

JEFFERSONIANA

*Contributions from the
Virginia Museum of Natural History*

Number 32

October 1, 2025

Catalog of the invertebrate types in the collection of the Virginia Museum of Natural History, USA. Part I. Bryozoa, Annelida, and Arthropoda (Chelicerata, Crustacea, and Hexapoda).

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Virginia Museum of Natural History
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Editor: Dr. Adam Pritchard, Associate Curator of Paleontology, Virginia Museum of Natural History

ISSN 2163-8020 (online)

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ABSTRACT

We present the first synopsis of the invertebrate species group types housed in the Department of Recent Invertebrates, Virginia Museum of Natural History (VMNH), Martinsville, Virginia. The catalog provides detailed information regarding the types of 109 taxa (6 species of Ctenostomatida, 30 species of Cheilostomatida, 2 species of Cyclostomatida, 1 species of Hirudinida, 3 species of Opiliones, 2 species of Araneae, 3 species of Cyclopoida, 1 species of Harpacticoida, 23 species of Isopoda, 1 species of Decapoda, 2 species of Plecoptera, 3 species of Hemiptera, 1 species of Hymenoptera, 20 species of Coleoptera, 2 species of Trichoptera, and 9 species of Siphonaptera) housed at VMNH, including holotypes of 47 species. The paratypes of *Perlesta puttmanni* Kondratieff & Kirchner and *Perlesta roblei* Kondratieff & Kirchner (Plecoptera) reported to be at VMNH could not be located and their whereabouts are currently unknown. A catalog of the types in VMNH's extensive myriapod holdings will be published separately.

Keywords: Biodiversity, biological types, natural history collections.

INTRODUCTION

Type material connects formal names to physical specimens housed in natural history collections and represents an invaluable resource for the study of the world's biodiversity. The safe preservation of types and making these irreplaceable resources and their associated data available for examination by the research community are among the most important functions of such collections. Given the fundamental importance of type specimens to taxonomy, systematics, and biodiversity, the International Code of Zoological Nomenclature encourages institutions to publish lists of the name-bearing types in their care (ICZN 1999: Recommendation 72F.4). Such publications not only provide information on the available material, including data that can aid in the subsequent recognition of type specimens, but also provide a reference to the sources containing the original description and complement similar lists published by other institutions. The purpose of this catalog is to provide an annotated list of the invertebrate species group types housed at the

Virginia Museum of Natural History (VMNH) in Martinsville, Virginia.

VMNH was established in 1984 as a private institution, the Boaz Foundation. It was elected as the state's natural history museum in 1988 and became the formal state repository for scientific material and legacy data associated with numerous studies. Despite its short history, VMNH's invertebrate holdings have grown into an important regional collection containing many historically valuable specimens, the oldest of which date back to the 1870s.

The invertebrate collection at VMNH did not begin in earnest until early 1989 with the arrival of its first curator, Richard L. Hoffman, who donated his collection of over 54,000 specimens, which he had amassed during many years of research and teaching at Radford University, to VMNH (Roble 2009). During his tenure at VMNH (1989–2012), Hoffman collected, identified, and curated specimens from a wide variety of taxonomic groups and today the collection preserves legacy data from his numerous studies.

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In the collection's early years, entomologists Oliver S. Flint, David R. Smith, and Michael Kosztarab, and myriapodologists Rowland Shelley and William A. Shear added specimens and worked on the material. The collection grew rapidly through curatorial efforts, exchange of materials, donations, and acquisitions of orphaned materials. During this early period, Hoffman obtained several significant malacological collections from Richard Neves, Steve Ahlstedt, and Andy Gerberich and over 900 spider lots from the collection of William A. Shear (Roble 2009). The orphaned University of Richmond insect collection containing 22,500+ specimens, collected in the 1930s and 1940s, was acquired by VMNH in 1991. More recently, specimens generated through faunal surveys by VMNH and the Virginia Department of Conservation and Recreation, Division of Natural Heritage have increased the size and taxonomic breadth of the collection. In 2015, upon his retirement from Hampden-Sydney College, William A. Shear donated his collection of approximately 750 lots of invertebrate material (primarily Myriapoda and Arachnida) containing thousands of specimens to VMNH. Other notable recent acquisitions include James

Madison University and Virginia Commonwealth University – Rice Rivers Center insect collections, Bruce A. Steinly Diptera collection, Ralph Eckerlin Siphonaptera collection, and Eric H. Smith Coleoptera collection.

Over the years, many researchers have contributed material to VMNH's invertebrate holdings and vouchers of their studies (including types) are preserved here: Judith E. Winston (Bryozoa); James Murray (Gastropoda); William A. Shear, Rowland Shelley, Henrik Enghoff, Paul Marek, and Derek Hennen (Myriapoda, especially Diplopoda); Janet W. Reid (Crustacea: Copepoda), Julian J. Lewis (Crustacea: Isopoda, especially Asellidae); Steven M. Roble (Odonata, Lepidoptera); Boris C. Kondratieff (Plecoptera); Michael Kosztarab, Thomas Henry (Hemiptera); Ellison Orcutt (Hymenoptera: Apoidea), David R. Smith (Hymenoptera, especially Symphyta); Oliver S. Flint (Megaloptera, Neuroptera, Trichoptera, and Mecoptera); Robert S. Anderson (Coleoptera: Curculionoidea), Arthur V. Evans (Coleoptera, especially Scarabaeidae), Curt W. Harden (Coleoptera, especially Carabidae and



Figure 1. Invertebrate collections at the Virginia Museum of Natural History: A) fluid-preserved collection, B) dry-preserved collection.

Staphylinioidea), C. Barry Knisley (Coleoptera, especially Carabidae); Ralph Eckerlin (Acari, Psocodea: Phthiraptera, Siphonaptera); Paul Bedell (Diptera: Asilidae); William D. Orndorff and Thomas Malabad (cave taxa, especially Diplopoda, Isopoda, and Coleoptera); and others.

VMNH's invertebrate collection is housed on the second floor of the museum's building in Martinsville, Virginia with collection storage areas devoted to dry-preserved specimens (bryozoans; bivalve and gastropod shells; and pinned, pointed and papered insects), fluid-preserved specimens (alcohol-preserved bryozoans; annelids; mollusks; arthropods and others), and frozen tissues. The museum's slide collection (chiefly Siphonaptera) is currently housed in the entomology lab located adjacent to the collection storage areas.

At present, the museum's invertebrate collection contains an estimated 600,000+ curated specimens with a particular strength in bryozoans, unionids, isopods, myriapods, spiders, hemipterans, ants, and beetles (Fig. 1). The VMNH Diplopoda collection ranks among the ten most important millipede collections in the world and contains numerous type specimens and undescribed taxa (Sierwald and Reft 2004). Although worldwide in coverage, VMNH's invertebrate holdings are particularly strong in taxa from the southeastern United States with a principal emphasis on materials from Virginia and the surrounding states. A formal inventory of the museum's invertebrate collection began in 2017 and is ongoing. With a few exceptions (Mollusca; Isopoda: Oniscidea; Hemiptera: Cicadidae; and Hymenoptera: Formicidae), these collections have not yet been digitized.

This paper is the first of an intended two-part synopsis of VMNH's invertebrate type holdings, the second part of which will focus on VMNH's extensive myriapod collection. It is our hope that this work will increase the visibility and use of the museum's invertebrate holdings.

MATERIALS AND METHODS

For the purpose of compiling this list, all type material currently housed at VMNH was carefully examined and the label data, number and sex of specimens, and type repository were compared to the

original description. In cases in which the author(s) failed to make a clear statement regarding the deposition of types, the materials were considered to belong to the host institution. All types were assigned unique catalog numbers, most of which were given during this work. All specimen data were cataloged in both MS Excel and RSI Proficio and will be made available on the museum's website (<https://www.vmnh.net/research-collections/scientific-collections>). Examples of different preservations of type material housed at VMNH are shown in Fig. 2.

Taxa are arranged systematically by phylum, subphylum, class, and order. Within each order the families, genera, and species are listed alphabetically. Each entry includes the following information:

1. Original name combination, author, and year of publication. Asterisk (*) denotes type species of the genus.
2. Short reference with the name of the author(s), year of publication, journal name, and page on which the name was originally published. Type locality data, author, year, and page number.
3. Verbatim label data, with our remarks placed in square brackets. The text of the labels is presented in double quotation marks and, unless otherwise indicated, all labels are printed on white paper with black ink. Separate labels are numbered sequentially with numbers placed in parenthesis, e.g., (1). Lines within each label are separated by a vertical bar "|". We used the following abbreviations: [p] – succeeding data are printed, [hw] – succeeding data are handwritten. The holotype or lectotype data are listed first, followed by the allotype, paratype or paralectotype data, in ascending order by catalog number. In cases where the exact type status of the specimens was unspecified or is unclear, the specimens are listed as syntypes. Syntypes are listed in the same manner as paratypes.
4. Notes regarding the type material.
5. Current taxonomic status.

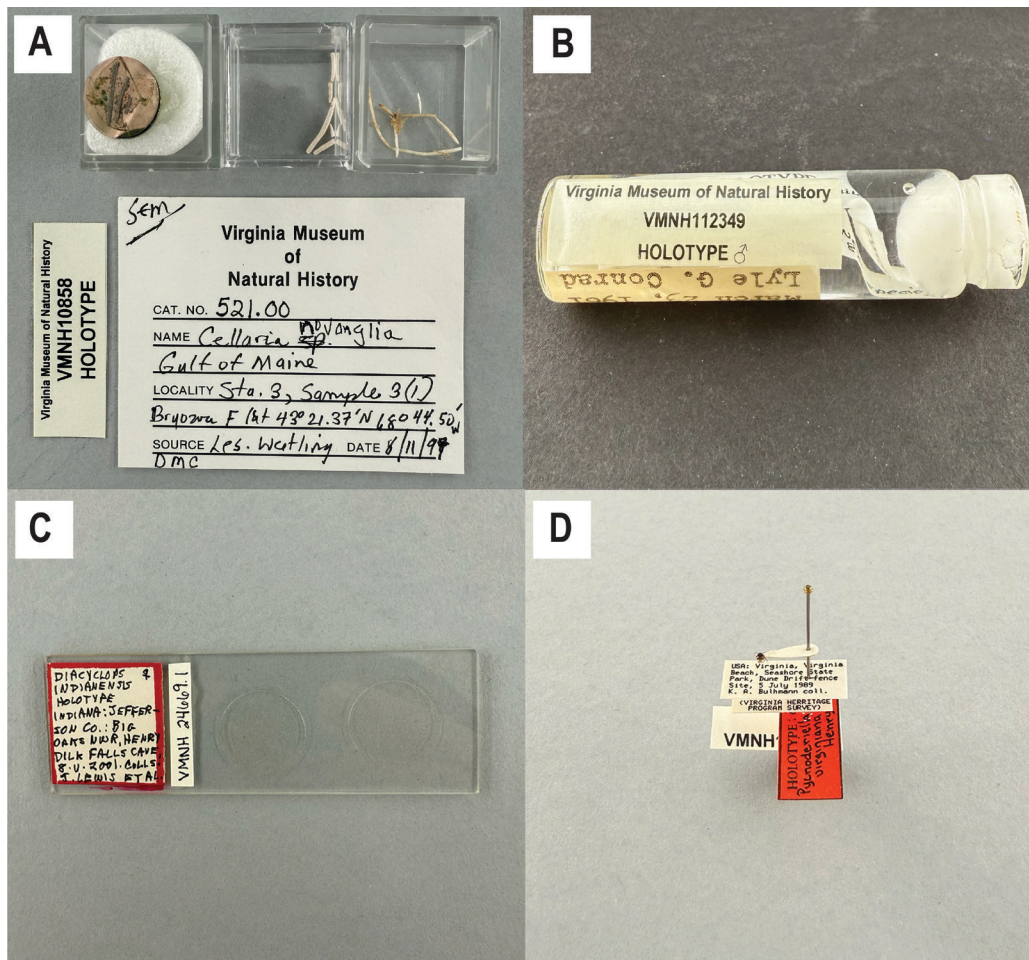


Figure 2. Holotypes from the Virginia Museum of Natural History showing various types of preservation: A) dry-preserved *Cellaria novanglia* Winston & Hayward (Cheilostomatida: Cellariidae), including a SEM stub; B) alcohol-preserved *Hesperonemastoma smilax* Shear (Opiliones: Sabaconidae); C) slide-mounted *Diacyclops indianensis* Reid (Cyclopoida: Cyclopidae); and D) pinned *Pycnoderiella virginiana* Henry (Hemiptera: Miridae).

Collection abbreviations		AVEC	A.V. Evans Collection, Richmond, Virginia, USA
ABS	Archbold Biological Station, Lake Placid, Florida, USA	BBC	B. Baldwin Collection, Mena, Arkansas, USA
ADC	Augusto DeGiovanni Collection, Bolonga, Italy	BMEC	R.M. Bohart Museum of Entomology, University of California, Davis, California, USA
AHF	Allan Hancock Foundation, University of Southern California, Los Angeles, California, USA	BPBM	Bishop Museum, Honolulu, Hawaii, USA
AMNH	American Museum of Natural History, New York, New York, USA	BYU	Brigham Young University, Monte L. Bean Life Science Museum, Provo, Utah, USA
ANSP	Academy of Natural Sciences of Drexel University, Philadelphia, Pennsylvania, USA	CAS	California Academy of Sciences, San Francisco, California, USA
ASUHC	Hasbrouck Insect Collection, Arizona State University, Tempe, Arizona, USA	CAS-DHK	D.H. Kavanaugh, California Academy of Sciences, San Francisco, California, USA

CMNC	Canadian Museum of Nature, Ottawa, Ontario, Canada	KHSC	North Carolina, USA
CMNH	Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, USA	LSAM	K.H. Stephan Collection, Red Oak, Oklahoma, USA (to TAMU)
CNC	Canadian National Collection of Insects, Arachnids, and Nematodes, Ottawa, Ontario, Canada	MCZ	Louisiana State Arthropod Museum, Louisiana State University, Baton Rouge, Louisiana, USA
CSUIC	C.P. Gillette Museum of Arthropod Diversity, Colorado State University, Fort Collins, Colorado, USA	MEM	Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA
CUAC	Clemson University Arthropod Collection, Clemson, South Carolina, USA	MWHC	Mississippi Entomological Museum, Mississippi State University, Mississippi State, Mississippi, USA
CUIC	Cornell University, Ithaca, New York, USA	MZH	M.W. Hastriter Collection
CUP	Pennsylvania Western University, Clarion (formerly Clarion University of Pennsylvania), Clarion, Pennsylvania, USA	MZUSP	Finnish Museum of Natural History, Helsinki, Finland
CWOB	C.W. O'Brien Collection, Green Valley, Arizona, USA	NCIP	Museum of Zoology of the University of São Paulo, São Paulo, Brazil
DNMNH	Ditsong National Museum of Natural History Collection (formerly Transvaal Museum), Pretoria, South Africa	NCSU	South African National Collection of Insects, Pretoria, South Africa
EBUSAC	Sistema de Colecciones Biológicas, Escuela de Biología, Universidad de San Carlos de Guatemala, Guatemala City, Guatemala	NGC	North Carolina State University Insect Collection, Raleigh, North Carolina, USA
EEC	E. Eaton Collection	NHMUK	N. Gompel Collection
EIU	Eastern Illinois University, Charleston, Illinois, USA	NIAES	Natural History Museum, London, United Kingdom
ENCB	National School of Biological Sciences, Mexico City, Mexico	NMB	National Institute for Agro-Environmental Sciences, Tsukuba, Japan
ERC	E. Riley Collection	OSAC	National Museum Bloemfontein, Bloemfontein, South Africa
FMNH	Field Museum of Natural History, Chicago, Illinois, USA	PERC	Oregon State Arthropod Collection, Corvallis, Oregon, USA
FPC	F. Peus Collection	PSU	Purdue University, West Lafayette, Indiana, USA
FSCA	Florida State Collection of Arthropods, Gainesville, Florida, USA	RELC	Pennsylvania State University, University Park, Pennsylvania, USA
GML	Gorgas Memorial Laboratory, Panama City, Panama	RHTC	R.E. Lewis Collection
INHS	Illinois Natural History Survey, Champaign, Illinois, USA	RLOC	R.H. Turnbow Collection, Fort Rucker, Alabama, USA
JAWC	J.A. Wojtowicz Collection	RMBC	R.L. Otto Collection
JMC	J. Muona Collection	RML	R.M. Brattain Collection, Lafayette, Indiana, USA
JMCC	J. McClarin Collection	ROM	Rocky Mountain Laboratories, Hamilton, Montana, USA
JSWC	J.S. Weaver III Collection	RTC	Royal Ontario Museum, Toronto, Ontario, Canada
KESC	K.E. Schnepp Collection, Raleigh, North Carolina, USA	SEMC	R. Traub Collection
			Snow Entomological Museum, University of Kansas, Lawrence, Kansas, USA

	Kansas, USA
SIU	Southern Illinois University, Carbondale, Illinois, USA
SMIRC	Severin-McDaniel Insect Research Collection, South Dakota State University, Brookings, South Dakota, USA
SNPC	Shenandoah National Park, Luray, Virginia, USA
SRAPI	Stavropol Research Anti-Plague Institute, Stavropol, Russia
TAMU	Texas A&M University, College Station, Texas, USA
TMC	T. MacRae Collection
UAAM	Arthropod Museum, University of Arkansas, Fayetteville, Arkansas, USA
UASM	E.H. Strickland Entomological Museum, University of Alberta, Edmonton, Alberta, Canada
UGCA	University of Georgia Collection of Arthropods, Athens, Georgia, USA
UK-TCB	T.C. Barr, Jr., University of Kentucky, Lexington, Kentucky, USA
ULKY	University of Louisville, Louisville, Kentucky, USA
UMIC	University of Mississippi, University, Mississippi, USA
UMOC	University of Missouri, Columbia, Missouri, USA
UNHP	University of New Hampshire, Durham, New Hampshire, USA
UNSM	University of Nebraska, Lincoln, Nebraska, USA
USNM	National Museum of Natural History, Smithsonian Institution, Washington DC, USA
UTIC	University of Texas Insect Collection, Austin, Texas, USA
UTC-UTCI	University of Tennessee Insect Museum, Knoxville, Tennessee, USA
UVM-RTB	R.T. Bell, University of Vermont, Burlington, Vermont, USA
VJTC	V.J. Tipton Collection
VMNH	Virginia Museum of Natural History, Martinsville, Virginia, USA
VPI&SU	Virginia Polytechnic Institute and State University, Blacksburg, Virginia, USA

WIRC University of Wisconsin, Madison,
Wisconsin, USA

ANNOTATED LIST OF TYPE SPECIMENS

In total, the 1,409 VMNH type specimens represent 47 holotypes, 2 allotypes, and 1,360 paratypes corresponding to 109 taxa described by 49 authors. The collection contains type material in the orders Ctenostomatida (6 spp.), Cheilostomatida (30), Cyclostomatida (2), Hirudinida (1), Opiliones (3), Araneae (2), Cyclopoida (3), Harpacticoida (1), Isopoda (23), Decapoda (1), Plecoptera (2), Hemiptera (3), Hymenoptera (1), Coleoptera (20), Trichoptera (2), and Siphonaptera (9). The paratypes of *Perlesta puttmanni* Kondratieff & Kirchner and *Perlesta roblei* Kondratieff & Kirchner (Insecta: Plecoptera) reported to be at VMNH could not be located and their whereabouts are currently unknown, being possibly in other collections. The female holotype and male allotype of *Nitokra evergladensis* Bruno & Reid (Harpacticoida) reported as deposited at VMNH have been returned to the Everglades National Park (see text for details).

Phylum Bryozoa
Class Gymnolaemata
Order Ctenostomatida
Family Alcyonidiidae

Alcyonidium adustum Winston & Hayward, 2012

“*Alcyonidium adustum* new species” Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 9. Type locality: “Hilton Park, Great Bay, New Hampshire” (Winston and Hayward 2012: 9).

Holotype: preserved in ethanol with labels: (1) “Virginia Museum of Natural History” | [hw] “ETOH” | [p] “1999-083 | Cat.no. 1354.00 | Name Alcyonidium “adustum” | Locality Hilton Park, Great Bay, New Hampshire | Source Winston,J.E. Date 01 Sep 1991” (2) [hw] “+photographed | Alcyonidium sp (4?) | col. # 2 meas. 9/1/91 | Hilton Park | Great Bay, NH | JEW” (3) “Virginia Museum of Natural History | VMNH11691 | HOLOTYPE” (4) [circular gold sticker on jar lid; hw] Alcyonidium | adustum |

Holotyp” (5) [circular green sticker on jar lid; hw] *Alcyonidium* | *adustum* | sp 4 col. # | 2” (6) [circular blue sticker on jar lid; hw] “slide” (7) [hw on jar lid] “000011691.0000 | OLD VMNH 1354.00 | Acc. # 1999-083 | 70% E”.

Notes: No other types have been designated. The species description erroneously lists the catalog number for this specimen as VMNH13691. The catalog number OLD VMNH 1354.00 refers to an old numbering system that has been replaced.

Status: valid.

Alcyonidium albescens Winston & Key, 1999

“*Alcyonidium albescens* new species” Winston and Key 1999. Bulletin of Marine Science 64(3): 510. Type locality: “Newport River estuary, 1-2 m deep channel in between two small islands in the Newport Marshes (34°44’30”N, 76°41’00”W) 7 km upstream from the mouth of the river at Beaufort Inlet, Beaufort, North Carolina” (Winston and Key 1999: 510).

Holotype: dry preserved in clear plastic box with labels: (1) [hw] “HOLOTYPE | [p] “Virginia Museum | of | Natural History | CAT. NO.” [hw] “327” | [p] “NAME” [hw] “*Alcyonidium* (sp nov) | *albescens*” | [p] “LOCALITY” [hw] “Beaufort, N.C. crab | no-S-52” | [p] “SOURCE” [hw] “Marcus Key” [p] “DATE” [hw] “coll 95 July” (2) “Virginia Museum of Natural History | VMNH10664 | HOLOTYPE” (3) [circular gold sticker on box lid; hw] “327” (4) [hw on box lid] “L stub no9 SEM 17 NOV 95 | *Alcyonidium* (sp nov.) | *albescens* | VMNH 327”.

