/ M. Caterino & M. Ferro (1, CUAC); **WEST VIRGINIA:** WEST VIRGINIA: Putnam/ Co., 3.2 km SSW Buffalo/ 38.59092, –81.99447/ 20 May–5 Jun 2020, LFT/ Greg Lewis (1, CMNH).

***Dromaeolus cylindricollis* (Say, 1836)**

In Canada, this infrequently collected eucnemid species was previously known from Ontario and Québec. In the United States, *D. cylindricollis* has been recorded from Alabama, Arkansas, Connecticut, District of Columbia, Florida, Georgia, Illinois, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Tennessee, Texas, Vermont, Virginia, and Wisconsin (Otto 2022b; Wickham 1911). The single **new state record** is for and reported for South Carolina. One specimen was taken from a flight intercept trap placed in South Carolina. **SOUTH CAROLINA:** USA: SC: Chesterfield Co./ 34.5476° N 80.2433° W/ Carolina Sandhills NWR/ v.3–17.2017, FIT/ M. Caterino & M. Ferro (1, CUAC).

***Dromaeolus salsus* Bonvouloir, 1875**

This rarely encountered, but apparently widespread eucnemid species has been recorded from Florida, Louisiana, Ohio, and Texas (Otto and Karns 2017). **New records** have been confirmed for three states/Commonwealths: Massachusetts, New York, and Rhode Island. Six specimens were taken from cross-vane panel traps placed in Massachusetts and Rhode Island. Two specimens were taken from Lindgren funnel traps placed in Rhode Island and New York. **MASSACHUSETTS:** MASSACHUSETTS: Norfolk/ Co., 0.3 km NNE of Milton/ 42.252369, –71.064749/ 38m, 1–15 July 2020 // Cross-vane panel trap/ with *Trichoferus/ campestris* lure/ C. Perry, (1, CMNH); MASSACHUSETTS: Bristol/ Co., 2.4 km NNE of Taunton/ 41.919604, –71.077327/ 25m, 14–28 Jul 2020 // Cross-vane panel trap/ with EtOH/ K. Thomsen (1, CMNH); MASSACHUSETTS:/ Plymouth Co., 3.2 km/ NW of Brockton, 65m/ 42.10527, –71.04289/ 23 June–7 July 2021 // Cross-vane panel trap/ with EtOH + spruce/ blend+ Geranyl acetol/ C. Perry (1, CMNH); MASSACHUSETTS:/ Bristol County, 0.8 km/ SW of East Freetown/ 41.76939, –70.96456/ 33m, 5–19 August 2021 // Cross-vane panel trap/ with EtOH + spruce/ blend+ Geranyl acetol/ C. Perry (1, CMNH); **NEW YORK:** NEW YORK: Ulster Co./ 3.3 WSW of Saugerties/ 42.0629, –73.9872/ 19 Jun–2 Jul 2020, LFT // Lindgren funnel trap/ S. Hammerstone (1, CMNH); **RHODE ISLAND:** RHODE ISLAND: Kent/ Co., 1 km NW of Manville/ 41.973607, –71.484528/ 78m, 10–23 Jul 2020 // Cross-vane panel/ trap with EtOH/ K. DiVito (1, CMNH); RHODE ISLAND:/ Kent County, 2.6 km/ SW of Potowomut/ 41.64794, –71.44553 // 20 Jul–3 Aug. 2020/ Lindgren funnel trap/ R. Martin (1, CMNH); RHODE ISLAND:/ Providence County/ 5.5 km NW Johnston/ 41.84380, –71.57059/ 118m, 7–21 July 2021 // Cross-vane panel trap/ with EtOH + spruce/ blend+ Geranyl acetol/ K. Bjarnason, coll. (1, CMNH).

***Dromaeolus turnbowi* Muona, 2000**

(Fig. 16)

This widespread, rarely encountered eucnemid species was previously known from Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Ohio, Pennsylvania, Tennessee, Texas, and West Virginia (Otto 2022b). It is recorded here for the first time as **new state records** for Kentucky and South Carolina. Two specimens were

taken from Malaise traps placed in Kentucky. One specimen was taken from a U.V. light trap in South Carolina. **KENTUCKY:** USA: Kentucky: Madison Co./ Berea, Coll. For. Horse Cove Rd./ 37.57165°N 84.21799°W/ 17–24.vi.2013, 276m MT trap 2/ K80 Chapman & Stedenfeld (1, CUAC); USA: Kentucky: Madison Co./ Berea, Coll. For. Horse Cove Rd./ 37.575676°N 84.219452°W/ 1–8.vii.2013, 270m MT trap 6/ K99 Chapman & Stedenfeld (1, CUAC); **SOUTH CAROLINA:** Isarthrus/ calceatus/ (Say) [handwritten label] // West Columbia/ SC 6/7/92 [handwritten label] // at U.V./ light [handwritten label] // Col. J.C./ Ciegler (1, CUAC).