Paratype: dry preserved on cardboard micropaleontological slide with labels: (1) [hw] “From crab. No S-41 | PARATYPE | Large” | [p] “Virginia Museum” | [hw] “stub no 10” [p] “of” | [hw] “SEM date” [p] “Natural History” | [hw] “17 NOV 1995” | [p] “CAT. NO.” | NAME” [hw] “*Alcyonidium* sp (nov.) | *albescens*” | [p] “LOCALITY” [hw] “Beaufort, N.C.” | [p] “SOURCE” [hw] “Marcus Key Coll.” [p] “DATE” [hw] “July 1995” (2) [on slide; hw] “L STUB no 10 | *Alcyonidium* | sp *albescens* | Beaufort | N.C. on | blue crab S-41 | Marcus Key July 1995 SEM 17 NOV 95”

(3) “Virginia Museum of Natural History | VMNH10665 | PARATYPE” (4) [circular silver sticker on box lid; hw] “328” (5) [hw on jar lid] “L stub no.10 SEM 17 NOV 95 | *Alcyonidium* (sp nov) | *albescens* | VMNH 328”.

Notes: No other types have been designated. The holotype and paratype labels list a collection date of July 1995, however, VMNH’s electronic database and the species description list the collection date as 22 August 1980. It is likely that the samples were processed in July 1995 and the data were incorrectly transcribed onto the labels. The catalog numbers 327 and 328 refer to an old numbering system that has been replaced.

Status: valid.

Alcyonidium eightsi Winston & Hayward, 1994

“*Alcyonidium eightsi* sp. nov.” Hayward and Winston 1994. Biology and Palaeobiology of Bryozoans: Proceedings of the 9th International Bryozoology Association Conference: 207. Type locality: “at Low Island and other localities in the South Shetland Islands and along the Peninsula” (Hayward and Wilson 1994: 207).

Paratype: preserved in ethanol with labels: (1) [hw] “*Alcyonidium* sp. | found in *Flustra thysanica* | Colony #1 Injury study | Low Island Antarctic | Peninsula | 7-III-85 70% alcohol” (2) [hw] “*Alcyonidium eightsi*” (3) “Virginia Museum of Natural History | VMNH10338 | PARATYPE” | (4) [circular silver sticker on jar lid; hw] “PARATYPE 000” (5) [hw on jar lid] “VMNH cat.# 1”

Notes: The type series also includes the holotype deposited at USNM. The VMNH catalog number included in the original description (VMNH no. 000) does not exist and may be a reference to the paratype specimen label “Paratype 000”. The catalog number VMNH cat.# 1 refers to an old numbering system that has been replaced.

Status: valid.

Alcyonidium lutosum Winston & Hayward, 2012

“*Alcyonidium lutosum* new species” Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 12. Type locality: “Darling Marine

Center, Walpole, Maine” (Winston and Hayward 2012: 12).

Holotype: preserved in ethanol with labels: (1) [hw] “Alcyonidium lutosum | Holotype VMNH no. 13679.0000 | ME08-05 subtidal kelp root | attached to DMC moorings | Damariscotta River @ Darling | Marine Center, Walpole, ME. | coll. 24 July 2008 | JEWinston” (2) [hw] “Alcyonidium “parasiticum 2” | ME08-05 includes colony | measured & 2 photoed” (3) “Virginia Museum of Natural History | VMNH13679 | HOLOTYPE” (4) [circular gold sticker on jar lid; hw] “Holotype” (5) [hw on jar lid] “VMNH no. 13679.0000 | Alcyonidium | lutosum”.

Notes: No other types have been designated.

Status: valid.

Alcyonidium maculosum Winston & Hayward, 2012

“*Alcyonidium maculosum* new species” Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 15. Type locality: “Darling Marine Center, Walpole, Maine” (Winston and Hayward 2012: 15).

Holotype: preserved in ethanol with labels: (1) [hw] “HOLOTYPE” [p] “Virginia Museum | of | Natural History | CAT. NO.” [hw] “13680.0000” | [p] “NAME” [hw] “Alcyonidium maculosum | Darling Marine Center” | [p] “LOCALITY” [hw] “boat mooring on | kelp, Damariscotta River | Walpole, ME.” | [p] “SOURCE” [hw] “J E. Winston” [p] “DATE” [hw] “24 July | 2008” (2) “Virginia Museum of Natural History | VMNH13680 | HOLOTYPE” (3) [circular gold sticker on jar lid; hw] “Alcyonidium | maculosum | Holotype” (4) [hw on jar lid] “VMNH 13680.0000 | Alcyonidium maculosum”.

Paratype: preserved in ethanol with labels: (1) [hw] “PARATYPES” [p] “Virginia Museum | of | Natural History | CAT. NO.” [hw] “13681.0000” | [p] “NAME” [hw] “Alcyonidium maculosum | Damariscotta River” | [p] “LOCALITY” [hw] “Darling Marine Center | boat mooring on kelp & red | algae - Walpole, ME.” | [p] “SOURCE” [hw] “J. E Winston”

[p] “DATE” [hw] “24 July | 2008” (2) [hw] “Alcyonidium “maculosum” | DMC, mooring kelp | & red algae. ME08-05 | 24 July 2008 JEW | Photoed & meas. | colonies | on bottom!” (3) “Virginia Museum of Natural History | VMNH13681 | PARATYPE” (4) [circular silver sticker on jar lid; hw] “Paratypes” (5) [hw on jar lid] “VMNH 13681.0000 | Alcyonidium maculosum”.

Notes: No other types have been designated.

Status: valid.

Family Vesiculariidae

Bowerbankia tertia Winston & Hayward, 2012

“*Bowerbankia tertia*, new species” Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 32. Type locality: “Jamestown, Virginia, beach west of ferry landing” (Winston and Hayward 2012: 32).

Holotype: preserved in ethanol with labels: (1) [p] “Virginia Museum of Natural History” | [hw] “Holotype.” [p] “1994-006 | Cat.no. 2232.00 | Name Bowerbankia tertia” | [hw] “+” [p] “(colony 3 measured) | Locality Along shore and rock jetty, west | of ferry dock, Jamestown beach, James City | County, Virginia | Source Pritchett, L. Date 12 Nov 1993” | [hw] “+ J. Winston” (2) [hw] “Formalin” [p] “Virginia Museum | of | Natural History | CAT. NO. | NAME” [hw] “Bowerbankia sp. | Colony 3” | [p] “LOCALITY” [hw] “James City County, VA | Jamestown Beach, W of ferry dock” | [p] “SOURCE” [hw] “J. Winston” [p] “DATE” [hw] “12 Nov 1993” (3) [hw] “Bowerbankia tertia | Col. 3 measured.” (4) “Virginia Museum of Natural History | VMNH12569 | HOLOTYPE” (5) [circular gold sticker on jar top; hw] “B. | tertia | Holotype” (6) [circular green sticker on jar lid; hw] “Colony | 3 | meas.” (7) [hw on jar lid] “70% F TRANSFERED TO 70% ETOH | old VMNH 2232.00 | 000012569.0000 | Acc. #1994-006”.

Notes: No other types have been designated. The species description erroneously lists the catalog number for this specimen as VMNH13569. The catalog number old VMNH 2232.00 refers to an old numbering system that has been replaced.

Status: now *Amathia tertia* (Waeschenbach et al. 2015).

Order Cheilostomatida
Family Aeteidae

Aetea arcuata Winston & Hayward, 2012

“*Aetea arcuata* new species” Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 41. Type locality: “West revetment, Shinnecock Inlet, Hampton Bays, New York” (Winston and Hayward 2012: 41).

Holotype: dry preserved in clear plastic box with labels: (1) “Virginia Museum of Natural History | 1999-083 | Cat.no 993.00, 993.01, 993.02 | Name *Aetea anguina* | *Schizoporella variabilis* | *Membranipora tenuis* | Locality West revetment, Shinnecock Inlet, | Hampton Bays, New York | Source Sarg,K.B. Date 29 Aug 1991” (2) “Virginia Museum of Natural History | VMNH11330 | HOLOTYPE” (3) [hw on box lid] “VMNH 993.00, 993.01, 993.02 | Acc. #1999-083”.

Notes: No other types have been designated. The catalog numbers 993.00, 993.01, and 993.02 refer to an old numbering system that has been replaced. The catalog numbers 993.01 and 993.02 refer to other bryozoan taxa, *Schizoporella variabilis* (Leidy) and *Membranipora tenuis* Desor, encrusted on the same *Mytilus edulis* L. shell, respectively.

Status: valid.

**Callaetea liliacea* Winston, 2008

“*Callaetea liliacea*, new species” Winston 2008. Virginia Museum of Natural History Special Publication 15: 326. Type locality: “Northeast Cay, Pelican Cays, Belize, Central America” (Winston 2008: 326).

Paratype: preserved in ethanol with labels: (1) [hw] “VMNH. 13657.00 | PARATYPE *Callaetea* | *liliacea* BE08-03 19 Feb 2008 | Northeast Cay, Pelican | Cays, Belize JEW” (2) “Virginia Museum of Natural History | VMNH13657 | PARATYPE” (3) [circular silver sticker on jar lid; hw] “PARA- | TYPE” (4) [hw

on jar lid] “VMNH | 13657”.

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM.
Status: valid.

Family Arachnopusiidae

Arachnopusia incernicula Hayward & Winston, 2011

“*Arachnopusia incernicula* sp. nov.” Hayward and Winston 2011. Journal of Natural History 45: 2290. Type locality: [South Atlantic Ocean, Drake Passage, Cape Horn] “56°06’ to 56°07’ S, 66°19’ to 66°30’ W” (Hayward and Winston 2011: 2290).

Paratype: preserved in ethanol with labels: (1) [hw] “*Arachnopusia incernicula* | Hayward & Winston | PARATYPES | ANT 4456” (2) “Virginia Museum of Natural History | VMNH13669 | PARATYPE” (3) [hw] “transcribed from Re:discovery | database by L. Hightower 10 Feb 2022 | Antarctica ANT4456 | 56°06’-56°07’S, 66°19’-66°30’W | 384-494 m. 18 SEP 1963 | Eltanin cruise 9, Station 740”.

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM.
Status: valid.

Family Bifaxariidae

Diplonotus supplicatus Hayward & Winston, 2011 [misspelling of *Diplonotos*]

“*Diplonotus supplicatus* sp. nov.” [misspelling of *Diplonotos*] Hayward and Winston 2011. Journal of Natural History 45: 2286. Type locality: [Antarctic Ocean, east of South Orkney Is.] “61°04’ to 61°07’ S, 39°55’ to 39°42’ W” (Hayward and Winston 2011: 2286).

Paratype: dry preserved in glass vial with labels: (1) “SMITHSONIAN OCEANOGRAPHIC SORTING CENTER | SCLERODOMUS SP. | USARP USC 11 FEB 1966 | BLAKE TR | 01.52 | ELTANIN 61 04’ S-61 07’ S | CR#: 22 039 55’ W-039 42’ W | ST#: 1545 DEP: 2355-2897M | ALQ: WHOLE SPEC: 1 LOT | REM: | DRY SPECIMEN” (2) “Virginia Museum of Natural History | VMNH13676 | PARATYPE” (3) [hw] “*Diplonotus supplicatus* | Hayward & Winston |

PARATYPES | ANT 5862”.

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM.

Status: valid.

Family Bryocryptellidae

Porella ammense Winston & Hayward, 2012

“*Porella ammense* new species” Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 110. Type locality: “Ammen Rock Pinnacle, Gulf of Maine” (Winston and Hayward 2012: 110).

Holotype: dry preserved on cardboard micropaleontological slide with labels: (1) [on slide margins; hw] “*Porella ammense* | Ammen Rock | Pinnacle, Gulf | of Maine | Acc no. 1999-083 | Holotype | VMNH NO. | 13682.0000” (2) [hw] “transcribed from Re:discovery database | by L. Hightower 9 February 2022 | VMNH 13682 | *Porella ammense* | Winston & Hayward, 2012 | USA: Maine: Gulf of Maine | Ammen Rock Pinnacle | 42°51’25” N, 68°57’11” W | August 1990, Sal Genovese” (3) “Virginia Museum of Natural History | VMNH13682 | PARATYPE” (4) [circular gold sticker on box lid, hw] “Holotype” (5) [hw on box lid] “VMNH 13682.000”.

Notes: The type series also includes a paratype (same data as for holotype) deposited at AMNH.

Status: valid.

Family Bugulidae

Halophila antillaea Winston, 2005

“*Halophila antillaea* new species” Winston 2005. Virginia Museum of Natural History Memoir 7: 21. Type locality: “Rio Bueno, Jamaica” (Winston 2005: 21).

Holotype: dry preserved in clear plastic box with labels: (1) “Virginia Museum of Natural History | Dept. of Bryozoans | 1999-083 | Cat.no 3176.00 | Name *Halophila antillaea* [Holotype] | Locality from panel exposed on reef wall for 6 | months, Rio Bueno, Jamaica | Source Winston, J.E. Date 1 March 1981” (2) “Virginia Museum of Natural History | VMNH13513 | HOLOTYPE”.

Notes: No other types have been designated. Note a discrepancy regarding date of collection between the species description (September 1981) and the specimen label (1 March 1981). The catalog number 3176 refers to an old numbering system that has been replaced.

Status: valid.

Klugella rufula Hayward & Winston, 2011

“*Klugella rufula* sp. nov.” Hayward and Winston 2011. Journal of Natural History 45: 2263. Type locality: [South Atlantic Ocean, Scotia Sea, South Georgia Island] “54°29’ to 54°31’S, 39°22’ to 39°19’ W” (Hayward and Winston 2011: 2263).

Paratype: preserved in ethanol with labels: (1) [hw] “*Klugella rufula* n sp* PARATYPE | from | ANT. 5543 08 FEB 1966 | Eltanin 22 STA 1536 | 659-686m Hayward & Winston | 2011” (2) “Virginia Museum of Natural History | VMNH13675 | PARATYPE”.

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM.

Status: valid.

Family Calloporidae

Callopora thaxterae Winston & Hayward, 2012

“*Callopora thaxterae* new species” Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 63. Type locality: “Cashes Ledge, Ammen Rock Pinnacle” [Gulf of Maine] (Winston and Hayward 2012: 63).

Holotype: dry preserved in clear plastic box with labels: (1) [p] “Virginia Museum of Natural History | 1999-083” | [hw] “Holotype” | [p] “Cat.no. 1230.00, 1230.01 | Name *Callopora* sp.” [hw] “*thaxterae*” | [p] “*Celleporella* sp.” | [hw] “+ *Disporella* w gonozooic” | [p] “Locality Ammen Rock Pinnacle, Cashes | Ledge, Gulf of Maine | Source Witman, J. Date 29 June 1990” (2) “Virginia Museum of Natural History | VMNH11567 | HOLOTYPE” (3) [circular gold sticker on box lid; hw] “*Callopora* | *thaxterae* | Holotype” (4) [hw on box lid] “VMNH 1230.00, 1230.01 | Acc. # 1999-083”.

Notes: No other types have been designated. The

catalog number 1230 refers to an old numbering system that has been replaced. The catalog number 1230.01 refers to other bryozoan taxa housed in the same storage container.

Status: valid.

Cauloramphus neospiniferum Winston & Hayward, 2012

“*Cauloramphus neospiniferum* new species” Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 65. Type locality: “Carrying Place Bay, Lubec, Maine” (Winston and Hayward 2012: 65).

Holotype: dry preserved in clear plastic box with labels: (1) [p] “Virginia Museum of Natural History | 1999-083” | [hw] “HOLOTYPE” | [p] “Cat.no. 1555.00 | Name *Cauloramphus spinniferum*” [hw] “neospiniferum” | [p] “Locality Carrying Place Bay, Quoddy Head Park, | Lubec, ME site#2 | Source Winston & Hayward Date 19 Aug 1992” (2) “Virginia Museum of Natural History | VMNH11892 | HOLOTYPE” (3) [circular gold sticker on box lid; hw] “Holotype” (4) [circular green sticker on box lid; hw] “col. #1 | measured” (5) [hw on box lid] “VMNH 1555.00 | Acc.#1999-083”.

Notes: No other types have been designated. The catalog number 1555 refers to an old numbering system that has been replaced.

Status: valid.

Family Cellariidae

Cellaria novanglia Winston & Hayward, 2012

“*Cellaria novanglia* new species” Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 96. Type locality: “Gulf of Mexico, south of Penobscot Bay, 43 2137’ N, 68 4450’ W” (Winston and Hayward 2012: 96).

Holotype: dry preserved, including an SEM specimen stub, in clear plastic box with labels: (1) [p] “Virginia Museum of Natural History | SEM 1998-057 | Cat.no. 521.00 | Name *Cellaria sp.*” [hw] “novanglia” | [p] “Locality Sta.3, Sample3(1); Gulf of ME | 43*2137’N, 68*4450’W; S.of PenbsctBy | Source

L. Watling Date 11 Aug 1997” (2) [hw] “SEM” | [p] “Virginia Museum | of | Natural History | CAT. NO.” [hw] “521.00” | [p] “NAME” [hw] “*Cellaria sp.* novanglia | Gulf of Maine” | [p] “LOCALITY” [hw] “Sta. 3, sample 3(1) | Bryozoa F {3 letters/digits undecipherable} 43°21.37’N 68°44.50’W” | [p] “SOURCE” [hw] “Les. Watling” [p] “DATE” [hw] “8/11/97 | DMC” (3) [p] “VMNH” [hw] “521.00” | [p] “Accession No. 1997-” [hw] “057” | [p] “Dept. Bryozoans” (4) “Virginia Museum of Natural History | VMNH10858 | HOLOTYPE” (5) [circular gold sticker on box lid; hw] “Holotype” (6) [circular green sticker on box lid; hw] “COL. #1 meas.”.

Notes: The type series also includes a paratype (A16 III-80. Sta. 1, 40°35’N, 68°19’W, no date, Schopf Collection) deposited at USNM. The catalog number 521 refers to an old numbering system that has been replaced.

Status: valid.

Melicerita flabellifera Hayward & Winston, 1994

“*Melicerita flabellifera* sp. nov.” Hayward and Winston 1994. Journal of Natural History 28: 242. Type locality: “Low Island, Antarctic Peninsula, 63°24’S, 62°10’W” (Hayward and Winston 1994: 242).

Paratype: preserved in ethanol with labels: (1) [hw] “*Melicerita flabellifera* | Hayward & Winston | PARATYPE | 63°24’S 62°10’W, 40-110m | Low Id., Antarctica, 21.2.1985” (2) “Virginia Museum of Natural History | VMNH10341 | PARATYPE” (3) [circular silver sticker on jar lid; hw] “Paratype | 0004” (4) [hw on jar lid] “VMNH 4”.

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM. The catalog number 0004 refers to an old numbering system that has been replaced.

Status: valid.

Stomhypselosaria robusta Hayward & Winston, 2011

“*Stomhypselosaria robusta* sp. nov.” Hayward and Winston 2011. Journal of Natural History 45: 2276.

Type locality: [South Orkney Islands, SE of islands] “59°53.1’ S, 32°19.5’W” (Hayward and Winston 2011: 2276).

Paratype: dry preserved in clear plastic box with labels: (1) [hw] “Stomhypselosaria | robusta Hayward & Winston | PARATYPES (pt.) | South Orkney Isles | 59°53.1’S, 32°19.5’W | 25 Feb. 1976, 523-671m | ANT3883” (2) “Virginia Museum of Natural History | VMNH13668 | PARATYPE”.

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM. The species description erroneously lists the catalog number for this specimen as VMNH136668.

Status: valid.

Family Celleporidae

Spigaleos striatula Hayward & Winston, 2011

“*Spigaleos striatula* sp. nov” Hayward and Winston 2011. Journal of Natural History 45: 2331. Type locality: [South Atlantic Ocean, Drake Passage, Cape Horn] “56°06’ to 56°07’ S, 66°19’ to 66°30’ W” (Hayward and Winston 2011: 2331).

Paratype: dry preserved in clear plastic box with labels: (1) [hw] “Spigaleos striatula | Hayward & Winston | PARATYPES | ANT 4456” (2) “Virginia Museum of Natural History | VMNH13674 | PARATYPE” (3) [hw] “transcribed from Re:discovery | database by L. Hightower 11 Feb 2022 | Antarctica ANT 4456 | 56°06’-56°07’S, 66°19’-66°30’W | 384-494m 18 SEP 1963 | Eltanin cruise 9, station 740”.

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM.

Status: valid.

Family Cribrilinidae

Puellina capronensis Winston, 2005

“*Puellina capronensis* new species” Winston 2005. Virginia Museum of Natural History Memoir 7: 35. Type locality: “Capron Shoal, near Buoy 10 A, off South Hutchinson Island, St. Lucie Co., Florida” (Winston 2005: 35).

Holotype: dry preserved in clear plastic box

with labels:

(1) “Virginia Museum of Natural History | Dept. of Bryozoans | 1998-079 | Cat.no 610.00 | Name *Puellina capronensis* [Holotype] | Locality Capron Shoal near Buoy 10A, off | South Hutchinson Id., St. Lucie Co., Florida | Source Winston, J.E. Date 9 July 1998” (2) “Virginia Museum of Natural History | VMNH10947 | HOLOTYPE” (3) [circular cold sticker on box lid; hw] “Holo | 610.00 | type” (4) [hw on box lid] “VMNH #610.00 | Acc. #1998-079”.

Notes: No other types have been designated. The catalog number 610 refers to an old numbering system that has been replaced.

Status: valid.

Family Epistomiidae

Synnotum circinatum Winston, 2004

“*Synnotum circinatum*, New Species” Winston 2004. Atoll Research Bulletin 523: 9. Type locality: [Caribbean Sea] “Twin Cays, Belize” (Winston 2004: 11).

Paratypes (2): preserved in ethanol and dry preserved on cardboard micropaleontological slide with labels:

[VMNH13510; in ethanol] (1) [hw] “Synnotum | Mangroves Twin Cays | 10-23-84 | JEW” (2) “Virginia Museum of Natural History | VMNH13510 | PARATYPE” (3) [hw on jar lid] “VMNH | Paratype | VMNH | 3173.00 | Acc.# | 1995-016”.

[VMNH13511; slide mounted] (1) [hw] “Synnotum | circinatum | Mangrove | roots, Twin | Cays, Belize | col.#1 meas. | 23 Oct 1984” (2) “Virginia Museum of Natural History | VMNH13511 | PARATYPE” (3) [circular green sticker on box lid; hw] “Measured | col. #1” (4) [hw on box lid] “VMNH 3174.00 | Acc.# 1995-016”.

Notes: The type series also includes the holotype (same data as for paratypes) deposited at USNM. The catalog numbers 3173 and 3174 refer to an old numbering system that has been replaced.

Status: valid.

Family Fenestrulinidae

Fenestrulina delicia Winston, Hayward, & Craig, 2000

“*Fenestrulina delicia*, new species” Winston et al. 2000. Proceedings of the 11th International Bryozoology Association Conference: 417. Type locality: “Damariscotta River, Maine” [Lincoln County] (Winston et al. 2000: 417).

Paratype: dry preserved in clear plastic box with labels: (1) [hw] “PARATYPE” | [p] “Virginia Museum | of | Natural History | CAT. NO.” [hw] “533” | [p] “NAME” [hw] “Fenestrulina delicia | rock dredge, 100-142” | [p] “LOCALITY” [hw] “DMC-4, NNW of Hodgson’s | Island, Damariscotta River, Maine Lincoln Co.” | [p] “SOURCE” [hw] “J.E. Winston” [p] “DATE” [hw] “29 July 1991 | S. Craig” (2) “Virginia Museum of Natural History | VMNH10870 | PARATYPE” (3) [circular silver sticker on box lid; hw] “PARATYPE | 533” (4) [circular green sticker on box lid; hw] “Measured | col.# 2” (5) [hw on box lid] “VMNH 533.00”.

Notes: The type series also includes the holotype (USA, Maine, Damariscotta River, DMC-5, kelp from Blake trawl, 29 July 1991, J.E. Winston and S.F. Craig) and an additional paratype (Nobska, Massachusetts) deposited at AMNH. The catalog number 533 refers to an old numbering system that has been replaced.

Status: valid.

Family Flustridae

Chartella notialis Hayward & Winston, 1994

“*Chartella notialis* sp. nov.” Hayward and Winston 1994. Journal of Natural History 28: 238. Type locality: [South Atlantic Ocean, Staten Island] “54°54.2’-54°55’S, 64°9.2’-64°9.7’W” (Hayward and Winston 1994: 238).

Paratype: preserved in ethanol with labels: (1) [hw] “*Chartella notialis* | Hayward & Winston | Paratypes | Hero cruise 715, Sta 885 | 54°54.2’-54°55’S | 64°9.2’-64°9.7’W | 493-511 m.” (2) “Virginia Museum of Natural History | VMNH10339 | PARATYPE” (3) [circular silver sticker on jar lid; hw] “Paratype | 0002” (4) [hw

on jar lid] “VMNH #2”.

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM. The catalog number 0002 refers to an old numbering system that has been replaced.

Status: valid.

Family Lepraliellidae

Celleporaria sherryae Winston, 2005

“*Celleporaria sherryae*, new species” Winston 2005. Virginia Museum of Natural History Memoir 7: 51. Type locality: “south side of South Beach Route AIA bridge, Fort Pierce, St. Lucie Co., Florida” (Winston 2005: 51).

Holotype: dry preserved in clear plastic box with labels: (1) [hw] “00-03FL” | [p] “Virginia Museum | of | Natural History | CAT. NO. | NAME” [hw] “*Celleporaria subalba* | + *Scrupocellaria regularis*” | [p] “LOCALITY” [hw] “South Beach Bridge | (W side) rocks, Fort Pierce | FL” | [p] “SOURCE” [hw] “J. Winston” [p] “DATE” [hw] “11 APRIL 2000 | N. Tuross” (2) [p] “Virginia Museum of Natural History” | [hw] “HOLOTYPE” | [p] “2000-007 | Cat.no 1628.00, 1628.01 | Name *Celleporaria subalba*” [hw] “sherryae” | [p] “Locality Rocks on W side of South Beach | Bridge, AIA, Fort Pierce, St. Lucie Co., Florida | Source Winston, J.E. Date 11 Apr 2000” (3) “Virginia Museum of Natural History | VMNH11965 | HOLOTYPE” (4) [circular gold sticker; hw] “HOLOTYPE” (5) [hw on box lid] “VMNH 1628.00 (1) | + VMNH 1624.01”.

Notes: No other types have been designated. Note a slight discrepancy in type locality between the original publication (“south side of South Beach”) and the specimen label (“W side of South Beach”). The catalog numbers 1624.01 and 1628.00 (other bryozoan taxa encrusted on the same surface as the holotype) refer to an old numbering system that has been replaced.

Status: valid.

Family Marcusadoreidae

**Marcusadorea jamaicensis* Vieira, Migotto & Winston, 2010

“*Marcusadorea jamaicensis* n. sp.” Vieira et al. 2010. Zootaxa 2348: 59. Type locality: “Rio Bueno, Jamaica” (Vieira et al. 2010: 59).

Holotype: dry preserved on SEM stub with labels:

(1) [hw] “no. 13659” | [p] “*Coleopora corderoi*, Marcus, 1949, ovicelled colony, with *Reptadeonella* sp. Rio Bueno, Jamaica, 10m 10-3-R2, coll. J.B.C. | Jackson, 1978. (SEM September, 2008)” (2) [on piece of pink sticky note; hw] “*Marcusadorea jamaicensis*” (3) “Virginia Museum of Natural History | VMNH13659 | HOLOTYPE” (4) [circular gold sticker on box lid; hw] “HOLOTYPE” (5) [circular green sticker on box lid; hw] “MEAS, | COLONY 1” (6) [hw on box lid] “VMNH | 13659”.

Paratypes (3): dry preserved on SEM stubs with labels:

[VMNH13660; on SEM stub] (1) [p] “*Coleopora corderoi* Marcus, 1949. with *Escharina porosa*, *Puellina radiata* and *Steginoporella* sp. Rio Bueno, Jamaica, 10m, 10-7- | R22, coll. J.B.C. Jackson, 1978. (SEM September, 2008)” | [hw] “13660 Figs 9-10 in *Marcusadorea* paper” (2) [on pink sticky note; hw] “*Marcusadorea jamaicensis*” (3) “Virginia Museum of Natural History | VMNH13660 | PARATYPE” (4) [hw on box lid] “13660”.

[VMNH13661; on SEM stub] (1) [hw] “M col. 2” | [p] “Virginia Museum | of | Natural History | CAT. NO. | NAME” [hw] “*Coleopora corderoi*” | [p] “LOCALITY” [hw] “Rio Beuno, Jamaica 1 colony | 10m 10-1-R29 + 10-1-R18 | 3 colonies (underside)” | [p] “SOURCE” [hw] “JBCJ” [p] “DATE” [hw] “1978” (2) [p] “*Coleopora corderoid*, Marcus, 1949. Colony fragment. Rio Bueno, Jamaica, 10m, 10-1-R29, coll J.B.C. Jackson, 1978 (SEM, | September, 2008)” [hw] “13661” (3) [on pink sticky note; hw] “*Marcusadorea jamaicensis*” (4) “Virginia Museum of Natural History | VMNH13661 | PARATYPE” (5) [hw on box lid] “13661”.

[VMNH13662; on SEM stub] (1) [p] “*Coleopora*

corderoi, Marcus, 1949, fragments of colony, mounted to show construction of undersurface of frontal wall. Rio Bueno, | Jamaica, 10m, 10-3-R18, coll. J.B.C. Jackson, 1978. (SEM September, 2008)” [hw] “Cat. no 13662 | Figs 15-16 in *Marcusadorea* paper” (2) [on pink sticky note; hw] “*Marcusadorea jamaicensis*” (3) “Virginia Museum of Natural History | VMNH13662 | PARATYPE” (4) [hw on box lid] “13662”.

Notes: No other types have been designated. The species description erroneously lists the holotype catalog number as VMNH13359.

Status: valid.

Family Phidoloporidae

Reteporella sulcula Hayward & Winston, 2011

“*Reteporella sulcula* sp. nov” Hayward and Winston 2011. Journal of Natural History 45: 2322. Type locality: [South Atlantic Ocean, Drake Passage, Cape Horn] “56°06’ to 56°07’ S, 66°19’ to 66°30’ W” (Hayward and Winston 2011: 2322).

Paratype: preserved in ethanol with labels:

(1) [hw] “*Reteporella sulcula* Hayward & Winston | PARATYPES | ANT 4456” (2) “Virginia Museum of Natural History | VMNH13670 | PARATYPE” (3) [hw] “ANT | 4456” (4) [hw] “transcribed from Re:discovery | database by L. Hightower 11 Feb 2022 | Antarctica ANT 4456 | 56°06’-56°07’S, 66°19’-66°30’W | 384-494m 18 SEP 1963 | Eltanin cruise 9, station 740”.

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM.

Status: valid.

Reteporella tortuosa Hayward & Winston, 2011

“*Reteporella tortuosa* sp. nov” Hayward and Winston 2011. Journal of Natural History 45: 2323. Type locality: [South Atlantic Ocean, Drake Passage, Cape Horn] “56°06’ to 56°07’ S, 66°19’ to 66°30’ W” (Hayward and Winston 2011: 2323).

Paratype: preserved in ethanol with labels:

(1) [hw] “*Reteporella tortuosa* | Hayward & Winston | PARATYPES | ANT 4456” (2) “Virginia Museum of Natural History

| VMNH13671 | PARATYPE" (3) [hw]
 "transcribed from Re:discovery | database by L.
 Hightower 11 Feb 2022 | Antarctica ANT 4456
 | 56°06'-56°07'S, 66°19'-66°30'W | 384-494m
 18 SEP 1963 | Eltanin cruise 9, station 740".

Notes: The type series also includes the holotype
 (same data as for paratype) deposited at USNM.
Status: valid.

Family Schizoporellidae

Stylopoma smitti Winston, 2005

"*Stylopoma smitti*, new species" Winston 2005.
 Virginia Museum of Natural History Memoir 7: 72.
 Type locality: "Florida" (Winston 2005: 72).

Paratype: dry preserved in clear plastic box:
 (1) [p] "Virginia Museum of Natural History
 | Dept. of Bryozoans | 2002-100 | Cat.no
 2796.00 | Name *Stylopoma* sp.8" [hw] "smitti
 | PARATYPE" | [p] "Locality Amber Sands
 beach access," [hw] "S. of" | [p] "Sebastian
 Inlet, Indian River County, Florida | Source
 Winston, J.E. Date 01 Aug 2002" (2) "Virginia
 Museum of Natural History | VMNH13133
 | PARATYPE" (3) [hw] "*Stylopoma* sp 8 |
 FL3102 - ovicelled" (4) [circular silver sticker
 on box lid; hw] "PARATYPE" (5) [hw on box
 lid] "FL3102 | VMNH 2796.00 | 2002-100".

Notes: The type series also includes the holotype
 (Inside Floridan reed, 4 faths. L.F.P.[ourtales].
 [n.d.]) deposited at MCZ. The catalog number
 2796 refers to an old numbering system that has
 been replaced.

Status: valid.

Family Sclerodomidae

Cellarinella diatriaria Hayward & Winston, 2011

"*Cellarinella diatriaria* sp. nov." Hayward and
 Winston 2011. Journal of Natural History 45: 2298.
 Type locality: [Antarctic Ocean, Scotia Sea, SE of
 South Orkney Islands] "61°27' to 61°26' S, 67°19'
 to 67°24' W" (Hayward and Winston 2011: 2298).

Paratype: dry preserved in
 clear plastic box with labels:
 (1) [hw] "*Cellarinella diatriaria* | Hayward
 & Winston | PARATYPES | Eltanin 12, Stn
 1078" (2) "Virginia Museum of Natural

History | VMNH13677 | PARATYPE" (3) [hw]
 "transcribed from Re:discovery | database by L.
 Hightower 10 Feb 2022 | Antarctica | 61°27'S-
 61°26'S, 67°19'-67°24'W | 604 m 12 APR 1964
 | Eltanin cruise 12, station 1078".

Notes: The type series also includes the holotype
 (same data as for paratype) deposited at USNM.
Status: valid.

Cellarinella incompta Hayward & Winston, 2011

"*Cellarinella incompta* sp. nov." Hayward and
 Winston 2011. Journal of Natural History 45: 2296.
 Type locality: [Antarctic Ocean, Scotia Sea, South
 Orkney Islands, Coronation Island, NW of island]
 "60°30.1' S, 46°42.8' W" (Hayward and Winston
 2011: 2296).

Paratype: preserved in ethanol with labels:
 (1) [hw] "*Cellarinella incompta* | Hayward &
 Winston | Paratype ANT 758 | Blake Cruise
 876, STn114" (2) "Virginia Museum of Natural
 History | VMNH13665 | PARATYPE" (3) [hw]
 "transcribed from Re:discovery | database by L.
 Hightower 10 Feb 2022 | Antarctica ANT 758
 | 60°30.1'S, 46°42.8'W | 128-130 m. 17 FEB
 1976 | Islas Orcada 876, station 114".

Notes: The type series also includes the holotype
 (same data as for paratype) deposited at USNM.
Status: valid.

Cellarinella terminata Hayward & Winston, 1994

"*Cellarinella terminata* sp. nov." Hayward and
 Winston 1994. Journal of Natural History 28: 244.
 Type locality: [Antarctic Ocean, South Shetland
 Islands, King George Island] "62°42'-62°41'S,
 56°10'-56°12'W" (Hayward and Winston 1994:
 244).

Paratypes (2): preserved in ethanol and dry
 preserved with labels:
 [VMNH10342; in ethanol] (1) "SMITHSONIAN
 OCEANOGRAPHIC SORTING CENTER |
 CELLARINELLID | USARP USC 02 JAN
 1963 | ROCK DR | ELTANIN 62 42' S-62 41' S
 | CR# 6 056 10' W-056 12' W | ST# 415 DEP:
 406- 465M | ALQ: SPEC: 1 LOT" (2) [hw]
 "*Cellarinella terminata* | Hayward & Winston |
 PARATYPES" (3) "Virginia Museum of Natural
 History | VMNH10342 | PARATYPE" (4)

[circular silver sticker on jar lid; hw] paratypes | 0005 | 0006" (5) [hw on jar lid;] "VMNH 5".

[VMNH13678; dry preserved, coated for SEM imaging] (1) [hw] "Cellarinella terminata | Hayward & Winston | pt. of Paratype | Eltanin cruise 6, Stn 415" (2) "Virginia Museum of Natural History | VMNH13678 | PARATYPE" (3) [hw] "this specimen belongs to | VMNH10342 but was separated | out and prepped for SEM and | given its own cat no. VMNH13678".

Notes: The type series also includes the holotype (same data as for paratypes) deposited at USNM. The catalog numbers 0005 and 0006 refer to an old numbering system that has been replaced.

Status: valid.

Family Smittinidae

Hemismittoidea lanceolata Hayward & Winston, 2011

"*Hemismittoidea lanceolata* sp. nov." Hayward and Winston 2011. Journal of Natural History 45(37-38): 2310. Type locality: [South Atlantic Ocean, drake Passage, Cape Horn] "56°06' to 56°07' S, 66°19' to 66°30' W" (Hayward and Winston 2011: 2310).

Paratype: dry preserved in clear plastic box with labels: (1) [hw] "Smittoidea lanceolata | Hayward & Winston | PARATYPE | ANT 4456" (2) "Virginia Museum of Natural History | VMNH13673 | PARATYPE" (3) [hw] "transcribed from Re:discovery | database by L. Hightower 11 Feb 2022 | Antarctica ANT 4456 | 56°06'-56°07'S, 66°19'-66°30'W | 384-494m 18 SEP 1963 | Eltanin cruise 9, station 740".

Notes: The type series also includes the holotype and an additional paratype (same data as for paratype) deposited at USNM.

Status: valid.

Smittoidea cancellata Hayward & Winston, 2011

"*Smittoidea cancellata* sp. nov." Hayward and Winston 2011. Journal of Natural History 45(37-38): 2308. Type locality: [South Atlantic Ocean, drake Passage, Cape Horn] "56°06' to 56°07' S,

66°19' to 66°30' W" (Hayward and Winston 2011: 2308).

Paratype: dry preserved in clear plastic box with labels: (1) [hw] "Smittoidea cancellata sp. n. | PARATYPES | ANT 4456" (2) "Virginia Museum of Natural History | VMNH13672 | PARATYPE" (3) [hw] "transcribed from Re:discovery | database by L. Hightower 11 Feb 2022 | Antarctica ANT 4456 | 56°06'-56°07'S, 66°19'-66°30'W | 384-494m 18 SEP 1963 | Eltanin cruise 9, station 740".

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM. The species description erroneously lists the catalog number for this specimen as VMNH1367.2.

Status: valid.

Family Tessaradomidae

**Striatodoma dorothea* Winston & Beaulieu, 1999

"*Striatodoma dorothea* new species" Winston and Beaulieu 1999. Proceedings of the Biological Society of Washington 112(2): 315. Type locality: [off central California, ca. 220 km W of Point Conception] "34°42'N, 123°00'W" (Winston and Beaulieu 1999: 315).

Paratype: preserved in ethanol with labels: (1) [hw] "PARATYPE" [P] "Virginia Museum | of | Natural History" | [hw] "measured specimen" | [p] "CAT. NO." [hw] "567" | [p] "NAME" [hw] "*Striatodoma dorothea*" | 34°42'N, 123°00'W | off California" | [p] "LOCALITY" [hw] "sponge stalk 4, Pulse | 22, Dive 2828, 4100m" | [p] "SOURCE" [hw] "Stace Beaulieu" [p] "DATE" [hw] "17-Sep 94" (2) [hw] "PULSE 22 DIVE 2828 | 17-9-94 | STALK 4" (3) "Virginia Museum of Natural History | VMNH10904 | PARATYPE".

Notes: The type series also includes the holotype (same date and locality as for paratype; collected as stalk 3) and three additional paratypes (different dates and/or localities within the same general area) deposited at CAS. The catalog number 567 refers to an old numbering system that has been replaced.

Status: now *Smithsonius dorothea* (Bock 2025).

Family Watersiporidae

Watersipora arcuata Banta, 1969

“*Watersipora arcuata*, new species” Banta 1969. Bulletin of the Southern California Academy of Science 68(2): 96. Type locality: “Southwestern Yacht Club Marina, near Point Loma, San Diego Bay, San Diego, California” (Banta 1969: 97).

Paratype: dry preserved in clear plastic box with labels: (1) [p] ALLAN HANCOCK FOUNDATION” [hw] “10%HCHO 70%EtOH | *Watersipora* Banta, n.sp.” | [p] “Loc.” [hw] “Oceanside Marina, Oceanside | Southern California” [p] “Date” [hw] “27 October 1968” | [p] “Fms.” [hw] “Surface” [p] “~~Vetero~~ Sta.” [hw] “Collector WCBanta” | [p] “The University of Southern California” (2) [hw] “*Watersipora arcuata* | Banta 1968 70191.0000 | PARATYPE” (3) “Virginia Museum of Natural History | VMNH70191 | PARATYPE.

Notes: The type series also includes the holotype (California, San Diego Bay, Southwestern Yacht Club Marina, near Point Loma) deposited at AHF, and an additional paratype deposited at NHMUK. The VMNH paratype is from the W.C. Banta collection donated to VMNH in 2004 (Acc# 2004-005).

Status: valid.

*Incertae sedis**Ogivalia sagittirostra* Hayward & Winston, 1994

“*Ogivalia sagittirostra* sp. nov.” Hayward and Winston 1994. Journal of Natural History 28: 241. Type locality: [South Atlantic Ocean, Drake Passage, Cape Horn] “56°06’-56°07’S, 66°19’-66°30’W” (Hayward and Winston 1994: 241).

Paratype: preserved in ethanol with labels: (1) [hw] “*Ogivalia sagittirostra* | Hayward & Winston | Eltanin cruise 9, Stn 740 | 56°06’-56°07’S, 66°19’-66°30’W | 384-494m. 18.9.1963 | PARATYPE” (2) “Virginia Museum of Natural History | VMNH10340 | PARATYPE” (3) [circular silver sticker on jar lid; hw] “Paratype | 0003” (4) [hw on jar lid] “VMNH 3”.

Notes: The type series also includes the holotype (same data as for paratype) deposited at USNM. The catalog number 0003 refers to an old numbering system that has been replaced.

Status: valid.

Class Stenolaemata
Order Cyclostomatida
Family Crisiidae

Crisia osburni Winston & Hayward, 2012

“*Crisia osburni* new species” Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 161. Type locality: “Egg Rock side of Northeastern Marine Lab beach, Nahant, Massachusetts” (Winston and Hayward 2012: 161).

Holotype: dry preserved on two cardboard micropaleontological slides with labels: (1) [p] “Virginia Museum of Natural History | 1999-083 | Cat.no. 977.00 | Name Cellaria osburnea” [hw] “i” | [p] “Locality Egg Rock side of NE Marine Lab | Beach, Nahant, Massachusetts | Source Winston,J.E. Date 28 Aug 1991” (2) [slide 1 margins; hw] “*Crisia w osburneai* | (2 gonozooids) | H | Nahant, MASS | 28 AUG 1991” (3) [slide 2 margins; hw] “*Crisia osburneai* | (gz developing) | H” (4) “Virginia Museum of Natural History | VMNH11314 | HOLOTYPE” (4) [circular gold sticker on box lid; hw] “Holotype” | (5) [hw on box lid] “VMNH 977.00 | Acc. # 1999-083”.

Paratypes (2): dry preserved in clear plastic boxes with labels:

[VMNH10558; dry preserved] (1) “Virginia Museum of Natural History | 1993-093 | Cat. no. 221.00 | Name *Crisia ‘osburnea’* | Locality Charlestown Beach, Rhode Island | Source Pritchett,L. Date 31 Jul 1993” (2) [hw] “Paratype” | [p] “Virginia Museum | of | Natural History | CAT. NO.” [hw] “221” | [p] “NAME” [hw] “*Crisia sp. osburneai* | [p] “LOCALITY” [hw] “Charlestown Beach, R.I. | Washed ashore” | [p] “SOURCE” [hw] “L. Pritchett” [p] “DATE” [hw] “31 JUL 1993” (3) “Virginia Museum | of | Natural History | Accession No.: 1993-093 | VMNH Dept.: Bryozoan” (4) “Virginia Museum of Natural History | VMNH10558 |

PARATYPE" (5) [circular silver sticker on box lid; hw] "PARATYPE" | (6) [written directly on box lid; hw] "VMNH 221.00 | Acc.#1993-093". [VMNH13664; dry preserved]: (1) [p] "Virginia Museum" [hw] "PARATYPE" | [p] "of | Natural History | CAT. NO." [hw] "13664.0000" | [p] "NAME" [hw] "Crisia osburni" | [p] "LOCALITY" [hw] "beach drift on algae | Jenness Beach, New Hampshire" | [p] "SOURCE" [hw] "JEWinston" [p] "DATE" [hw] "20 AUG | 2009" (2) [hw] "gonozooids | Crisia Jenness Beach | JEW Rye NH 20 AUG 2009" (3) "Virginia Museum of Natural History | VMNH13664 | PARATYPE" (4) [circular silver sticker on box lid; hw] "PARATYPE" | (5) [written directly on box lid; hw] "BRY 13664.0000 | PARATYPE | VMNH".