Tribe Nematodini Leiler, 1976

Nematodes atropos (Say, 1836)

This widespread, somewhat common eucnemid species has been taken from Alabama, Arkansas, Connecticut, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and West Virginia (Otto, 2021). It is reported and confirmed for the first time in Iowa. One specimen was taken from a panel trap placed in a state park. One specimen was taken from a combination fluorescent and UV light at a state park. **IOWA:** IA, Fremont Co./ Waubonsie S.P./ June 22–July 5, 2013/ Panel trap – melange/ Doug Veal (1, DAVC); IA, Fremont Co./ Waubonsie S.P./ June 28, 2022/ Flour./UV light/ Doug Veal (1, DAVC).

Nematodes humphreyi Muona, 2000

(Fig. 17)

This rarely encountered eucnemid species was previously known from Florida, only (Otto 2021) and recorded here for the first time in Louisiana as a **new state record**. In Louisiana, a single specimen was taken from a Lindgren funnel trap baited with ethanol. **LOUISIANA:** USA: LA: Feliciana Par./ Feliciana Preserve/ N 30.7946, W –91.2537/ 18–24 May 2014/ Lindgren EtOH bait Farro, Flick (1, CUAC).

Nematodes rugosipennis Otto, 2021

(Fig. 18)

This widespread, rarely collected eucnemid was previously taken in Florida, Georgia, and Oklahoma (Otto 2021). It is reported for the first time in two additional states: Louisiana and South Carolina. Three specimens were taken from Lindgren funnel trap baited with ethanol. One specimen was taken from a UV light trap in South Carolina. Seven specimens were taken from Lindgren funnel traps baited either with *Ips* lure or Platypodinae lure in South Carolina. One specimen was taken from a Malaise trap placed in South Carolina. **LOUISIANA:** USA: LA: W. Feliciana Par./ Feliciana Preserve/ N 30.7946, W –91.2537/ 18–24 May 2014/ Lindgren EtOH bait Farro, Flick (1, CUAC); USA: LA: W. Feliciana Par./ Feliciana Preserve/ N 30.795, W –91.254/ 24 May–1 June 2014/ Lindgren w/ EtOH –MFarro (1, CUAC); USA: LA: W. Feliciana Par./ Feliciana Preserve/ N 30.795, W –91.254/ 1–8 June 2014/ Lindgren w/ EtOH –MFarro (1, CUAC); **LOUISIANA:** Plaque-/ mines Parish, 1.2 km/ NW Saint Clair, 1m/ 29.87671, –89.97819 // 31 Mar – 27 May 2021/ Lindgren funnel trap/ M. Troxler, L. Ramos/ BSF# 100374 (1, CMNH); **SOUTH CAROLINA:** Clemson S.C./ 18 May 1953/ J.T. Whitlaw [‘18 May’ and ‘3’ handwritten on label](1, CUAC); *Nematodes/ atropos* (Say) ♀ [handwritten label] // S. Carolina: Greenville Co./ Jones Gap SP, Hosp. Rock Tr./ June 19, 2014 – UV light // Coll. J.C./ Ciegler (1, CUAC); USA: SC: Georgetown Co./ 33.3302° N, 79.2469° W/ Baruch/Hobcaw Barony/ v.13–16.2015, M. Caterino/ S. Meyers & A. Deczynski (3, CUAC); USA: SC: Spartanburg Co./ N 34.87978, W –81.86531/ Camp Croft (2)/ iv.16–v.4.2016 BBSC16.BC03/ Lindgren – *Ips* lure (1, CUAC); USA: SC: Florence Co./ N 34.2945, W –79.7238/ Florence, Dargan’s Pond/ v.2–v.16.2016 BBSC16.MH014/ Lindgren – *Ips* lure (1, CUAC); USA: S. Carolina: Barnwell Co./ N 33.33351, W –81.30316/ Barnwell State Park/ v.4–v.23.2016 BBSC16.GC02/ Lindgren – Platypodinae lure (3, CUAC); USA: SC: Pickens Co./ 34.7252° N, 82.8245° W/ 5 mi. N. Clemson/ v.31.2016, M & K Caterino (3, CUAC); USA: SC: Chesterfield Co./ 34.6397° N, 79.8920° W/ Cheraw St. Pk./ iv.5–8.2017, M. Howle/ Lindgren – *Ips* lure (1, CUAC); USA: SC: Dillon Co./ 34.3300° N, 79.2700° W/ Little Pee Dee St. Pk./ iv.5–8.2017, N. Mirmow/ Lindgren – *Ips* lure (1,

CUAC); USA: SC: Pickens Co./ 34.7252° N, 82.8245° W/ 5 mi. N. Clemson/ 10–16.vi.2021, Malaise/ M Caterino (1, CUAC).