Notes: No other types have been designated. The catalog numbers 977 and 221 refer to an old numbering system that has been replaced.

Status: valid.

Family Tubuliporidae

Tubulipora confracta Winston & Hayward, 2012

"*Tubulipora confracta* new species" Winston and Hayward 2012. Virginia Museum of Natural History Memoir 11: 164. Type locality: "Gulf of Maine, mouth of Damariscotta River" (Winston and Hayward 2012: 164).

Holotype: dry preserved on cardboard micropaleontological slide with labels: (1) [hw] "Holotype" [p] "Virginia Museum of Natural History | 1999-083 | Cat.no. 1674.00 | Name Tubulipora ~~sp.~~" [hw] "confracta | new species" | [p] "Locality DMC-10, #6 & #7, Thread-of-Life, | mouth of Damariscotta River, Maine (25-75 ft) | Source Winston, J.E. Date 31 Jul 1991" (2) [hw] "DMC-10 Thread- | # 6 of-Life 25-60' | mouth of Damariscotta | River, Maine | 7/31/91 JEW" (3) [hw] "Tubulifora | confracta | HOLOTYPE | w oeciostome | DMC 10 | 31 July 1991" (4) "Virginia Museum of Natural History | VMNH12011 | HOLOTYPE" (5) [circular gold sticker on box lid; hw] "Holotype" | (6) [hw on box lid] "VMNH 1674.00 | Acc.#1999-083".

Notes: No other types have been designated. The catalog number 1674 refers to an old numbering system that has been replaced.

Status: valid.

Phylum Annelida
Class Clitellata
Order Hirudinida
Family Piscicolidae

Cystobranthus virginicus Hoffman, 1964

"*Cystobranthus virginicus*, n. sp" Hoffman 1964. The American Midland Naturalist 72(2): 391. Type locality: "South Fork of the Roanoke River, ca. 3 miles south of Shawsville, Montgomery Co., Virginia" (Hoffman 1964: 391).

Paratypes(6♂):preserved in isopropanol with labels: (1) [hw] "South Fork of the Roanoke | River, ca. 3 miles south of | Shawsville, Montgomery Co., | Virginia, from a small | aggregation on a stone; | May 2, 1963, Mary Kathleen | Klimkiewicz, leg. | -transcribed by L. Hightower | 2 February 2022 from original | publication" (2) "Virginia Museum of Natural History | ♂♂: VMNH110682.1-VMNH110682.6 | PARATYPES".

Notes: The type series also includes the holotype and an additional paratype (same data as for VMNH paratypes) deposited at USNM.

Status: valid.

Phylum Arthropoda
Subphylum Chelicerata
Class Arachnida
Order Opiliones
Family Sabaconidae

Hesperonemastoma smilax Shear, 2010

"*Hesperonemastoma smilax*, n. sp." Shear 2010. Journal of Cave and Karst Studies 72(2): 107. Type locality: "McClung's Cave, Greenbrier County, West Virginia" (Shear 2010: 107).

Holotype(♂): preserved in isopropanol with labels: (1) "MALE HOLOTYPE | *Hesperonemastoma smilax* Shear" (2) [hw] "Note eyes! | Hesperonemastoma new species | det. Cokendolpher, 1980" (3) "WEST VIRGINIA:

| McClung Cave | Greenbrier Co. | March 23, 1961 | Lyle G. Conrad" (4) "Virginia Museum of Natural History | VMNH112349 | HOLOTYPE ♂".

Notes: No other types have been designated.

Status: valid.

Family Sclerosomatidae

Leiobunum euserratipalpe Ingianni, McGhee & Shultz, 2011

"*Leiobunum euserratipalpe* new species" Ingianni et al. 2011. The Journal of Arachnology 39: 461. Type locality: "USA: Virginia: Prince William County, Manassas National Battlefield Park, 0.3 km S of Sudley Spring, 38.8168°N, 77.5164°W" (Ingianni et al. 2011: 461).

Holotype (♂): preserved in isopropanol with labels: (1) "HOLOTYPE | *Leiobunum euserratipalpe* Ingianni, McGhee & Shultz 2011 | Male | USA: Prince William County, Manassas National Battlefield Park, ~0.3 km S Sudley Spring, | 38.8168°N, 77.5164°W | 22 July 1999, A.C. Chazal" (2) "VMNH110678".

Paratype (1 ♀): preserved in isopropanol with labels: (1) "PARATYPE | *Leiobunum euserratipalpe* Ingianni, McGhee & Shultz 2011 | Female | USA: Prince William County, Manassas National Battlefield Park, ~0.3 km S Sudley Spring, | 38.8168°N, 77.5164°W | 22 July 1999, A.C. Chazal" (2) "VMNH110679".

Notes: No other types have been designated. The species description erroneously lists USNM as the types repository (J. W. Shultz, personal communication, 2017). The material belongs to the U.S. National Park Service and is only temporarily housed at VMNH.

Status: valid.

Leiobunum hoffmani Ingianni, McGhee & Shultz, 2011

"*Leiobunum hoffmani*, new species" Ingianni et al. 2011. The Journal of Arachnology 39: 475. Type locality: "Virginia: Smythe [misspelling of Smyth County] County: Mt. Rogers NRA, 36.724°N, 81.4904°W" (Ingianni et al. 2011: 475).

Paratype (1 ♀): preserved in isopropanol with labels: (1) "PARATYPE | *Leiobunum hoffmani*

Ingianni, McGhee & Shultz 2011 | Female | USA: Grayson County: Whitetop Mountain, | "just off FS 89," 36.6387°N, 81.6059°W, elev. ~1524 m | 25 June-11 July 1998, VMNH Survey" (2) "VMNH110680".

Notes: The type series also includes the male holotype (USA: Virginia: Smythe County: Mt. Rogers NRA, 36.724°N, 81.4904°W, elev. 870 m, 10 August 2007, M. Hedin) deposited at USNM. The species description erroneously lists USNM as the paratype repository (J. W. Shultz, personal communication, 2017).

Status: valid.

Phylum Arthropoda

Subphylum Chelicerata

Class Arachnida

Order Araneae

Family Halonoproctidae

Ummidia gingoteague Godwin & Bond, 2021

"*Ummidia gingoteague*, sp. nov." Godwin and Bond, 2021. ZooKeys 1027: 33. Type locality: "Chincoteague National Wildlife Refuge, White Hills Ridge, 1.3 km N toll booth, Accomack County, Virginia, United States" (Godwin and Bond 2021: 33).

Holotype (♂): preserved in alcohol with labels: (1) "*Ummidia gingoteague* | ♂ HOLOTYPE" (2) "VIRGINIA: Accomack Co.: | Chincoteague NWR, White | Hills ridge, 1.3 km N toll booth | 26 June-10 July 1998 S.M.Roble." (3) [hw] "UMM0003" (4) "Virginia Museum of Natural History | VMNH112454 | HOLOTYPE".

Notes: The type series also includes a female paratype (Newport News, Mariner's Museum Park, Newport News County, Virginia, United States, 37.0588 -76.48461, 18 m a.s.l., 9.vii.2015, coll. RL Godwin) deposited at BMEC.

Status: valid.

Ummidia neilgaimani Godwin & Bond, 2021

"*Ummidia neilgaimani*, sp. nov." Godwin and Bond, 2021. ZooKeys 1027: 27. Type locality: "Virginia Western Community College, Roanoke

County, Virginia, United States, 37.2462, -79.9744” (Godwin and Bond 2021: 27).

Holotype (♂): preserved in alcohol with labels:
 (1) “*Ummidia neilgaimani* | ♂ HOLOTYPE”
 (2) “VIRGINIA: Roanoke Co.: in | building,
 Virginia Western | Community College |
 26 October 1995 M.W.Donahue” (3) [hw]
 “UMM0016” (4) “Virginia Museum of Natural
 History | VMNH112453 | HOLOTYPE”.

Notes: The type series also includes a female paratype (Red Oak, Charlotte County, Virginia, United States, 36.7698 -78.6356, 140 m a.s.l., 2.v.1968, coll. WW Baker) deposited at AMNH.

Status: valid.

Phylum Arthropoda
 Subphylum Crustacea
 Class Copepoda
 Order Cyclopoida
 Family Cyclopidae

Diacyclops indianensis Reid, 2004

“*Diacyclops indianensis*, new species” Reid 2004. Jeffersoniana 12: 40. Type Locality: “Henry Dilk Falls Cave, Big Oaks National Wildlife Refuge, Jefferson County, Indiana” (Reid 2004: 45).

Holotype (♀): slide mounted with labels:

(1) [hw] “DIACYCLOPS ♀ | INDIANENSIS | HOLOTYPE | INDIANA: JEFFER- | SON Co.: BIG | OAKS NWR, HENRY | DILK FALLS CAVE, | 8.V.2001 COLLS. | J. LEWIS ET AL.”
 (2) [hw] “VMNH24669.1”.

Paratypes (3 copepodids): preserved in isopropanol with labels:

(1) [p] “INDIANA: Jefferson Co. | Henry Dilk Falls Cave | Big Creek #08 | 8 May 2001 J. Lewis | S. Miller, E. Laudermilk” | [hw] “copepods” (2) [hw] “DIACYCLOPS | INDIANENSIS | 1 ♀ 3 COPEPODIDS. | PARATYPES” (3) “Virginia Museum of Natural History | VMNH24669.2-VMNH124669.4 | copepodids | PARATYPES”.

Notes: No other types have been designated. The catalog number CrustCatDB no. 349 reported in the species description refers to an old numbering system that has been replaced.

Status: valid.

Diacyclops lewisi Reid, 2004

“*Diacyclops lewisi*, new species” Reid 2004. Jeffersoniana 12: 30. Type Locality: “Well in Graham Creek drainage section, Big Oaks National Wildlife Refuge, Jennings County, Indiana” (Reid 2004: 38).

Holotype (♀): slide mounted with labels:

(1) [hw] “DIACYCLOPS B | LEWISI HOLOTYPE ♀ | INDIANA: JEFFER- | SON Co.: BIG OAKS | NWR, WELL, | 2-3.ii.2001. | COLLS. J. LEWIS, | S. RAFAIL.” (2) [hw] “VMNH24668.1”.

Allotype (♂): slide mounted with labels:

(1) [hw] “DIACYCLOPS B | LEWISI ALLOTYPE ♂ | INDIANA: JEFFER- | SON Co.: BIG OAKS | NWR, WELL, | 2-3.ii.2001. | COLLS. J. LEWIS, | S. RAFAIL.” (2) [hw] “VMNH24668.2”.

Paratypes (4 ♂♂, 18 ♀♀, 30 copepodids): preserved in isopropanol with labels:

[VMNH24667.1-VMNH24667.4; 1 ♂, 3 copepodids] (1) [hw] “INDIANA: JEFFERSON Co., | BIG OAKS NAT'L WILDLIFE | REFUGE, BIG CREEK | DRAINAGE SECTION 7, NE | ¼ WELL, SHRIMP-BAITED | JARS, 2-3 FEB 2001, COLLS. | J. LEWIS, S. RAFAIL. DET. J.W. | REID” (2) [hw] “DIACYCLOPS LEWISI | 1 ♂ 3 COPEPODIDS. | PARATYPES. | DET. J.W. REID” (3) “Virginia Museum of Natural History | ♂: VMNH24667.1 | PARATYPE” (4) “Virginia Museum of Natural History | VMNH24667.2-VMNH124667.4 | copepodids | PARATYPES”.

[VMNH24668.3-VMNH24668.50; 18 ♀♀, 3 ♂♂, 27 copepodids] (1) “5 | INDIANA: Jefferson Co. | well, Graham Creek Drainage | section 18, NW 1/4 | shrimp baited jars | Big Oaks Natl Wildlife Refuge | Feb 2-3, 2001 J. Lewis, S. Rafail” (2) [hw] “DIACYCLOPS LEWISI | 18 ♀ 3 ♂ 27 COPEPODIDS. | PARATYPES. | DET. J.W. REID” (3) “Virginia Museum of Natural History | ♀♀: VMNH24668.3-24668.20 | ♂♂: VMNH24668.21-24668.23 | PARATYPES” (4) “Virginia Museum of Natural History | VMNH24668.24-24668.50 | copepodid PARATYPES”.

Notes: No other types have been designated. The

catalog numbers CrustCatDB no. 347 and 348 reported in the species description refer to an old numbering system that has been replaced.

Status: valid.

Diacyclops salisae Reid, 2004

“*Diacyclops salisae*, new species” Reid 2004. *Jeffersoniana* 12: 21. Type Locality: “Well in Otter Creek drainage, section 31, Big Oaks National Wildlife Refuge, Jennings County, Indiana” (Reid 2004: 28).

Holotype (♀): slide mounted with labels:

(1) [hw] “DIACYCLOPS A | SALISAE ♀ | HOLOTYPE | INDIANA: JEFFER- | SON Co.: BIG OAKS | NWR, WELL, | 2-3.ii.2001. | COLLS. J. LEWIS, | S. RAFAIL” (2) [hw] “VMNH24666.1”.

Allotype (♂): slide mounted with labels:

(1) [hw] “DIACYCLOPS | SALISAE ♂ | ALLOTYPE | INDIANA: JEFFER- | SON Co.: BIG | OAKS NWR, WELL, | 2-3.ii.2001. | COLS. J. LEWIS, | S. RAFAIL.” (2) [hw] “VMNH24666.2”.

Paratypes (1 ♂, 1 copepodid): preserved in isopropanol with labels:

(1) “6 | INDIANA: Jefferson County | well, Otter Creek drainage | section 31, SW 1/4 | shrimp baited jars | Big Oaks Natl Wildlife Refuge | Feb 2-3, 2001 J. Lewis, S. Rafail” (2) [hw] “DIACYCLOPS SALISAE, | PARATYPES: 1 ♂, | 1 COPEPODID.” (3) “Virginia Museum of Natural History | ♂: VMNH24666.3 | copepodid: VMNH24666.4 | PARATYPES”.

Notes: No other types have been designated. The catalog number CrustCatDB no. 346 reported in the species description refers to an old numbering system that has been replaced.

Status: valid.

Order Harpacticoida

Family Ameiridae

Nitokra evergladensis Bruno & Reid, 2002

“*Nitokra evergladensis*, new species” Bruno et al. 2002. *Journal of Crustacean Biology* 22(4): 836. Type locality: “North Taylor Slough, 25°26'11.9"N, 080°35'35.3"W, Everglades National Park, Dade

County, Florida, U.S.A.” (Bruno et al. 2002: 836).

Notes: The only designated types, a female holotype (Florida, Dade County, Everglades National Park, 17 February 2000, collected with inverted funnel trap in North Taylor Slough, 25°26'11.9"N, 080°35'35.3"W) and a male allotype (Florida, Dade County, Everglades National Park, 11 February 1999, collected in North Taylor Slough, 25°25'12.80"N, 80°35'22.98"W) were deposited at VMNH and given VMNH catalog numbers (VMNH356 and VMNH357). The material, property of the U.S. National Park Service, was returned to the Everglades National Park on 16 October 2020 (VMNH IL2015-008).

Status: valid.

Family Canthocamptidae

**Pindamoraria boraceiae* Reid & Rocha, 2003

“*PINDAMORARIA BORACEIAE*, SP. NOV.” Reid and Rocha 2003. *Zoological Journal of the Linnean Society* 139: 82. Type locality: [Brazil, Sao Paulo] “along the Trilha da Clareira (‘Clearing Trail’), beside last of three unnamed streamlets before clearing at end of trail (23°40'08.5"S, 045°53'54.2"W; UTM 23K0408370/7382086)” (Reid and Rocha 2003: 82).

Paratypes (5 ♂♂, 3 ♀♀, 1 copepodid): preserved in isopropanol with labels:

(1) [hw] “PINDAMORARIA | BORACEIAE, 3♀ 5♂ 1 cop. | BRAZIL: SAO PAULO: | BORACEIA, SP99-6-2, TINY | CREEK ALONG TRAIL “TRILHA DA CLAREIRA,” IN ROTTING | LEAVES IN SMALL DEBRIS | DAM, 23°40'08.5"S, 045° | 53'54.2"W, 24.viii.1999. | COLLS. J.W. REID, C.E.F. | ROCHA & S.S. ROCHA” (2) [hw] “PARATYPES- VMNH” (3) [p] “VMNH | 0440” (4) “Virginia Museum of Natural History | ♀♀: VMNH 24760.1-VMNH 24760.3 | ♂♂: VMNH 24760.4-VMNH 24760.8 | copepodid: VMNH 24760.9 | PARATYPES”.

Notes: The type series also includes the male holotype and female allotype ([Brazil, Sao Paulo] along the Trilha da Clareira (‘Clearing Trail’), beside last of three unnamed streamlets

before clearing at end of trail (23°40'08.5"S, 045°53'54.2"W; UTM 23K0408370/7382086), 24.viii.1999) deposited at MZUSP and 60 additional paratypes (varying localities and dates) deposited at MZUSP and NHMUK. The VMNH Crustacea Catalog no. 440 refers to an old numbering system that has been replaced.

Status: valid.

Class Malacostraca

Order Isopoda

Family Asellidae

Caecidotea fisherorum Lewis & Lewis, 2023

“*Caecidotea fisherorum* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 76. Type locality: “Hugh Young Cave, in Ward Cove, Tazewell County, Virginia” (Lewis et al. 2023: 76).

Holotype (♂): preserved in ethanol with labels:

(1) “Virginia, Tazewell Co. | Hugh Young Cave | Coll. Tom Malabad, Katarina Kosič Ficco | February 14, 2022 | 4.8 miles southeast of Claypool Hill, VA | 37.023 | -81.679 | 95% EtOH” (2) “*Caecidotea fisherorum* | Holotype male” (3) “Virginia Museum of Natural History | VMNH110740 | HOLOTYPE ♂”.

Paratypes (12 ♂♂, 32 ♀♀): preserved in ethanol with labels:

[VMNH110741.1-VMNH110741.26; 25 ♂♀]

(1) “VIRGINIA: Tazewell County | Hugh Young Cave | 4.8 miles SE Claypool Hill | 14 February 2022 | T. Malabad, K. Kosič Ficco”

(2) “*Caecidotea fisherorum* | Paratypes: 26 ♂♀”

(3) “Virginia Museum of Natural History | ♂♂: VMNH110741.1-VMNH110741.10 |

♀♀: VMNH110741.11-VMNH110741.25 |

PARATYPES”.

[VMNH110742.1-VMNH110742.19; 2 ♂♂, 17

♀♀] (1) “Virginia, Tazewell Co. | Hugh Young Cave | Coll. Tom Malabad, Wil Orndorff | October 6, 2021 | 4.8 miles southeast of Claypool Hill, VA | 37.023 | -81.679 | 95% EtOH” (2)

“*Caecidotea fisherorum* | Paratypes: 2 ♂♂ 17 ♀♀”

(3) “Virginia Museum of Natural History |

♂♂: VMNH110742.1- | VMNH110742.2 |

♀♀: VMNH110742.3- | VMNH110742.19 |

PARATYPES”.

Notes: No other types have been designated. The species description lists 26 ♂♀ paratypes from Hugh Young Cave collected on 14 February 2022 (Lewis et al. 2023: 76), however, there are 10 ♂♂ and 15 ♀♀ deposited at VMNH.

Status: valid.

Caecidotea malardi Lewis & Lewis, 2025

“*Caecidotea malardi* new species” Lewis et al. 2025. Jeffersoniana 31: 17. Type locality: [USA, Virginia, Tazewell County] “Stonley Cave” (Lewis et al. 2025: 18).

Holotype (♂): preserved in ethanol with labels:

(1) “VIRGINIA: Tazewell County | Stonley Cave | 5.2 miles NE Tazewell | 10 January 2019 | Tom Malabad, Wil Orndorff” (2) “*Caecidotea malardi* | Holotype male” (3) “Virginia Museum of Natural History | VMNH112432 | HOLOTYPE ♂”.

Paratypes (4 ♂♂, 2 ♀♀): preserved in ethanol with labels:

(1) “VIRGINIA: Tazewell County | Stonley Cave | 5.2 miles NE Tazewell | 10 January 2019 | Tom Malabad, Wil Orndorff” (2) “*Caecidotea*

malardi | Paratypes | specimens: 4 ♂♂ 2 ♀♀”

(3) “Virginia Museum of Natural History |

♂♂: VMNH112433.1-VMNH112433.4 |

♀♀: VMNH112433.5-VMNH112433.6 |

PARATYPES”.

Notes: The type series also includes eight additional paratypes (Stonley Cave, 19 August 1962, J. Holsinger) deposited at USNM.

Status: valid.

Caecidotea ornatus Lewis & Lewis, 2023

“*Caecidotea ornatus* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 72. Type locality: [USA, Virginia, Scott County] “Lane Cave” (Lewis et al. 2023: 72).

Holotype (♂): preserved in ethanol with labels:

(1) “VIRGINIA: Scott County | Lane Cave, from stream | 2.7 miles NW Gate City | Salisa L. Lewis, Julian J. Lewis | Zenah Orndorff, | Wil

Orndorff | 6 June 2021” (2) “*Caecidotea ornatus*

| HOLOTYPE ♂” (3) “Virginia Museum of

Natural History | VMNH110735 | HOLOTYPE

♂”.

Paratypes (4 ♂♂, 18 ♀♀): preserved in ethanol with labels:

[VMNH110736.1-VMNH110736.12; 2 ♂♂, 10 ♀♀] (1) “Virginia, Scott Co. | Lane Cave | Coll. Wil Orndorff | October 12, 2019 | 7 miles southwest of Snowflake, VA | Isopods, 38 | 95% EtOH | 36.663 | -82.162 [correct longitude is -82.612]” (2) “*Caecidotea ornatus* | PARATYPES 3 ♂♂ 10 ♀♀” (3) [hw] “correct W coordinate | is -82.612” (4) “Virginia Museum of Natural History | ♂♂: VMNH110736.1-VMNH110736.2 | ♀♀: VMNH110736.3-VMNH110736.12 | PARATYPES”.

[VMNH110737.1-VMNH110737.10; 2 ♂♂, 8 ♀♀] (1) “VIRGINIA: Scott County | Lane Cave, from stream | 2.7 miles NW Gate City | N 36.66393 W 82.61283 | 6 June 2021 | S.L. Lewis, J.J. Lewis | Z. Orndorff, W. Orndorff” (2) “*Caecidotea ornatus* | PARATYPES 9 ♂♂ 9 ♀♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH110737.1-VMNH110737.2 | ♀♀: VMNH110737.3-VMNH110737.10 | PARATYPES”.

Notes: No other types have been designated. The species description lists 3 ♂♂ and 10 ♀♀ paratypes from Lane Cave collected on 12 October 2019 (Lewis et al. 2023: 72), however, there are 2 ♂♂ and 10 ♀♀ deposited at VMNH.

Status: valid.

Caecidotea speleoconservata Lewis & Lewis, 2025

“*Caecidotea speleoconservata* new species” Lewis et al. 2025. *Jeffersoniana* 31: 13. Type locality: [USA, Virginia, Lee County] “Gallohan Cave No. 2” (Lewis et al. 2025: 14).

Holotype (♂): preserved in alcohol with labels: (1) “VIRGINIA: Lee County | Gallohan Cave No. 2 | main stream passage | 0.72 miles southeast of | White Shoals Church | coll. Tom Malabad, | Katarina Kosič Ficco | 15 December 2021” (2) “*Caecidotea speleoconservata* | HOLOTYPE ♂” (3) “Virginia Museum of Natural History | VMNH112426 | HOLOTYPE ♂”.

Paratypes (14 ♂♂, 40 ♀♀): preserved in ethanol with labels:

[VMNH112427.1-VMNH112427.8; 8 ♀♀] (1)

“Virginia, Lee Co. | Gallohan No. 1 Cave | Coll. Tom Malabad and | Katarina Kosič Ficco | December 15, 2021 | 0.70 miles southeast White | Shoals Church | Isopods (Caec) main stream | (1 of 2) 95% EtOH | 36.6267256207 | -83.2567137019” (2) “*Caecidotea speleoconservata* | Paratypes: 8 ♀♀” (3) “Virginia Museum of Natural History | ♀♀: VMNH112427.1-VMNH112427.8 | PARATYPES”.

[VMNH112428.1-VMNH112428.11; 11 ♀♀] (1) “Virginia, Lee Co. | Gallohan No. 1 Cave | Coll. Tom Malabad and | Katarina Kosič Ficco | December 15, 2021 | 0.70 miles southeast White | Shoals Church | Isopods (Caec) main stream | (2 of 2) 95% EtOH | 36.6267256207 | -83.2567137019” (2) “*Caecidotea speleoconservata* | Paratypes: 11 ♀♀” (3) “Virginia Museum of Natural History | ♀♀: VMNH112428.1-VMNH112428.11 | PARATYPES”.

[VMNH112429.1-VMNH112429.17; 6 ♂♂, 11 ♀♀] (1) “Virginia, Lee Co. | Gallohan No. 1 Cave | Coll. Wil and Zenah Orndorff | December 15, 2021 | 0.70 miles southeast White | Shoals Church | ~18 isopods; perennial strand | pool R wall end of ent. crawl | 95% EtOH | 36.6267256207 | -83.2567137019” (2) “*Caecidotea speleoconservata* | det. Julian J. Lewis | 11 January 2022 | specimens: 6 ♂♂ 11 ♀♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH112429.1-VMNH112429.6 | ♀♀: VMNH112429.7-VMNH112429.17 | PARATYPES”.

[VMNH112430.1-VMNH112430.9; 2 ♂♂, 7 ♀♀] (1) “Virginia, Lee Co. | Gallohan No. 2 Cave | Coll. Tom Malabad and | Katarina Kosič Ficco | December 15, 2021 | 0.72 miles southeast | White Shoals Church | Isopods (Caec) main | stream (1 of 2) | 95% EtOH | 36.6258115366 | -83.2550097156” (2) “*Caecidotea speleoconservata* | Paratypes: 2 ♂♂ 7 ♀♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH112430.1-VMNH112430.2 | ♀♀: VMNH112430.3-VMNH112430.9 | PARATYPES”.

[VMNH112431.1-VMNH112431.9; 6 ♂♂, 3 ♀♀]

(1) “VIRGINIA: Lee County | Gallohan Cave No. 2 | main stream passage | 0.72 miles southeast of | White Shoals Church | coll. Tom Malabad, | Katarina Kosič Ficco | 15 December 2021” (2) “*Caecidotea speleoconservata* | Paratypes: 6♂ 3♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH112431.1-VMNH112431.6 | ♀♀: VMNH112431.7-VMNH112431.9 | PARATYPES”. **Notes:** No other types have been designated.

Status: valid.

Conasellus hobsoni Lewis & Lewis, 2023

“*Conasellus hobsoni* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 33. Type locality: “Mount Creek seep 1, located at N38.199462 W77.29054, on the grounds of U.S. Army Fort A. P. Hill, in Caroline County, Virginia” (Lewis et al. 2023: 33).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Caroline County | Fort A. P. Hill | Mount Creek 1 | N38.199462 W77.29054 | 11 March 2014 | coll. C.S. Hobson, D.L. Nelms” (2) [hw] “VA: Caroline Co | Fort A.P. Hill | Mount Creek # 5 | 31 March 2014 | CSH, D, N, RM” (3) “*Conasellus hobsoni* | HOLOTYPE” (4) “Holotype ♂” (5) “22 mm ♂” (6) “Virginia Museum of Natural History | VMNH110743 | HOLOTYPE ♂”.

Paratypes (14 ♂♂, 2 ♀♀): preserved in ethanol with labels:

[VMNH110744.1; ♂] (1) “VIRGINIA: Caroline County | Fort A. P. Hill | Mount Creek 1 | N38.199462 W77.29054 | 11 March 2014 | coll. C.S. Hobson, D.L. Nelms” (2) “*Conasellus hobsoni* | PARATYPES 1♂” (3) “26 mm ♂” (4) “VMNH110744.1”.

[VMNH110744.2-VMNH110744.3; 2 ♂♂] (1) “VIRGINIA: Caroline County | Fort A. P. Hill | Mount Creek 1 | N38.199462 W77.29054 | 11 March 2014 | coll. C.S. Hobson, D.L. Nelms” (2) [hw] “Mount Creek 1 | 3/11/14 *Caecidotea* sp. | CS Hobson DL Nelms” (3) “*Conasellus hobsoni* | PARATYPES 2♂” [inner vial with a single specimen] (1) “17 mm ♂” (2) “VMNH110744.2” [inner vial with a single specimen] (1) “23 mm ♂” (2) “VMNH110744.3”

[VMNH110744.4-VMNH110744.16; 11 ♂♂, 2 ♀♀] “VIRGINIA: Caroline County | Fort A. P. Hill | Mount Creek 1 | N38.199462 W77.29054 | 11 March 2014 | coll. C.S. Hobson, D.L. Nelms” (2) “*Conasellus hobsoni* | PARATYPES 11♂2♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH110744.4-VMNH110744.14 | ♀♀: VMNH110744.15-VMNH110744.16 | PARATYPES”.

Notes: No other types have been designated. There is a slight discrepancy between a handwritten locality label associated with the holotype and the species description/printed labels (i.e., different collection date and seep number, and presence of an extra collector).

Status: valid.

Conasellus laeae Lewis & Lewis, 2025

“*Conasellus laeae* new species” Lewis et al. 2025. Jeffersoniana 31: 20. Type locality: [USA, Virginia, Shenandoah County] “Cohen Spring” (Lewis et al. 2025: 20).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Shenandoah County | Cohen Spring | 0.7 mile S Quicksburg | coll. Tom Malabad, | Katarina Kosič Ficco | 26 May 2021” (2) “*Conasellus laeae* | HOLOTYPE ♂” (3) “Virginia Museum of Natural History | VMNH112434 | HOLOTYPE ♂”.

Paratypes (22 ♂♀): preserved in ethanol with labels:

[VMNH112435.1-VMNH112435.21; 21 ♂♀] (1) “Virginia, Shenandoah Co. | Cohen Spring | Coll. Tom Malabad, Katarina Kosič Ficco | May 26, 2021 | 0.7 miles south of Quicksburg, VA | 38.683 | -78.679” (2) “*Conasellus laeae* | Paratypes: 21♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH112435.1-VMNH112435.21 | PARATYPES”.

[VMNH112436; ♀] (1) “VIRGINIA: Shenandoah County | Cohen Spring | 0.7 mile S Quicksburg | Julian J. Lewis | Salisa L. Lewis | 23 June 2023” (2) “*Conasellus laeae* | Paratype: 1♀” (3) “Virginia Museum of Natural History | ♀: VMNH112436 | PARATYPE”.

Notes: No other types have been designated.

Status: valid.

Lirceus appalachius Lewis & Lewis, 2023

“*Lirceus appalachius* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 87. Type locality: “Island Ford Cave Spring, Alleghany County, Virginia” (Lewis et al. 2023: 87).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Alleghany County | Island Ford Cave Spring | below cave entrance on bank | of Jackson River | from detritus and aquatic moss | ca. 4.4 miles E Covington | 8 March 2022 | Julian J. Lewis” (2) “*Lirceus appalachius* | Holotype ♂” (3) “Virginia Museum of Natural History | VMNH110745 | HOLOTYPE ♂”.

Paratypes (72 ♂♀): preserved in ethanol with labels:

[VMNH110746.1-VMNH110746.30; 30 ♂♀] (1) “VIRGINIA: Alleghany County | Island Ford Cave Spring | below cave entrance on bank | of Jackson River | from detritus and aquatic moss | ca. 4.4 miles E Covington | 8 March 2022 | Julian J. Lewis” (2) “*Lirceus appalachius* | Paratypes: 30 ♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110746.1-VMNH110746.30 | PARATYPES”.

[VMNH110747.1-VMNH110747.30; 30 ♂♀] (1) “Virginia, Alleghany Co. | Island Ford Cave Spring | Coll. Tom Malabad, Pam Tegelman Malabad, | Kallan Malabad, Arik Malabad | June 12, 2020 | 2.4 miles west of Low Moor, VA” (2) “*Lirceus appalachius* | PARATYPES 30 ♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110747.1-VMNH110747.30 | PARATYPES”.

[VMNH110808.1-VMNH110808.12; 12 ♂♀] (1) “VIRGINIA: Alleghany County | Island Ford Cave Spring | from detritus | N37.78066 W79.92682 | 30 April 2022 | Julian Lewis, Salisa Lewis” (2) “*Lirceus appalachius* | 12 ♂♀ Paratypes” (3) “Virginia Museum of Natural History | ♂♀: VMNH110808.1-VMNH110808.12 | PARATYPES”.

Notes: No other types have been designated.

Status: Valid.

Lirceus bisetus Lewis & Lewis, 2023

“*Lirceus bisetus* new species” Lewis et al. 2023.

Virginia Museum of Natural History Special Publication 19: 137. Type locality: “Lane Cave, Scott County, Virginia” (Lewis et al. 2023: 137).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Scott County | Lane Cave, from stream | 2.7 miles NW Gate City | N 36.66393 W 82.61283 | 6 June 2021 | S.L. Lewis, J.J. Lewis | Z. Orndorff, W. Orndorff” (2) “*Lirceus bisetus* | Holotype ♂” (3) [hw] “HOLOTYPE” (4) “Virginia Museum of Natural History | VMNH110748 | HOLOTYPE ♂”.

Paratypes (55 ♂♀): preserved in ethanol with labels:

[VMNH110749.1-110749.40; 40 ♂♀] (1) “VIRGINIA: Scott County | Lane Cave, from stream | 2.7 miles NW Gate City | N 36.66393 W 82.61283 | 6 June 2021 | S.L. Lewis, J.J. Lewis | Z. Orndorff, W. Orndorff” (2) “*Lirceus bisetus* | PARATYPES 40 ♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110749.1-VMNH110749.40 | PARATYPES”.

[VMNH110750.1-110750.15; 3 ♂♂, 12 ♀♀] (1) “VIRGINIA: Scott County | Lane Cave | 7 miles SW Snowflake | 12 October 2019 | Wil Orndorff” (2) “*Lirceus bisetus* | PARATYPES 3 ♂♂ 12 ♀♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH110750.1-VMNH110750.3 | ♀♀: VMNH110750.4-VMNH110750.15 | PARATYPES”.

Notes: No other types have been designated. There is a slight discrepancy regarding the collection locality between the species description (2.5 miles NW Gate City) and the specimen labels (2.7 miles NW Gate City).

Status: valid.

Lirceus burnsi Lewis & Lewis, 2023

“*Lirceus burnsi* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 168. Type locality: “Cardwell Spring, 4.1 miles SW Corryton, Knox County, Tennessee” (Lewis et al. 2023: 168).

Paratypes (80 ♂♀): preserved in ethanol with labels: (1) “TENNESSEE: Knox County | Cardwell Spring | 11 miles NE Knoxville | N36.10675 W83.82630 | 20 August 2021 | S.L. Lewis, J.J. Lewis” (2) “*Lirceus burnsi* | 80 ♂♀ paratypes”

(3) “Virginia Museum of Natural History | ♂♀: VMNH110751.1- | VMNH110751.80 | PARATYPES”.

Notes: The type series also includes the male holotype and 48 additional paratypes (all from the type locality) deposited at USNM. Note difference in reference locality between the species description and the VMNH paratypes (i.e., 4.1 SW Corryton vs. 11 miles NW Knoxville; both with same geographic coordinates).

Status: valid.

Lirceus cedrus Lewis & Lewis, 2023

“*Lirceus cedrus* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 123. Type locality: [USA, Virginia, Lee County] “Flanary Bridge Spring” (Lewis et al. 2023: 123).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Lee County | Flanary Bridge Springs | east spring | ca. 6.0 miles WSW Jonesville | N36.64311 W83.20322 | 12 October 2019 | Julian J. Lewis, Salisa L. Lewis” (2) “*Lirceus cedrus* | HOLOTYPE” (3) [hw] “HOLOTYPE 7.0mm” (4) “Virginia Museum of Natural History | VMNH110752 | HOLOTYPE ♂”.

Paratypes (9 ♂♂, 7 ♀♀): preserved in ethanol with labels:

[VMNH110753.1-VMNH110753.4; 3 ♂♂, 1 ♀] (1) “VIRGINIA: Lee County | Flanary Bridge Springs | upstream spring | N36.64311 W83.20322 | 6.0 miles WSW Jonesville | coll. Julian J. Lewis. Wil Orndorff | 1 May 2017” (2) “*Lirceus cedrus* | PARATYPES 3♂1♀” [inner vial with 1 male] (1) [hw] “6.0 mm ♂” (2) “VMNH110753.1” [inner vial with 2 males and 1 female] (1) “♂♂: VMNH110753.2- | VMNH110753.3 | ♀: VMNH110753.4”.

[VMNH110754.1-VMNH110754.4; 3 ♂♂, 1 ♀] (1) “Virginia, Lee Co. | Flanary Bridge Spring - Upper | Coll. Wil Orndorff, Zenah Orndorff | August 13, 2020 | 6 miles southwest of Jonesville, VA | Isopods, 4 | 95% EtOH | 36.64311 | -83.20322” (2) “*Lirceus cedrus* | PARATYPES 3♂1♀” (3) “Virginia Museum

of Natural History | ♂♂: VMNH110754.1-VMNH110754.3 | ♀: VMNH110754.4 | PARATYPES”.

[VMNH110755.1-VMNH110755.8; 3 ♂♂, 5 ♀♀] (1) “VIRGINIA: Lee County | Flanary Bridge Spring | east spring | ca. 6.0 miles WSW Jonesville | N 36.64311 W 83.20322 | 12 October 2019 | Julian J. Lewis | Salisa L. Lewis” (2) “*Lirceus cedrus* | PARATYPES 3♂5♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH110755.1-VMNH110755.3 | ♀♀: VMNH110755.4-VMNH110755.8 | PARATYPES”.

Notes: No other types have been designated.

Status: valid.

Lirceus clinchensis Lewis & Lewis, 2023

“*Lirceus clinchensis* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 149. Type locality: [USA, Virginia, Russell County] “a small spring on Seven Springs Road, 1.7 miles SW of Castlewood” (Lewis et al. 2023: 149).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Russell County | small spring on 7 Springs Road | 1.7 miles SW Castlewood | Julian J. Lewis, Ronnie Burns | 12 July 2018” (2) “*Lirceus clinchensis* | HOLOTYPE ♂” (3) “Virginia Museum of Natural History | VMNH110756 | HOLOTYPE ♂”.

Paratypes (37 ♂♂, 14 ♀♀): preserved in ethanol with labels:

[VMNH110757.1-VMNH110757.22; 8 ♂♂, 14 ♀♀] (1) “VIRGINIA: Russell County | small spring on 7 Springs Road | 1.7 miles SW Castlewood | 12 July 2018 | coll. Julian J. Lewis, Ronnie Burns” (2) “*Lirceus clinchensis* | PARATYPES 22♂♀” [inner vial with 2 dissected males] (1) [hw] “dissect” (2) “♂♂: VMNH110757.1- | VMNH110757.2” [inner vial with 6 males] (1) [hw] “♂” (2) “♂♂: VMNH110757.3- | VMNH110757.8” [inner vial with 14 females] (1) [hw] “♀” (2) “♀♀: VMNH110757.9-VMNH110757.22”.

[VMNH110758.1-VMNH110758.15; 15 ♂♂] (1) “VIRGINIA: Russell County | small spring on 7 Springs Road | 1.7 miles SW Castlewood | Julian

J. Lewis | 19 April 2021” (2) “Lirceus clinchensis | PARATYPES 15♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110758.1-VMNH110758.15 | PARATYPES”.

Notes: No other types have been designated.

Status: valid.

Lirceus douadyi Lewis & Lewis, 2025

“*Lirceus douadyi*, new species” Lewis et al. 2025. Jeffersoniana 31: 2. Type locality: [USA, Virginia, Scott County] “Quillin Spring” (Lewis et al. 2025: 2).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Scott County | Quillin Spring | 4.1 miles N. Gate City | N36.69695 W82.57732 | 24 October 2022 | J. Lewis, T. Malabad, | K.K. Ficco, W. Orndorff” (2) “Lirceus douadyi | HOLOTYPE male” (3) “Virginia Museum of Natural History | VMNH112418 | HOLOTYPE ♂”.

Paratypes (10 ♂♂, 9 ♀♀): preserved in ethanol with labels:

[VMNH112419.1- VMNH112419.6; 4 ♂♂, 2 ♀♀] (1) “VIRGINIA: Scott County | Quillin Spring | 4.1 miles N. Gate City | 9 July 2018 coll. J. Lewis, | W. Orndorff, Z. Orndorff” (2) “Lirceus douadyi | PARATYPES: 4♂ 2♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH112419.1-VMNH112419.4 | ♀♀: VMNH112419.5-VMNH112419.6 | PARATYPES”.

[VMNH112420.1- VMNH112420.8; 3 ♂♂, 5 ♀♀] (1) “VIRGINIA: Scott County | Quillin Spring | 4.1 miles N Gate City | N36.69695 W82.57732 | 24 October 2022 | J. Lewis, T. Malabad, K.K. Ficco, W. | Orndorff” (2) “Lirceus douadyi | PARATYPES: 3♂ 5♀” [inner vial with 1 dissected male] (1) [hw] “5.7mm ♂” (2) “♂: VMNH112420.1” [inner vial with 2 males] (1) “♂♂: VMNH112420.2- | VMNH112420.3” [inner vial with 1 dissected female] (1) [hw] “5.7 ♀” (2) “♀: VMNH112420.4” [inner vial with 4 females] (1) “♀♀: VMNH112420.5- | VMNH112420.8”.

[VMNH112421.1- VMNH112421.4; 2 ♂♂, 2 ♀♀] (1) “VIRGINIA: Scott County | Quillin Spring, | from spring orifice | ca. 4 miles N Gate City | N 36.69683 W 82.57706 | 21 Oct 2023 Julian J. Lewis” (2) “Lirceus (Hargerellus) douadyi

| Paratypes 2♂ 2♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH112421.1-VMNH112421.2 | ♀♀: VMNH112421.3-VMNH112421.4 | PARATYPES”.

[VMNH112422; ♂] (1) “VIRGINIA: Scott County | Quillin Spring, | from under rock below | spring orifice | 4.2 miles N Gate City | N36.69683 W82.57706 | 25 April 2024 | Julian J. Lewis, Florian Malard” (2) “Lirceus (Hargerellus) douadyi | Paratype ♂” (3) “Virginia Museum of Natural History | ♂: VMNH112422 | PARATYPE”.

Notes: No other types have been designated.

Status: valid.

Lirceus fonticulus Lewis & Lewis, 2023

“*Lirceus fonticulus* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 131. Type locality: “Cave Springs, accessed from the Jefferson National Forest Cave Springs campground, northeast of Pennington Gap, in Lee County, Virginia” (Lewis et al. 2023: 134).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Lee County | Cave Spring Cave | spring below cave entrance | 11 miles WSW Big Stone Gap | USFS Cave Springs Recreation Area | 22 April 2021 | J. Lewis, W. Orndorff, | Z. Orndorff, T. Malabad” (2) “Lirceus fonticulus | HOLOTYPE” (3) [hw] “8.6 ♂ HOLOTYPE” (4) “Virginia Museum of Natural History | VMNH110759 | HOLOTYPE ♂”.

Paratypes (37 ♂♀): preserved in ethanol with labels:

(1) “VIRGINIA: Lee County | Cave Spring Cave | spring below cave entrance | 11 miles WSW Big Stone Gap | USFS Cave Springs Recreation Area | 22 April 2021 | J. Lewis, W. Orndorff, | Z. Orndorff, T. Malabad” (2) “Lirceus fonticulus | PARATYPES” [inner vial with 1 dissected male] (1) [hw] “7.9mm ♂” (2) “♂: VMNH110760.1” [inner vial with 1 dissected male] (1) [hw] “8.1mm ♂” (2) “♂: VMNH110760.2” [inner vial with 5 specimens] (1) “♂♀: VMNH110760.3- | VMNH110760.7” [inner vial with 30 specimens] (1) “♂♀: VMNH110760.8- | VMNH110760.37”.

Notes: No other types have been designated.

Status: valid.

Lirceus katarinae Lewis & Lewis, 2023

“*Lirceus katarinae* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 144. Type locality: [USA, Virginia, Scott County] “Mill Creek Springs” (Lewis et al. 2023: 148).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Scott County | Mill Creek Springs | 1.9 miles east of Rye Cove | N36.72051 W82.66177 | coll. Katarina Kosič Ficco | 11 November 2020” (2) “*Lirceus katarinae* | Holotype ♂” (3) “HOLOTYPE” (4) “Virginia Museum of Natural History | VMNH110761 | HOLOTYPE ♂”.

Paratypes (100 ♂♀): preserved in ethanol with labels:

[VMNH110762.1- VMNH110762.8; 5 ♂♂, 3 ♀♀] (1) “VIRGINIA: Scott County | Mill Creek Springs | 1.9 miles east of Rye Cove | N36.72051 W82.66177 | coll. Katarina Kosič Ficco | 11 November 2020” (2) “*Lirceus katarinae* | Paratypes 5♂ 3♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH110762.1- VMNH110762.5 | ♀♀: VMNH110762.6- VMNH110762.8 | PARATYPES”.