Discussion

One of the 35 species of Eucnemidae covered in this study stood out for its range extension. The record for *R. thoracicus* in Florida and Georgia offers more potential opportunities for additional records east of Texas, particularly Alabama, Arkansas, Louisiana and Mississippi. It is unknown whether or not the eucnemid species is present north of Georgia. Muona (2000) previously thought its range would be more limited here in the United States, based on the examination of nine specimens available for his Nearctic revision found in Texas. The unexpected find in Florida and Georgia re-evaluates that previous notion and surmise that it is more widespread than originally thought. So far, *R. thoracicus* records are present in nearly all Mesoamerican countries as far south as Panama but remains absent in both El Salvador and Mexico. It is likely *R. thoracicus* is present in these latter two countries.

Ed Freese (pers. comm.) brought to my attention on an obscure publication (Wickham 1911), which listed records for five eucnemid species (as Elateridae) from Iowa evidently overlooked in all previous research done on Nearctic Eucnemidae. These overlooked Iowa records include the following Eucnemidae: *Perothops muscidus* (Gyllenhal) (Aims), *Anelastes drurii* Kirby (Oskaloosa), *Isarthrus calceatus* (Say) (Iowa City), *Dromaeolus badius* (Melsheimer) (Iowa City) and *Dromaeolus cylindricollis* (Say) (Iowa City). These records are hereby included in current and future research projects for Nearctic Eucnemidae.

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Literature Cited

- Horn G. 1890.** Fam. Eucnemidae. p. 210–257, pl. 10. In: Godman FD, Salvin O (eds.). *Biologia Centrali-Americana: Zoology, Botany and Archeology. Insecta, Coleoptera, Serricornia. Volume III, Part 1.* Bernard Quaritch Limited; London, UK. 671 p. + 29 pl.
- Muona J. 2000.** A revision of the Nearctic Eucnemidae. *Acta Zoologica Fennica* 212: 1–106.
- Otto RL. 2012.** New USA state records for eight species of false click beetles (Coleoptera: Eucnemidae). *The Coleopterists Bulletin* 66(4): 358–359.
- Otto RL. 2013.** Eucnemid larvae of the Nearctic region. Part III: Mature larval descriptions for three species of *Onichodon* Newman, 1838 (Coleoptera: Eucnemidae: Macraulacinae: Macraulacini), with notes on their biology. *The Coleopterists Bulletin* 67(2): 97–106.
- Otto RL. 2020.** A review of the Nearctic species of *Fornax* Laporte (Coleoptera: Eucnemidae: Macraulacinae: Macraulacini) with descriptions of six new species. *Insecta Mundi* 0818: 1–26.
- Otto RL. 2021.** A review of the Nearctic species of *Nematodes* (Coleoptera: Eucnemidae: Macraulacinae: Nematodini) with a description of one new species. *Insecta Mundi* 0881: 1–19.
- Otto RL. 2022a.** A new species and new records for two other exotic species of *Dirrhagofarsus* Fleutiaux, 1935 (Coleoptera: Eucnemidae: Melasinae: Dirrhagini) in the United States. *Insecta Mundi* 0932: 1–15.
- Otto RL. 2022b.** New state records for 33 species of Nearctic false click beetles (Coleoptera: Eucnemidae). *Insecta Mundi* 0934: 1–13.
- Otto RL, Karns KD. 2017.** New state records for Nearctic false click beetles (Coleoptera: Eucnemidae). *Insecta Mundi* 0582: 1–21.

Otto RL, Young DK. 2017. New species records for Wisconsin false click beetles (Coleoptera: Eucnemidae), with a checklist of the Wisconsin eucnemid fauna. *The Great Lakes Entomologist* 50(3–4): 47–51.

Wickham HF. 1911. A list of the Coleoptera of Iowa. *Bulletin from the Laboratories of Natural History of the State University of Iowa* 6(2): 1–40.

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