[VMNH110763.1- VMNH110763.36; 36 ♂♀] (1) “VIRGINIA: Scott County | Mill Creek Springs | approximately 2 miles E Rye Cove | 23 April 2019 | J. Lewis, W. Orndorff, Z. Orndorff” (2) “*Lirceus katarinae* | Paratypes 36♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110763.1-VMNH110763.36 | PARATYPES”.

[VMNH110764.1- VMNH110764.40; 40 ♂♀] (1) “VIRGINIA: Scott County | Mill Creek Springs | J. Lewis, W. Orndorff | 2 May 2017” (2) “*Lirceus katarinae* | Paratypes 40♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110764.1-VMNH110764.40 | PARATYPES”.

[VMNH110809.1- VMNH110809.16; 16 ♂♀] (1) “VIRGINIA: Lee County | Mill Creek Springs | N36.72051 W82.66177 | 21 April 2022 | Julian Lewis, Salisa Lewis | Katarina Kosič Ficco” (2) “*Lirceus katarinae* | Paratypes 16♂♀” (3) [hw] “label bears | incorrect | county. It | is actually | Scott Co.” (4) “Virginia Museum

of Natural History | ♂♀: VMNH110809.1- VMNH110809.16 | PARATYPES”.

Notes: No other types have been designated.

Status: valid.

Lirceus laurae Lewis & Lewis, 2025

“*Lirceus laurae*, new species” Lewis et al. 2025. Jeffersoniana 31: 7. Type locality: [USA, Virginia, Lee County] “Woodward Springs, which are found on the north side of the Powell River, in the region known as the Cedars. The primary habitat is Woodward Spring #2, located approximately 800 feet (250 meters) from the river, at an elevation of about 1300 feet (400 meters) above sea level.” (Lewis et al. 2025: 8).

Holotype (♂): preserved in ethanol with labels:

(1) “VIRGINIA: Lee Co. | Woodward Spring #2 | 4.5 miles SW Jonesville | N36.64416 W83.16768 | 7 June 2021 | L. Young, S. L. Lewis, | J. J. Lewis, W. Orndorff” (2) “*Lirceus laurae* | Holotype male” (3) [hw] “Holotype” (4) “Virginia Museum of Natural History | VMNH112423 | HOLOTYPE ♂”.

Paratypes (40 ♂♀): preserved in ethanol (two vials) with labels:

[VMNH112424.1- VMNH112424.11; 6 ♂♂, 5 ♀♀] (1) “VIRGINIA, Lee Co. | Woodward Tract, Spring 2-US | coll. Wil Orndorff, Zenah Orndorff | August 13, 2020 | 4.4 miles southwest of Jonesville, VA” (2) “*Lirceus laurae* | Paratypes: 6♂ 5♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH112424.1- VMNH112424.6 | ♀♀: VMNH112424.7- VMNH112424.11 | PARATYPES”.

[VMNH112425.1- VMNH112425.29; 29 ♂♀] (1) “VIRGINIA: Lee County | Woodward Spring #2 | 4.5 miles SW Jonesville | N36.64416 W83.16768 | 7 June 2021 | L. Young, S.L. Lewis, J.J. Lewis, | W. Orndorff” (2) “*Lirceus laurae* | Paratypes: 29♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH112425.1- VMNH112425.29 | PARATYPES”.

Notes: No other types have been designated. Note misspelling of Jonesville (as Jonesboro) in the species description.

Status: valid.

Lirceus littonensis Lewis & Lewis, 2023

“*Lirceus littonensis* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 118. Type locality: [USA, Virginia, Lee County] “Litton Cave No. 1” (Lewis et al. 2023: 118).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Lee County | Litton Cave #1, cave stream | 4.5 miles SSE Pennington Gap | N36.70115 W82.99318 | 21 April 2021 | J. Lewis, W. Orndorff, | Z. Orndorff, T. Malabad” (2) “*Lirceus littonensis* | Holotype ♂” (3) “Virginia Museum of Natural History | VMNH110765 | HOLOTYPE ♂”.

Paratypes (54 ♂♀): preserved in ethanol with labels:

[VMNH110766.1- VMNH110766.10; 10 ♂♀] (1) “Virginia, Lee Co. | Litton Cave No. 1 | Coll. Tom Malabad, Wil Orndorff, | Zenah Orndorff | March 10, 2021 | 6.6 miles east of Jonesville, VA | 36.701 | -82.993 | 95% EtOH | Isopods, 10” (2) “*Lirceus littonensis* | PARATYPES 10 ♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110766.1-VMNH110766.10 | PARATYPES”.

[VMNH110767.1- VMNH110767.4; 4 ♂♂] (1) “VIRGINIA: Lee County | Litton Cave #1, cave stream | 4.5 miles SSE Pennington Gap | N36.70115 W82.99318 | 21 April 2021 | J. Lewis, W. Orndorff, | Z. Orndorff, T. Malabad” (2) “*Lirceus littonensis* | PARATYPES 4 ♂♂” [inner vial with 1 dissected male] (1) [hw] “5.4mm ♂” (2) “♂: VMNH110767.1” [inner vial with 3 males] (1) “♂♂: VMNH110767.2- | VMNH110767.4”.

[VMNH110768.1- VMNH110768.15; 15 ♀♀] (1) “VIRGINIA: Lee County | Litton Cave #1, cave stream | 4.5 miles SSE Pennington Gap | N36.70115 W82.99318 | 21 April 2021 | J. Lewis, W. Orndorff, | Z. Orndorff, T. Malabad” (2) “*Lirceus littonensis* | PARATYPES 15 ♀♀” [inner vial with 1 dissected female] (1) [hw] “5.5mm ♀” (2) “♀: VMNH110768.1” [inner vial with 1 dissected female] (1) [hw] “5.3mm ♀” (2) “♀: VMNH110768.2” [inner vial with 13 females] (1) “♀♀: VMNH110768.3- | VMNH110768.15”.

[VMNH110769.1- VMNH110769.7; 4 ♂♂, 3 ♀♀] (1) “VIRGINIA: Lee County | Litton Cave #1, cave stream | undersides of rocks | 11 miles west of Duffield | N36.70115 W82.99318 | 7 June 2021 | S.L. Lewis, J.J. Lewis, W. Orndorff | R. Blackwell” (2) “*Lirceus littonensis* | PARATYPES 4 ♂♂ 3 ♀♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH110769.1- VMNH110769.4 | ♀♀: VMNH110769.5- VMNH110769.7 | PARATYPES”.

[VMNH110770.1- VMNH110770.10; 10 ♂♀] (1) “Virginia, Lee Co. | Litton Cave No. 2 | Coll. Tom Malabad, Wil Orndorff, | March 24, 2021 | 6.3 miles east of Jonesville, VA | 36.698 | -82.997 | 95% EtOH | Isopods, 10” (2) “*Lirceus littonensis* | PARATYPES 10 ♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110770.1- | VMNH110770.10 | PARATYPES”.

[VMNH110771.1- VMNH110771.8; 8 ♂♀] (1) “VIRGINIA: Lee County | Litton Cave #2, cave stream | 4.5 miles SSE Pennington Gap | N36.69812 W82.99746 | 21 April 2021 | J. Lewis, W. Orndorff, | Z. Orndorff, T. Malabad” (2) “*Lirceus littonensis* | PARATYPES 8 ♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110771.1- | VMNH110771.8 | PARATYPES”.

Notes: No other types have been designated.

Status: valid.

Lirceus malabadi Lewis & Lewis, 2023

“*Lirceus malabadi* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 110. Type locality: [USA, Virginia, Lee County] “Young-Fugate Cave Spring” (Lewis et al. 2023: 110).

Holotype (♂): preserved in ethanol with labels: (1) “Virginia, Lee Co. | Younge-Fugate Cave’s Spring | Coll. Tom Malabad, Katarina Kosič Ficco, | Mike Ficco | November 16, 2020 | 2.4 miles southwest of Wheeler, VA | Isopods, 10, Vial 1 | 95%EtOH | 36.601 | -83.595” (2) “*Lirceus malabadi* | HOLOTYPE ♂” (3) [hw] “HOLOTYPE” (4) “Virginia Museum of Natural History | VMNH110772 | HOLOTYPE ♂”.

Paratypes (119 ♂♀): preserved in ethanol

with labels:

- [VMNH110773.1-VMNH110773.8; 7 ♂♂, 1 ♀] (1) “VIRGINIA: Lee County | small creek tributary to Indian | Creek, 100 feet upstream) confluence | of Young-Fugate Cave Spring | 7 miles east Middlesboro, KY | N36.602 W83.595 | 20 April 2021 | T. Malabad, J. Lewis, Z. Orndorff, | W. Orndorff” (2) “Lirceus malabadi | PARATYPES | specimens: 7♂1♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH110773.1-VMNH110773.7 | ♀: VMNH110773.8 | PARATYPES”.
- [VMNH110774.1-VMNH110774.25; 16 ♂♂, 9 ♀♀] (1) “Virginia, Lee Co. | Younge-Fugate Cave, Young Entrance | Coll. Tom Malabad, Katarina Kosič Ficco, | Mike Ficco | November 16, 2020 | 2.4 miles southwest of Wheeler, VA” (2) “Lirceus malabadi | PARATYPES 16♂9♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH110774.1-VMNH110774.16 | ♀♀: VMNH110774.17-VMNH110774.25 | PARATYPES”.
- [VMNH110775.1-VMNH110775.13; 13 ♂♀] (1) “VIRGINIA: Lee County | Young-Fugate Cave | under rocks in cave stream | 7 miles E Middlesboro, Ky. | N36.60167 W83.59500 | 20 April 2021 | J. Lewis, T. Malabad | Z. Orndorff, W. Orndorff” (2) “Lirceus malabadi | PARATYPES | specimens: 13♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110775.1-VMNH110775.13 | PARATYPES”.
- [VMNH110776.1-VMNH110776.27; 27 ♂♀] (1) “VIRGINIA: Lee County | Young-Fugate Cave Spring | 3.7 miles ENE Harrogate | 8 July 2018 coll. J. Lewis, | W. Orndorff, Z. Orndorff” (2) “Lirceus malabadi | PARATYPES 27♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110776.1-VMNH110776.27 | PARATYPES”.
- [VMNH110777.1-VMNH110777.20; 17 ♂♂, 3 ♀♀] [outer vial labels for all 20 specimens]: (1) “Virginia, Lee Co. | Younge-Fugate Cave’s Spring | Coll. Tom Malabad, Katarina Kosič Ficco, | Mike Ficco | November 16, 2020 | 2.4 miles southwest of Wheeler, VA” (2) “Lirceus malabadi | PARATYPES 17♂3♀” [inner vial with 1 dissected male] (1) “♂: VMNH110777.1”

[inner vial with 16 males] (1) [hw] “♂” (2) “♂♂: VMNH110777.2- | VMNH110777.17” [inner vial with 3 females] (1) [hw] “♀” (2) “♀♀: VMNH110777.18- | VMNH110777.20”.

- [VMNH110778.1-VMNH110778.14; 14 ♂♀] (1) “VIRGINIA: Lee County | Young-Fugate Cave Spring | 7 miles E Middlesboro, Ky. | N36.60167 W83.59500 | 20 April 2021 | J. Lewis, T. Malabad | Z. Orndorff, W. Orndorff” (2) “Lirceus malabadi | PARATYPES | specimens: 14♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110778.1-VMNH110778.14 | PARATYPES”.

- [VMNH110779.1-VMNH110779.12; 12 ♂♀] (1) “VIRGINIA: Lee County | swallet stream, upstream of Fugate | (upstream) entrance of | Young-Fugate Cave | 7 miles east Middlesboro, KY | N36.607 W83.586 | 20 April 2021 | T. Malabad, W. Orndorff” (2) “Lirceus malabadi | PARATYPES | specimens: 12♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110779.1-VMNH110779.12 | PARATYPES”.

Notes: No other types have been designated. Note misspelling of Young-Fugate (as Younge-Fugate) on labels.

Status: valid.

Lirceus orndorffi Lewis & Lewis, 2023

“*Lirceus orndorffi* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 152. Type locality: [USA, Virginia, Tazewell County] “Hugh Young Cave” (Lewis et al. 2023: 152).

Paratypes (10 ♂♀): preserved in ethanol with labels: (1) “VIRGINIA: Tazewell County | Hugh Young Cave | from stones in stream in | dark zone of cave | N37.02354 W81.67927 | 8 June 2021 | Julian J. Lewis, Salisa L. Lewis” (2) “Lirceus orndorffi | PARATYPES | 10♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110780.1-VMNH110780.10 | PARATYPES”.

Notes: The type series also includes the male holotype (Virginia: Tazewell County: Hugh Young Cave, 6.4 miles SE Cedar Bluff, J. J. Lewis, W. Orndorff, 1 May 2017) and 30 additional paratypes (varying localities and

dates) deposited at USNM.

Status: valid.

Lirceus powellensis Lewis & Lewis, 2023

“*Lirceus powellensis* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 127. Type locality: [USA, Virginia, Wise County] “Omega Cave Spring”, “the type locality is located at the base of Powell Mountain at N36.84544 W82.70776” (Lewis et al.2023: 127).

Holotype (♂): preserved in ethanol with labels:

- (1) “VIRGINIA: Wise County | Omega Cave Spring | 3.3 miles SE Big Stone Gap | 8 July 2018 Coll. J.J. Lewis, | W. Orndorff, Z. Orndorff”
- (2) “*Lirceus powellensis* | HOLOTYPE ♂”
- (3) “Virginia Museum of Natural History | VMNH110781 | HOLOTYPE ♂”.

Paratypes (54 ♂♀): preserved in ethanol with labels:

[VMNH110782.1-VMNH110782.24; 24 ♂♀]

- (1) “VIRGINIA: Wise County | Omega Cave Spring | 3.3 miles SE Big Stone Gap | 8 July 2018 coll. J. Lewis, | W. Orndorff, Z. Orndorff”
- (2) “*Lirceus powellensis* | PARATYPES 24 ♂♀”
- (3) “Virginia Museum of Natural History | ♂♀: VMNH110782.1-VMNH110782.24 | PARATYPES”.

[VMNH110783.1-VMNH110783.30; 30 ♂♀] (1)

- “VIRGINIA: Wise County | Omega Cave Spring | from interstices of gravel at | mouth of spring | 4 miles ESE Big Stone Gap | N36.845444 W82.70776 | 18 April 2021 | Julian J. Lewis”
- (2) “*Lirceus powellensis* | PARATYPES 30 ♂♀”
- (3) “Virginia Museum of Natural History | ♂♀: VMNH110783.1-VMNH110783.30 | PARATYPES”.

Notes: No other types have been designated.

Status: valid.

Lirceus stygophilus Lewis & Lewis, 2023

“*Lirceus stygophilus* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 140. Type locality: “The type-locality, Speers Ferry Cave, is located in the Clinch River Valley near the former town of Speers Ferry in Scott County, Virginia” (Lewis et al. 2023: 144).

Holotype (♂): preserved in ethanol with labels:

- (1) “VIRGINIA: Scott County | Speers Ferry Cave | 2.4 miles S Clinchport | N36.64174 W82.74103 | coll. Julian J. Lewis, | William Orndorff | 2 May 2017”
- (2) “*Lirceus stygophilus* | HOLOTYPE ♂”
- (3) “Virginia Museum of Natural History | VMNH110784 | HOLOTYPE ♂”.

Paratypes (62 ♂♀): preserved in ethanol with labels:

[VMNH110785; ♂] (1) “Virginia, Scott Co. | Speers Ferry Cave | Coll. Tom Malabad, Wil Orndorff | November 11, 2020 | 8.8 miles west of Gate City, VA | Isopod, 1 | 95% EtOH | 36.641 | -82.740”

- (2) “*Lirceus stygophilus* | PARATYPES 1 ♂”
- (3) “Virginia Museum of Natural History | ♂: VMNH110785 | PARATYPE”.

[VMNH110786.1-VMNH110786.18; 18 ♂♀] (1)

- “VIRGINIA: Scott County | Speers Ferry Cave | 2.4 miles S Clinchport | N36.64174 W82.74103 | coll. Julian J. Lewis, | William Orndorff | 2 May 2017”
- (2) “*Lirceus stygophilus* | PARATYPES 18 ♂♀”
- (3) “Virginia Museum of Natural History | ♂♀: VMNH110786.1-VMNH110786.18 | PARATYPES”.

[VMNH110787.1-VMNH110787.17; 17 ♂♀] (1)

- “VIRGINIA: Scott County | Speers Ferry Cave | stream in dark zone of cave | 2.4 miles S Clinchport | 9 July 2018 coll. J. Lewis, | W. Orndorff, Z. Orndorff”
- (2) “*Lirceus stygophilus* | PARATYPES 17 ♂♀”
- (3) “Virginia Museum of Natural History | ♂♀: VMNH110787.1-VMNH110787.17 | PARATYPES”.

[VMNH110788.1-VMNH110788.26; 26 ♂♀] (1)

- “VIRGINIA: Scott County | Speers Ferry Cave, 2.4 miles S | Clinchport | 23 April 2019 | J. Lewis, W. Orndorff, Z. Orndorff”
- (2) “*Lirceus stygophilus* | PARATYPES 26 ♂♀”
- (3) “Virginia Museum of Natural History | ♂♀: VMNH110788.1-VMNH110788.26 | PARATYPES”.

Notes: No other types have been designated.

The species description erroneously lists the paratypes from 9 July 2018 as 26 ♂♀ (VMNH110788.1-VMNH110788.26) and those from 23 April 2019 as 17 ♂♀ (VMNH110787.1-VMNH110787.17). The correct association is that the 17 ♂♀ paratypes were collected on

9 July 2018 and 26 ♂♀ were collected on 23 April 2019.

Status: valid.

Lirceus thermæ Lewis & Lewis, 2023

“*Lirceus thermæ* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 101. Type locality: [USA: West Virginia: Morgan County] “cluster of thermal springs emerging in Berkeley Springs State Park, in the town of Berkeley Springs” (Lewis et al. 2023: 102).

Paratypes (32 ♂♀): preserved in ethanol with labels: (1) “WEST VIRGINIA: MORGAN CO. | Berkeley Springs State Park | thermal spring (ca. 74 degrees) | south basin, from moss on rocks | below spring orifice | N39.62684 W78.22920 | 2 July 2021 | S.L. Lewis, J.J. Lewis” (2) “*Lirceus thermæ* | Paratypes | Specimens: 32 ♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH110789.1-VMNH110789.32 | PARATYPES”.

Notes: The type series also includes the male holotype (West Virginia: Morgan County: from aquatic moss below thermal spring, Berkeley Springs, J. J. Lewis, 29 April 2017) and 72 additional paratypes (varying localities and dates) deposited at USNM.

Status: valid.

Lirceus zenahæ Lewis & Lewis, 2023

“*Lirceus zenahæ* new species” Lewis et al. 2023. Virginia Museum of Natural History Special Publication 19: 114. Type locality: [USA, Virginia, Lee County] “Bacon Cave Spring” (Lewis et al. 2023: 114).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Lee County | Bacon Cave Spring | 5.5 miles SE of Rose Hill | N 36.61416 W 83.29985 | 8 July 2018 | collected by Zenah Orndorff, | Wil Orndorff, Julian Lewis” (2) “*Lirceus zenahæ* | HOLOTYPE MALE” (3) “Virginia Museum of Natural History | VMNH110790 | HOLOTYPE ♂”.

Paratypes (65 ♂♀): preserved in ethanol (two vials) with labels:

[VMNH110791.1-VMNH110791.21; 17 ♂♂, 4

♀♀] (1) “VIRGINIA: Lee County | Bacon Cave Spring | 5.5 miles SE of Rose Hill | N 36.61416 W 83.29985 | 8 July 2018 | collected by Zenah Orndorff, | Wil Orndorff, Julian Lewis” (2) “*Lirceus zenahæ* | Paratypes 17 ♂♂♀” [inner vial with 1 dissected male] (1) [hw] “8.8mm ♂” (2) “♂: VMNH110791.1” [inner vial with 16 males] (1) “♂♂: VMNH110791.2- | VMNH110791.17” [inner vial with 4 females] (1) “♀♀: VMNH110791.18- | VMNH110791.21”.

[VMNH110792.1-VMNH110792.44; 44 ♂♀] (1) “VIRGINIA: Lee County | Bacon Cave Spring | on bank of Powell River | 5.4 miles SE Rose Hill | N36.61416 W83.29986 | 20 April 2021 | J. Lewis, Z. Orndorff, | W. Orndorff, T. Malabad” (2) “*Lirceus zenahæ* | PARATYPES | specimens: 44 ♂♀ | det. Julian J. Lewis | 27 April 2021” (3) “Virginia Museum of Natural History | ♂♀: VMNH110792.1-VMNH110792.44 | PARATYPES”.

Notes: No other types have been designated.

Status: valid.

Pseudobaicalasellus novus Lewis & Lewis, 2025

“*Pseudobaicalasellus novus* new species” Lewis et al. 2025. Jeffersoniana 31: 30. Type locality: [USA, Virginia, Wythe County] “Sinking Spring Cave No. 1” (Lewis et al. 2025: 31).

Holotype (♂): preserved in ethanol with labels: (1) “VIRGINIA: Wythe County | Sinking Spring Cave No. 1 | 4.1 miles southwest of Ivanhoe | 36.829-81.040 | June 7, 2023 | coll. Tom Malabad, | Arik Malabad” (2) “*Pseudobaicalasellus novus* | Holotype ♂” (3) “Virginia Museum of Natural History | VMNH112437 | HOLOTYPE ♂”.

Paratypes (72 ♂♀): preserved in ethanol with labels:

[VMNH112438.1-VMNH112438.20; 20 ♂♀] (1) “Virginia, Wythe Co. | Sinking Spring Cave No. 1, VIAL #1 | Coll. Tom Malabad, Arik Malabad | June 7, 2023 | 4.1 miles southwest of Ivanhoe, VA | 95% EtOH | 36.829 | -81.040 | Isopods, 20” (2) “*Pseudobaicalasellus novus* | Paratypes: 20 ♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH112438.1-VMNH112438.20 | PARATYPES”.

[VMNH112439.1-VMNH112439.21; 1 ♂, 20 ♂♀]

(1) “Virginia, Wythe Co. | Sinking Spring Cave No. 1, VIAL #2 | Coll. Tom Malabad, Arik Malabad | June 7, 2023 | 4.1 miles southwest of Ivanhoe, VA | 95% EtOH | 36.829 | -81.040 | Isopods, 21” [inner vial with 1 male] (1) [hw] “8mm ♂” (2) “♂: VMNH112439.1” [inner vial with 20 ♂♀] (1) “♂♀: VMNH112439.2- | VMNH112439.21”.

[VMNH112440.1-VMNH112440.19; 19 ♂♀] (1) “Virginia, Wythe Co. | Sinking Spring Cave No. 1, VIAL #3 | Coll. Tom Malabad, Arik Malabad | June 7, 2023 | 4.1 miles southwest of Ivanhoe, VA | 95% EtOH | 36.829 | -81.040 | Isopods, 19” (2) “*Pseudobaicalasellus novus* | Paratypes: 19♂♀” (3) “Virginia Museum of Natural History | ♂♀: VMNH112440.1-VMNH112440.19 | PARATYPES”.

[VMNH112441.1-VMNH112441.8; 2 ♂♂, 6 ♀♀] (1) “Virginia, Wythe Co. | Sinking Spring Cave No. 1 | Coll. Tom Malabad, Katarina Kosič Ficco | September 21, 2018 | 4.1 miles southwest of Ivanhoe, VA | 8 isopods | 95% EtOH | 36.829 | -81.040” (2) “*Pseudobaicalasellus incurvus* | det. Julian J. Lewis | 27 November 2019 | specimens: 2♂6♀” (3) “Virginia Museum of Natural History | ♂♂: VMNH112441.1-VMNH112441.2 | ♀♀: VMNH112441.3-VMNH112441.8 | PARATYPES”.

[VMNH112442.1-VMNH112442.4; 4 ♀♀] (1) “Virginia, Wythe Co. | Sinking Spring Cave No. 1 | Coll. Tom Malabad, Katarina Kosič Ficco | November 30, 2021 | 4.1 miles southwest of Ivanhoe, VA | 95% EtOH | 36.829 | -81.040 | Isopods, 4” (2) “*Pseudobaicalasellus cf incurvus* | det. Julian J. Lewis | 15 March 2022 | specimens: 4♀” (3) “Virginia Museum of Natural History | ♀♀: VMNH112442.1-VMNH112442.4 | PARATYPES”.

Notes: No other types have been designated.

Status: valid.

Order Decapoda

Family Cambaridae

Cambarus angularis Hobbs & Bouchard, 1994

“*Cambarus angularis*, new species” Hobbs and Bouchard 1994. *Jeffersoniana* 5: 2. Type locality:

“Caney Valley Creek, 6.1 miles (9.8 km) southeast of Tazewell, Claiborne County, Tennessee, on U. S. Highway 25E” (Hobbs and Bouchard 1994: 8).

Paratypes (1 ♂I, 1 ♂II, 1♀): preserved in isopropanol with labels:

(1) “*Cambarus (Cambarus) angularis* | Hobbs & Bouchard PARATYPES | 1 male I, 1 male II, 1 female | Tennessee: Claiborne County | Unnamed tributary to Indian Creek | at Co. Rd. 2441, 3.4 mi from Harrogate | 3 Apr 1969, R.W. Bouchard et al. | (From USNM 218524)”

(2) “VIRGINIA MUSEUM OF NATURAL HISTORY | DEPARTMENT OF RECENT INVERTEBRATES | DECAPODA: CAMBARIDAE | *Cambarus (Cambarus) angularis* | Hobbs & Bouchard, 1994 | TENNESSEE: Claiborne Co. | Unnamed tributary to Indian Creel | at Co. Rd. 2441, 3.4 mi from Harrogate | 3 April 1969, R.W. Bouchard et al. | (From USNM 218524) | PARATYPES (1 ♂I, 1 ♂II, 1♀)” (3) [hw] “VMNH CRUST 26” (4) “Virginia Museum of Natural History | ♂ Form I: VMNH24364.1 | ♂ Form II: VMNH24364.2 | ♀: VMNH24364.3”.

Notes: The type series also includes the male holotype (form II) and female allotype (Caney Valley Creek, 6.1 miles (9.8 km) southeast of Tazewell, Claiborne County, Tennessee, on U. S. Highway 25E, 15 Apr 1951, WRW, HHH) deposited at USNM and 287 additional paratypes (varying localities and dates in Tennessee and Virginia) deposited at ANSP and USNM. The catalog number VMNH CRUST 26 refers to an old numbering system that has been replaced.

Status: valid.

Subphylum Hexapoda

Class Insecta

Order Plecoptera

Family Perlidae

Acroneuria kosztarabi Kondratieff & Kirchner, 1993

“*Acroneuria kosztarabi*, new species” Kondratieff and Kirchner 1993. *Journal of the New York Entomological Society* 101(4): 550. Type locality: “Virginia: Tazewell County, Burkes Garden” (Kondratieff and Kirchner 1993: 551).

Paratype (1 ♀): preserved in isopropanol with labels:

(1) [p] “Coll: V.M. Dalton I.D.: C.E. Willams | VA Tazewell Co.,Burkes Garden, Flatwoods | Site” [hw] “2” [p] “Date” [hw] “7/6/87” [p] “Time” [hw] “01-30” | [p] “Order:” [hw] “PLECOPTERA” | [p] “Comments on reverse side? Yes” [yes is circled in pencil] [p] “No” (1; reverse side) [hw] “PLECOPTERA | ACRONEURIA” (2) [hw] “Acroneuria kosztarabi | PARATYPE ♀” | [p] “DET” [hw] “Kondratieff” [p] “19” [hw] “92 | KIRCHNER” (3) “VMNH110667”.

Notes: The type series also includes the male holotype and female allotype (Virginia, Tazewell County, Burkes Garden, UV, 17 August 1987, V. M. Dalton) deposited at USNM, and two female paratypes deposited at CSUIC and USNM.

Status: valid.

Acroneuria yuchi Stark & Kondratieff, 2004

“*Acroneuria yuchi*, new species” Stark and Kondratieff 2004. *Jeffersoniana* 13: 3. Type locality: “Virginia: Lee Co., The Cedars Natural Areas Preserve, ca. 4 miles W Jonesville, Dry Creek barrens” (Stark and Kondratieff 2004: 3).

Holotype (♂): preserved in isopropanol with labels:

(1) [hw] “Virginia: Lee Co., Cedars | Nap [Natural Area Preserve], ca. 4mi W Jonesville | Dry Creek barrens, uv | 22 June 2000, C.S. Hobson” (2) [p] “HOLOTYPE” [hw] “♂ | *Acroneuria yuchi*” | [p] “Dsg. B. Stark” (3) “VMNH110668”.

Notes: The type series also includes four male and two female paratypes (same data as for holotype) deposited at CSUIC and USNM.

Status: valid.

Perlesta puttmanni Kondratieff & Kirchner, 2003

“*Perlesta puttmanni*, new species” Kondratieff and Kirchner 2003. *Proceedings of the Entomological Society of Washington* 105(4): 936. Type locality: “VIRGINIA: Hanover Co, South Anna River, Co. Rte. 657, 375.4’47”N 775.9’35”W” (Kondratieff and Kirchner 2003: 936).

Notes: According to the species description, paratypes of this species were deposited at

VMNH, however, these could not be located and their whereabouts are currently unknown. A check with the C.P. Gillette Museum of Arthropod Diversity failed to locate the types among their holdings (C. Harp, personal communication, 2025).

Status: valid.

Perlesta roblei Kondratieff & Kirchner, 2003

“*Perlesta roblei*, new species” Kondratieff and Kirchner 2003. *Proceedings of the Entomological Society of Washington* 105(4): 933. Type locality: “VIRGINIA: Middlesex Co., Dragon Run, County Rte. 603, East Mascot, 370.9’38”N 7646.1’41”W” (Kondratieff and Kirchner 2003: 935).

Notes: According to the species description, paratypes of this species were deposited at VMNH, however, these could not be located and their whereabouts are currently unknown. A check with the C.P. Gillette Museum of Arthropod Diversity failed to locate the types among their holdings (C. Harp, personal communication, 2025).

Status: valid.

Order Hemiptera

Family Miridae

Neolygus crataegi Henry, 2007

“*Neolygus crataegi*, new species” Henry 2007. *Jeffersoniana* 17: 2. Type locality: “USA: Virginia, Smyth County, Appalachian Trail, Elk Garden, near Mt. Rogers” (Henry 2007: 8).

Paratypes (2 ♂♂, 1 ♀): pointed with labels:

[VMNH110645; ♂] (1) “USA: VA: Smyth Co. | Appalachian Trail, Elk | Garden, nr Mt. Rogers | 16 June 1988, TJ Henry” (2) “Taken on | Crataegus | sp.” (3) on blue paper “PARATYPE: ♂ | *Neolygus crataegi* | Henry” (4) “VMNH110645”.

[VMNH110646; ♀] (1) “USA: VA: Grayson Co. | Whitetop Mtn., 17 June | 1988, TJ Henry coll.” (2) “Taken on | Crataegus | sp.” (3) on blue paper “PARATYPE: ♀ | *Neolygus crataegi* | Henry” (4) “VMNH110646”.

[VMNH110647; ♂] (1) “VA:GraysonCo;DF | site off FS 89,White- | top Mtn. 5000 ft.” (2)

“beechwoods, | 11-25 June 1993 | VMNH survey” (3) on blue paper “PARATYPE: ♂ | *Neolygus* | *crataegi* | Henry” (4) “VMNH110647”.

Notes: The type series also includes the male holotype (USA, Virginia, Smyth County, Appalachian Trail, Elk Garden, near Mt. Rogers, 16 June 1988, T. J. Henry, taken on flowers of *Crataegus* sp.) and 26 additional paratypes (varying localities and dates) deposited at USNM.

Status: valid.

Phytocoris hoffmani Henry, 2009

“*Phytocoris hoffmani*, new species” Henry 2009. Virginia Museum of Natural History Special Publication 16: 287. Type locality: “USA: Virginia, Highland Co., Laurel Fork area, Slabcamp Run” (Henry 2009: 291).

Holotype (1 ♂): pointed with labels:

(1) [hw] “VA: Highland Co | Laurel Fork R.A. [Recreation Area] | Slabcamp Run” (2) [hw] “redspruce for. | 15 June 2002 | [p] Steven M. Roble” (3) on red paper “HOLOTYPE: ♂ | *Phytocoris* | *hoffmani* | Henry” (4) “VMNH110648”.

Notes: The type series also includes a male paratype (same data as for holotype) deposited at USNM.

Status: valid.

**Pycnoderiella virginiana* Henry, 1993

“*Pycnoderiella virginiana*, new species” Henry 1993. Jeffersoniana 2: 6. Type locality: “USA: Virginia, Virginia Beach, Seashore State Park [now First Landing State Park]” (Henry 1993: 7).

Holotype (♂): pointed with labels:

(1) “USA: Virginia, Virginia | Beach, Seashore State | Park, Dune Drift-fence | site, 5 July 1989 | K. A. Buhlmann [Buhlmann] coll.” (2) “Taken in | Drift-fence | Pitfall Trap | (VIRGINIA HERITAGE | PROGRAM SURVEY)” (3) on red paper with black frame [p] “HOLOTYPE” [hw] “♂ | *Pycnoderiella* | *virginiana* | Henry” (4) “VMNH110635”.

Paratypes (8 ♂♂, 1 ♀): pointed with labels:

[VMNH110636-VMNH110640; 5 ♂♂] (1) “USA: Virginia, Virginia | Beach, Seashore State | Park, Dune Drift-fence | site, 18 August 1989

| K. A. Buhlmann coll.” (2) “Taken in | Drift-fence | Pitfall Trap | (VIRGINIA HERITAGE | PROGRAM SURVEY)” (3) on blue paper with black frame [p] “PARATYPE” [hw] “♂ | *Pycnoderiella* | *virginiana* | Henry” (4) “VMNH110636”; same data as previous, “VMNH110637”, “VMNH110638”, “VMNH110639”, “VMNH110640”.

[VMNH110641; ♀] (1) “USA: Virginia, Virginia | Beach, Seashore State | Park, Dune Drift-fence | site, 18 August 1989 | K. A. Buhlmann coll.” (2) “Taken in | Drift-fence | Pitfall Trap | (VIRGINIA HERITAGE | PROGRAM SURVEY)” (3) on blue paper with black frame [p] “PARATYPE” [hw] “♀ | *Pycnoderiella* | *virginiana* | Henry” (4) “VMNH110641”.

[VMNH110642; ♂] “USA: Virginia, Virginia | Beach, Seashore State | Park, Dune Drift-fence | site, 4 January 1990 | K. A. Buhlmann coll.” (2) “Taken in | Drift-fence | Pitfall Trap | (VIRGINIA HERITAGE | PROGRAM SURVEY)” (3) on blue paper with black frame [p] “PARATYPE” [hw] “♂ | *Pycnoderiella* | *virginiana* | Henry” (4) “VMNH110642”.

[VMNH110643; ♂] (1) “USA: Virginia, Virginia | Beach, Seashore State | Park, Mesic Drift-fence | site, 5 February 1990 | K. A. Buhlmann coll.” (2) “Taken in | Drift-fence | Pitfall Trap | (VIRGINIA HERITAGE | PROGRAM SURVEY)” (3) on blue paper with black frame [p] “PARATYPE” [hw] “♂ | *Pycnoderiella* | *virginiana* | Henry” (4) “VMNH110643”.

[VMNH110644; ♂] (1) “USA: Virginia, Virginia | Beach, Seashore State | Park, Dune Drift-fence | site, 9 April 1990 | K. A. Buhlmann coll.” (2) “Taken in | Drift-fence | Pitfall Trap | (VIRGINIA HERITAGE | PROGRAM SURVEY)” (3) on blue paper with black frame [p] “PARATYPE” [hw] “♂ | *Pycnoderiella* | *virginiana* | Henry” (4) “VMNH110644”.

Notes: The type series also includes five male and two female paratypes (same locality as for holotype, different dates) deposited at AMNH and USNM.

Status: valid.

Order Hymenoptera
Family Formicidae

Temnothorax caryaluteus Prebus, Nguyen,
Doering & Booher, 2024

“*Temnothorax caryaluteus* sp. nov.” Prebus et al. 2024. European Journal of Taxonomy 970: 181. Type locality: “USA- Kentucky, Whitley County, Williamsburg; 36.739° N, 84.168° W” (Prebus et al. 2024: 181).

Paratypes (2 ♀♀): types not yet delivered to VMNH.

Notes: The type series also includes a worker holotype (USA, Kentucky, Whitley County, Williamsburg; 36.739°N, 84.168°W; 320 m a.s.l.; 27 July 2015, M. Deyrup, #ANTC43885, in fallen branch of *Carya illinoensis*) deposited at USNM and 30 additional paratypes (1 ♀ and 29 ♀♀; varying localities and dates) deposited at ABS, ASUHC, CAS, MCZ, MEM, UGCA, and UTIC.

Status: valid.

Order Coleoptera
Family Carabidae

Anillinus arenicollis Harden & Caterino, 2024

“*Anillinus arenicollis*, new species” Harden and Caterino 2024a. Insecta Mundi 1057: 18. Type locality: “USA: SOUTH CAROLINA, Chesterfield Co. Carolina Sandhills NWR. 34.56758, -80.21175” (Harden and Caterino 2024a: 18).

Paratypes (3 ♂♂, 1 ♀): pointed with labels:

[VMNH112363; ♂] (1) “USA: SOUTH CAROLINA, | Chesterfield Co. Carolina | Sandhills NWR. 34.56758 | -80.21175. 13.iv-30.vi.2021. | CW Harden. Buried pipe trap. | Coarse sand. SAND-02” (2) “CLEMSON-ENT | [QR code] | CUAC000169328” (3) on yellow paper [p] “PARATYPE | *Anillinus* | *arenicollis*” | [hw] “♂” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112363” [hw] “♂”.

[VMNH112364; ♂] (1) “USA: SOUTH CAROLINA, | Chesterfield Co. Carolina | Sandhills NWR. 34.56758 | -80.21175. 13.iv-30.vi.2021. | CW Harden. Buried pipe trap. | Coarse sand. SAND-02” (2) “CLEMSON-ENT

| [QR code] | CUAC000169329” (3) on yellow paper [p] “PARATYPE | *Anillinus* | *arenicollis*” | [hw] “♂” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112364” [hw] “♂”.

[VMNH112365; ♀] (1) “USA: SOUTH CAROLINA, | Chesterfield Co. Carolina | Sandhills NWR. 34.56722 | -80.21139. 13.iv-30.vi.2021. | CW Harden. Buried pipe trap. | Dry clay soil. SAND-06” (2) “CLEMSON-ENT | [QR code] | CUAC000169332” (3) on yellow paper [p] “PARATYPE | *Anillinus* | *arenicollis*” | [hw] “♀” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112365” [hw] “♀”

[VMNH112366; ♂] (1) “USA: SOUTH CAROLINA, | Chesterfield Co. Carolina | Sandhills NWR. 34.56722 | -80.21139. 30.vi-15.xii.2021. | CW Harden & LM Thompson | Buried pipe trap. Dry clay | soil. SAND-08-1215” (2) “CLEMSON-ENT | [QR code] | CUAC000167146” (3) on yellow paper [p] “PARATYPE | *Anillinus* | *arenicollis*” | [hw] “♂” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112366” [hw] “♂”.

Notes: The type series also includes the male holotype (USA, South Carolina, Chesterfield County, Carolina Sandhills NWR. 34.56758, -80.21175. 30 June – 15 December 2021, C.W. Harden & L. M. Thompson, buried pipe trap, coarse sand, SAND-02-1215) deposited at USNM as well as 35 additional paratypes (varying localities and dates) deposited at ADC, CMNH, CUAC, LSAM, and NCSU.

Status: valid.

Anillinus dentatus Harden & Caterino, 2024

“*Anillinus dentatus*, sp.nov.” Harden and Caterino 2024b. ZooKeys 1209: 124. Type locality: “USA: SC, Abbeville Co. Sumter NF Long Cane Crk at end of FS rd 530. 34.1133, -82.3300” (Harden and Caterino 2024b: 124).

Paratypes (1 ♂, 1 ♀): pointed with labels:

[VMNH112398; ♂] (1) “USA: SC, Abbeville Co. | Sumter N.F. Long Cane Creek | area. 34.1370, -82.3226. | 5.May.2023. CW Harden. | under

small rocks in ditch” (2) on yellow paper [p] “PARATYPE | *Anillinus* | *dentatus*” | [hw] “♂” | [p] Harden & Caterino” (3) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112398” [hw] “♂”.

[VMNH112399; ♀] (1) “USA: SC, Abbeville Co. | Sumter N.F. Long Cane Creek | area. 34.1370, -82.3226. | 5.May.2023. CW Harden. | under small rocks in ditch” (2) on yellow paper [p] “PARATYPE | *Anillinus* | *dentatus*” | [hw] “♀” | [p] Harden & Caterino” (3) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112399” [hw] “♀”.

Notes: The type series also includes the male holotype (USA, South Carolina, Abbeville County, Sumter National Forest, Long Cane Creek, at end of FS Road 530, 34.1133, -82.3300, 5 February 2022, C. W. Harden & K. Ivanov, beneath embedded mossy rock in waterlogged soil) deposited at USNM and 19 additional paratypes (varying localities and dates) deposited at CMNH, CUAC, NCSU, and OSAC.

Status: valid.

Anillinus pittsylvanicus Harden & Caterino, 2024

“*Anillinus pittsylvanicus*, new species” Harden and Caterino 2024a. *Insecta Mundi*, 1057: 22. Type locality: “VIRGINIA, City of Danville. Anglers Park. N36.56519, W79.35644” (Harden and Caterino 2024a: 22).

Paratypes (8 ♂♂, 16 ♀♀): pointed with labels:

[VMNH112367-VMNH112368; 2 ♂♂] (1) “VIRGINIA, City of Danville. | Anglers Park. N36.56519, | W79.35644. 13April – 5August - | 2018. C.W. Harden. Buried | baited pipe trap. Dry oak-hickory | woods. DAN-BUR-01” (2) on yellow paper [p] “PARATYPE | *Anillinus* | *pittsylvanicus*” | [hw] “♂” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112367” [hw] “♂”; same data as previous, “VMNH112368”.

[VMNH123669-VMNH112372; 4 ♀♀] (1) “VIRGINIA, City of Danville. | Anglers Park. N36.56519, | W79.35644. 13April – 5August - | 2018. C.W. Harden. Buried | baited pipe trap. Dry oak-hickory | woods. DAN-BUR-01” (2)

[hw] “♀” | [p] “det. C.W. Harden 2018” (3) on yellow paper [p] “PARATYPE | *Anillinus* | *pittsylvanicus*” | [hw] “♀” | [p] Harden & Caterino” (5) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112369” [hw] “♀”; same data as previous, “VMNH112370”, “VMNH112371”, “VMNH112372”.

[VMNH112373; ♂] (1) “USA: VIRGINIA, Pittsylvania Co. | Danville. Angler’s Park. | N36.5640 W-79.3506 | 24-December-2017. C.W. Harden | Under small embedded quartz, in | middle of logging road. Clay soil, | b/w clearcut and young forest.” (2) on yellow paper [p] “PARATYPE | *Anillinus* | *pittsylvanicus*” | [hw] “♂” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112373” [hw] “♂”.

[VMNH112374; ♂, dissected] (1) “VIRGINIA, City of Danville. | Anglers Park. N36.56519 | W79.35644. 13April – 5August - | 2018. C.W. Harden. Buried | baited pipe trap. Dry oak-hickory | woods. DAN-BUR-02” (2) [hw] “*Anillinus* | *elongatus* ♂” | [p] “Det. C.W. Harden 2019” (3) on yellow paper [p] “PARATYPE | *Anillinus* | *pittsylvanicus*” | [hw] “♂” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112374” [hw] “♂”.

[VMNH112375-VMNH112378; 4 ♀♀] (1) “VIRGINIA, City of Danville. | Anglers Park. N36.56519 | W79.35644. 13April – 5August - | 2018. C.W. Harden. Buried | baited pipe trap. Dry oak-hickory | woods. DAN-BUR-02” (2) on yellow paper [p] “PARATYPE | *Anillinus* | *pittsylvanicus*” | [hw] “♀” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112375” [hw] “♀”; same data as previous, “VMNH112376”, “VMNH112377”, “VMNH112378”.

[VMNH112379; ♀] (1) “VIRGINIA, City of Danville. | Anglers Park. N36.56519 | W79.35644. 13April – 5August - | 2018. C.W. Harden. Buried | baited pipe trap. Dry oak-hickory | woods. DAN-BUR-03” (2) [hw] “*Anillinus* | *elongatus* ♀” | [p] “Det. C.W. Harden 2019” (3) on yellow paper [p] “PARATYPE | *Anillinus* | *pittsylvanicus*” | [hw]

“♀” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112379” [hw] “♀”.

[VMNH112380-VMNH112383; 4 ♂♂] (1) “VIRGINIA, City of Danville. | Anglers Park. Dry oak woods. | N36.56438 W79.35689. 145m | 5 August-23.November.2018. | C.W. Harden & K. Ivanov. Buried | PVC trap. DAN-01-1123” (2) “♂” (3) on yellow paper [p] “PARATYPE | *Anillinus* | *pittsylvanicus*” | [hw] “♂” | [p] Harden & Caterino” (4) [p] “SEM: hind leg | Jan. 2023” (5) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112380” [hw] “♂”; same data as previous, “VMNH112381”, “VMNH112382”, “VMNH112383”.

[VMNH112384-VMNH112390; 7 ♀♀] (1) “VIRGINIA, City of Danville. | Anglers Park. Dry oak woods. | N36.56438 W79.35689. 145m | 5 August-23.November.2018. | C.W. Harden & K. Ivanov. Buried | PVC trap. DAN-01-1123” (2) “♀” (3) on yellow paper [p] “PARATYPE | *Anillinus* | *pittsylvanicus*” | [hw] “♀” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112384” [hw] “♀”; same data as previous, “VMNH112385”, “VMNH112386”, “VMNH112387”, “VMNH112388”, “VMNH112389”, “VMNH112390”.

Notes: The type series also includes the male holotype (Virginia, City of Danville. Anglers Park, 36.56519, -79.35644, 13 April - 5 August 2018, C.W. Harden, buried baited pipe trap, dry oak-hickory woods. DAN-BUR-01) deposited at USNM and three additional paratypes (varying localities and dates) deposited at CUAC.

Status: valid.

Anillinus seneca Harden & Caterino, 2024

“*Anillinus seneca*, sp. nov.” Harden and Caterino 2024b. ZooKeys 1209: 157. Type locality: “USA: SOUTH CAROLINA, Oconee Co. Lake Hartwell. Martins Creek Landing, SW of Clemson. 34.6389, -82.8656” (Harden and Caterino 2024b: 157-158).

Paratypes (2 ♂♂, 1 ♀): pointed with labels:

[VMNH112400-VMNH112401; 2 ♂♂] (1) “USA: SC, Oconee Co. | Martin Creek Landing. | 34.6390, -82.8638. | 22.October.2021. | CW

Harden. under rock.” (2) on yellow paper [p] “PARATYPE | *Anillinus*” | [hw] “seneca | ♂” | [p] Harden & Caterino” (3) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112400” [hw] “♂”; same data as previous, “VMNH112401”.

[VMNH112402; ♀] (1) “USA: SC, Oconee Co. | Martin Creek Landing. | 34.6390, -82.8638. | 22.October.2021. | CW Harden. under rock.” (2) on yellow paper [p] “PARATYPE | *Anillinus*” | [hw] “seneca | ♀” | [p] Harden & Caterino” (3) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112402” [hw] “♀”.

Notes: The type series also includes the male holotype (USA, South Carolina, Oconee County, Lake Hartwell, Martins Creek Landing, SW of Clemson, 34.6389 -82.8656, 11 January 2020, C.W. Harden, under embedded rocks in oak-hickory woods near lake) deposited at USNM and 24 additional paratypes (varying localities and dates) deposited at CMNH, CUAC, LSAM, and USNM.

Status: valid.

Anillinus simplex Harden & Caterino, 2024

“*Anillinus simplex*, sp. nov.” Harden and Caterino 2024b. ZooKeys 1209: 145. Type locality: “USA: SC, York Co. Kings Mountain S.P. 35.1307, -81.3649.” (Harden and Caterino 2024b: 145).

Paratypes (2 ♂♂, 2 ♀♀): pointed with labels:

[VMNH112403; ♂] (1) “USA: SOUTH CAROLINA, | York Co. King’s Mountain SP | 35.13198, -81.36608. | 26.September.2020. | CW Harden. Berlese, deep | litter and topsoil. | oak, maple, sourwood, pine” (2) “CLEMSON-ENT | [QR code] | CUAC000170036” (3) on yellow paper [p] “PARATYPE | *Anillinus* | *simplex*” | [hw] “♂” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112403” [hw] “♂”.

[VMNH112404; ♂] (1) “USA: SOUTH CAROLINA, | York Co. King’s Mountain SP | 35.13198, -81.36608. | 26.September.2020. | CW Harden. Berlese, deep | litter and topsoil. | oak, maple, sourwood, pine” (2) “CLEMSON-ENT | [QR code] | CUAC000170042” (3) on yellow paper [p] “PARATYPE | *Anillinus* |

simplex” | [hw] “♂” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112404” [hw] “♂”.

[VMNH112405; ♀](1) “USA: SOUTH CAROLINA, York | Co. King’s Mountain State Park. | 35.13198, -81.36608. 26- | September-2020. C.W. Harden. | Berlese, deep litter and topsoil, | oak, maple, sourwood, pine” (2) “CLEMSON-ENT | [QR code] | CUAC000170048” (3) on yellow paper [p] “PARATYPE | *Anillinus simplex*” | [hw] “♀” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112405” [hw] “♀”.

[VMNH112406; ♀](1) “USA: SOUTH CAROLINA, York | Co. King’s Mountain State Park. | 35.13062, -81.36439. | 26-September-2020. C.W. | Harden. Berlese, litter near | stream, mesic hardwoods.” (2) “CLEMSON-ENT | [QR code] | CUAC000170060” (3) on yellow paper [p] “PARATYPE | *Anillinus simplex*” | [hw] “♀” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112406” [hw] “♀”.

Notes: The type series also includes the male holotype (USA, South Carolina, York County, Kings Mountain State Park, 35.1307 -81.3649, 26 September 2020, C.W. Harden, under rock near stream) deposited at USNM and 24 additional paratypes (varying localities and dates) deposited at ADC, CMNH, CNC, CUAC, FSCA, LSAM, NCSU, NHMUK, OSAC, and USNM.

Status: valid.

Anillinus uwharrie Harden & Caterino, 2024

“*Anillinus uwharrie*, new species” Harden and Caterino 2024a. *Insecta Mundi*, 1057: 23. Type locality: “USA: NC, Montgomery Co. Uwharrie NF, ~12km E of Albemarle. 35.3166, -80.0468” (Harden and Caterino 2024a: 23).

Paratypes (4 ♂♂, 3 ♀♀): pointed with labels:

[VMNH112391-VMNH112394; 4 ♂♂] (1) “USA: NC, Montgomery Co. | Uwharrie NF, ~12km E of | Albemarle. 35.3166, | -80.0468. 16.February.2023 | CW Harden. Under rock.” (2) on yellow paper [p] “PARATYPE | *Anillinus uwharrie*” | [hw] “♂” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology

Collection | PARATYPE | VMNH112391” [hw] “♂”; same data as previous, “VMNH112392”, “VMNH112393”, “VMNH112394”.

[VMNH112395-VMNH112397; 3 ♀♀] (1) “USA: NC, Montgomery Co. | Uwharrie NF, ~12km E of | Albemarle. 35.3166, | -80.0468. 16.February.2023 | CW Harden. Under rock.” (2) on yellow paper [p] “PARATYPE | *Anillinus uwharrie*” | [hw] “♀” | [p] Harden & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112395” [hw] “♀”; same data as previous, “VMNH112396”, “VMNH112397”.

Notes: The type series also includes the male holotype (same data as for paratypes) deposited at USNM and 14 additional paratypes (same data as for holotype) deposited at ADC, CMNH, CUAC, LSAM, and NCSU.

Status: valid.

Horologion hubbardi Harden & Davidson, 2024

“*Horologion hubbardi*, sp. nov.” Harden et al. 2024. *Subterranean Biology* 48: 15. Type locality: “USA: VIRGINIA, Bath Co. Williams Cave.” (Harden et al. 2024: 15).

Paratypes (2 ♂♂, 1 ♀): pointed with labels:

[VMNH112326; ♀] (1) “USA: VIRGINIA, Bath | Co. Williams Cave. | 2.August.2022. | T. Malabad, D. Hubbard | C. Harden. Active on | ground near drip pool.” (2) on white paper with green border “Harden DNA Voucher | CWH-452 | *Horologion f* | Ext. 7/August/2022” (3) on yellow paper [p] “PARATYPE” [hw] “♀” | [p] “*Horologion hubbardi* | Harden & Davidson” (4) “VMNH112326”.

[VMNH112329; ♂] (1) “USA: VIRGINIA, Bath | Co. Williams Cave. | 28.March.2023 | T. Malabad, K. Kosič | Ficco, CW Harden. | Found dead.” (2) [hw] “♂ #1” (3) on yellow paper [p] “PARATYPE” [hw] “♂” | [p] “*Horologion hubbardi* | Harden & Davidson” (4) “VMNH112329”.

[VMNH112330; ♂] (1) “USA: VIRGINIA, Bath | Co. Williams Cave. | 28.March.2023 | T. Malabad, K. Kosič | Ficco, CW Harden. | Found dead.” (2) on yellow paper [p] “PARATYPE” [hw] “♂” | [p] “*Horologion hubbardi* | Harden & Davidson” (4) “VMNH112330”.

Notes: The type series also includes the male holotype (USA, Virginia, Bath County, Williams Cave, 29 March 2023, T. Malabad, C. Harden, and K. Kosič Ficco) and a female paratype (same locality, collected 8 September 1991, D.A. Hubbard) deposited at CMNH.

Status: valid.

Nebria lacustris bellorum Kavanaugh, 1979

“*Nebria lacustris bellorum*, new subspecies” Kavanaugh 1979. Proceedings of the California Academy of Sciences 42(4): 95. Type locality: “West Prong Little Pigeon River (at Chimneys Picnic Area), Great Smoky Mountains National Park, Tennessee” (Kavanaugh 1979: 95).

Paratypes (2 ♂♂, 2 ♀♀): pointed with labels:

[VMNH110649; ♂] (1) “NC:7 mi S | Sunburst, | HaywoodCo” (2) “8 Aug1972 | Hffm/Knight [R.L. Hoffman/ L. Knight] | ± 5000 ft” (3) “HoKn” (4) on yellow paper “PARATYPE | *Nebria lacustris* | bellorum | Kavanaugh | det. D.H. Kavanaugh | 1976” (5) “VMNH110649”.

[VMNH110650; ♂] (1) “NC:7 mi S | Sunburst, | HaywoodCo” (2) “8 Aug1972 | Hffm/Knight | ± 5000 ft” (3) “HoKn” (4) on yellow paper “PARATYPE | *Nebria lacustris* | bellorum | Kavanaugh | det. D.H. Kavanaugh | 1976” (5) “VMNH110650”.

[VMNH110651; ♀] (1) “NC:n.sideBeech | Gap,7 mi. S of | Sunburst” (2) “3 June 1974 | Hffm/Knight” (3) on yellow paper “PARATYPE | *Nebria lacustris* | bellorum | Kavanaugh | det. D.H. Kavanaugh | 1976” (4) “VMNH110651”.

[VMNH110652; ♀] (1) “NC:n.sideBeech | Gap,7 mi. S of | Sunburst” (2) “3 June 1974 | Hffm/Knight” (3) “HoKn” (4) on yellow paper “PARATYPE | *Nebria lacustris* | bellorum | Kavanaugh | det. D.H. Kavanaugh | 1976” (5) “VMNH110652”.

Notes: The type series also includes the male holotype and female allotype (USA, Tennessee, Great Smoky Mountains National Park., Chimneys Picnic Area, W. Prong Little Pigeon R., 3000', 24 May 1973, D. H. Kavanaugh & H. Goulet) deposited at CAS and 272 additional paratypes (varying localities and dates) deposited at CAS, CAS-DHK, CUIC, MCZ,

UAAM, UASM, UK-TCB, USNM and UVM-RTB. VMNH's paratypes were originally part of R. L. Hoffman personal collection, transferred to VMNH in 1989.

Status: now *Nebria bellorum* (Kavanaugh et al. 2011).

Family Curculionidae

Orchestomerus eisemani Yoshitake & Anderson, 2015

“*Orchestomerus eisemani*, new species” Yoshitake and Anderson 2015. The Coleopterists Bulletin 69(4): 569. Type locality: “MA: Plymouth Co., Bridgewater, N. of Lake Nippenicket” (Yoshitake and Anderson 2015: 571).

Paratype (1 ♂): pointed with labels:

(1) “USA: VA, Wise Co. | Powell Mountain Karst Preserve | Cedar Ridge Malaise trap | ca. 1.3km E Cracker Neck Church | N36.8538533° W082.6998265° | 13-27 May 2009 | C.S. Hobson, J.F. Townsend” (2) on yellow paper with black frame “PARATYPE | *Orchestomerus* | *eisemani* n.sp. | Yoshitake & Anderson, 2015” (3) “VMNH110666”.

Notes: The type series also includes the male holotype (USA, Massachusetts, Plymouth County, Bridgewater, N. of Lake Nippenicket, 16 August 2013, emerged on 31 August-5 September 2013, C.S. Eiseman, ex. *Parthenocissus* leaf mines) deposited at CMNC and 73 additional paratypes (varying localities and dates) deposited at ASUHC, AVEC, CMNC, CNC, CWOB, KESC, LSAM, MEM, NIAES, SEMC, TAMU, and USNM.

Status: valid.

Family Eucnemidae

Dirrhagofarsus ernae Otto, Muona & McClarin, 2014

“*Dirrhagofarsus ernae*, new species” Otto et al.2014. Zootaxa 3878(2): 180. Type locality: “OH: Hamilton Co., Cincinnati, Mount Airy Forest” (Otto et al. 2014:181).

Paratypes (2 ♂♂, 3 ♀♀): pointed with labels:

[VMNH110661; ♂] (1) “VIRGINIA:City of |

Richmond, 9404 | Derbyshire Road” (2) “Apr-Aug 1995 | W.H. Mitchell” (3) on yellow paper [p] “PARATYPE: | *Dirrhagofarsus* | *ernae*” [hw] “♂” | Otto, Muona & McClarin | Det. R.L. Otto | 2013” (4) “VMNH110661”.

[VMNH110662; ♀] (1) [p] “VA: Bath Co. | Warm Springs Mtn.” | [hw] “Jct. Ridgecut Rd + | Rd to Trappers Lodge” (2) [hw] “14 June” [p] “1999” | [hw] “oldgrowth nr. clear-cut” | [p] “J. C. Ludwig” [hw] “uv” (3) on yellow paper [p] “PARATYPE: | *Dirrhagofarsus* | *ernae*” [hw] “♀” | Otto, Muona & McClarin | Det. R.L. Otto | 2013” (4) “VMNH110662”.

[VMNH110663; ♀] (1) “VA:Montgomery | CO: ca 3 km SE | Ellett, off Rt.641” (2) “Slaughterpen | Hollow, DenCrk | 10 June 2001 | J.C.Ludwig UV” (3) on yellow paper [p] “PARATYPE: | *Dirrhagofarsus* | *ernae*” [hw] “♀” | Otto, Muona & McClarin | Det. R.L. Otto | 2013” (4) “VMNH110663”.

[VMNH110664; ♂] (1) “VA:Montgomery | CO: ca 3 km SE | Ellett, off Rt.641” (2) “Slaughterpen | Hollow, DenCrk | 10 June 2001 | J.C.Ludwig UV” (3) on yellow paper [p] “PARATYPE: | *Dirrhagofarsus* | *ernae*” [hw] “♂” | Otto, Muona & McClarin | Det. R.L. Otto | 2013” (4) “VMNH110664”.

[VMNH110665; ♀] (1) “VA: Floyd Co.; | Buffalo Mtn., | 3500 feet” (2) “3500-3900’ | 20 June 2001 | S.M.Roble UV” (3) on yellow paper [p] “PARATYPE: | *Dirrhagofarsus* | *ernae*” [hw] “♀” | Otto, Muona & McClarin | Det. R.L. Otto | 2013” (4) “VMNH110665”.

Notes: The type series also includes the male holotype (USA, Ohio, Hamilton County, Cincinnati, Mount Airy Forest, 17 May 1998, E. Eaton) deposited at USNM and 63 additional paratypes (varying localities and dates) deposited at AMNH, BMNH, EEC, ERC, FMNH, FSCA, JMC, JMCC, MZH, NGC, RLOC, ROM, SMIRC, TMC, USNM, and WIRC.

Status: valid.

Family Scarabaeidae

Sparrmannia ursina Evans, 1989

“*Sparrmannia ursina* spec. nov.” Evans, 1989. Journal of the Entomological Society of Southern Africa (52)1: 27. Type Locality: “South Africa: Cape Province: Oograbies, L. Namaquald” (Evans 1989: 27).

Paratype (1 ♂): pinned with labels:

(1) “SOUTH AFRICA:Cape | Jakkalsputs | 28.42S- 16.54E 350m | 15/16-IX-1985 | AVEvans,CLBellamy” (2) on yellow paper with black border [p] “PARATYPE” | [hw] “*Sparrmannia* | *ursina*” | [p] “A.V. Evans” (3) “♂: VMNH 112452”.

Notes: The species description and specimen label erroneously list the collection coordinates as 28.42S- 16.54E; Jakkalsputs, South Africa is located at 28.64S- 17.03E. VMNH’s paratype was part of A.V. Evans private collection (AVEC) and donated to VMNH by A.V. Evans (Accession # 2025-003). The type series also includes the male holotype (South Africa, Cape Province, Oograbies, L. Namaquald., 30 August 1950, C. Koch and G. Van Son) deposited at DNMNH and 125 additional paratypes (various localities and dates) deposited at AVEC, DNMNH, NCIP, NHMUK, and NMB.

Status: valid.

Family Staphylinidae

Dasycerus virginiensis Caterino & Harden, 2024

“*Dasycerus virginiensis* sp. nov.” Caterino and Harden 2024. Insect Systematics and Diversity 8(2): 10. Type locality: “USA: VA: Montgomery Co., 37.1958°N,80.4818°W, Blacksburg, Price Park” (Caterino and Harden 2024: 10).

Holotype (♂): pointed with labels:

(1) “USA:VA:Montgomery Co. | 37.1958°N,80.4818°W | Blacksburg, Price Park | viii.18.2021, D. Hennen | mixed litter” (2) “CLEMSON-ENT | [QR code] | CUAC000176761” (3) “Caterino DNA Voucher | Ext. MSC-12447 | *Dasy_carolinensis*” (4) on orange paper “HOLOTYPE | *Dasycerus* | *virginiensis* | Caterino & Harden” (4) [p]

“VMNH|Entomology Collection|HOLOTYPE | VMNH112359” [hw] “♂”.

Paratype (3 ♂♂): pointed with labels:

[VMNH112360; ♂] (1) “USA [VA] Montgomery Co. | Blacksburg; Prices Fork | Price Park; end of Sandy Ln | 37.1991, -80.4811; 604 m” (2) “9.ii.2022; DA Hennen & | MW Hennen DAH-2022-0209-01 | Berlese, sifted litter; mixed forest | N side of Price Mtn” (3) on yellow paper “PARATYPE|*Dasycerus|virginiensis*|Caterino & Harden” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112360” [hw] “♂”.

[VMNH112361; ♂] (1) “USA VA Montgomery Co. | Blacksburg; Gateway Trail | off Meadowbrook Drive | 37.2529, -80.639; 692 m” (2) “4.xii.2021; DA Hennen | DAH-2021-1204-01 | Berlese, sifted litter | mixed hardwoods” (3) on yellow paper “PARATYPE | *Dasycerus|virginiensis* | Caterino & Harden” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112361” [hw] “♂”.

[VMNH112362; ♂] (1) “USA VA Montgomery Co. | Blacksburg | Ellet Valley Rec Area | 37.1846, -80.3751; 549 m” (2) “01.vii.2022; DA Hennen & | JC Means | maple, oak, hickory forest” (3) “Caterino DNA voucher | Ext. MSC-12556 | *Dasycerus* sp.” (4) on yellow paper “PARATYPE | *Dasycerus|virginiensis* | Caterino & Harden” (5) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112362” [hw] “♂”.

Notes: The type series also includes a male paratype (USA, Virginia, Montgomery County, Christiansburg, Midcounty Park, 37.1732, 80.411, 580 m, 6 November 2021) deposited at CUAC.

Status: valid.

Lathrobium (Abletobium) absconditum Haberski & Caterino, 2024

“*Lathrobium (Abletobium) absconditum* sp. nov.” Haberski and Caterino 2024. ZooKeys 1198: 208. Type locality: “USA: VA: Bath Co., 38.0744°N, 79.6836°W, Dry Run Gorge” (Haberski and Caterino 2024: 208).

Paratype (1 ♂): pointed with labels:

(1) “VIRGINIA, Bath Co. George | Washington

NF. Dry Run gorge, | 1.5mi NE McClung N38.07418, | W79.68387. 550m. | 28. October. 2018-24 March. 2019. | C.W. Harden. Buried PVC pipe | trap. Oak-hickory woods, | limestone gorge. DRY-01-0324” (2) “♂” (3) “CLEMSON-ENT | [QR code] | CUAC000185175” (4) on yellow paper “PARATYPE | *Lathrobium|absconditum* | Haberski & Caterino” (5) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112350” [hw] “♂”.

Notes: The type series also includes the male holotype (same data as for paratype) deposited at FMNH and two additional paratypes (same data as for holotype) deposited at CUAC and FMNH.

Status: valid.

Lathrobium (Abletobium) hardeni Haberski & Caterino, 2024

“*Lathrobium (Abletobium) hardeni* sp. nov.” Haberski and Caterino 2024. ZooKeys 1198: 214. Type locality: “USA: West Virginia, Pocahontas Co., Monongahela Nat. For. Cranberry Backcountry, past glades, 38.2101, -80.2871” (Haberski and Caterino 2024: 214).

Paratype (1 ♀): pointed with labels:

(1) “USA: WEST VIRGINIA, | Pocahontas Co. Monongahela | Nat. For. Kennison Mtn Tr, W of | Cranberry Glades, 1224m. | 38.18002, -80.27846. | 10-June-2019. C.W. Harden. | Under rock during rain” (2) “CLEMSON-ENT | [QR code] | CUAC000177176” (3) on yellow paper “PARATYPE | *Lathrobium|hardeni* | Haberski & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112351” [hw] “♀”.

Notes: The type series also includes the male holotype (USA, West Virginia, Pocahontas County, Monongahela National Forest, Cranberry Backcountry, past glades, 38.2101, -80.2871, 11 June 2019, C.W. Harden, under large rock nr. steep stream, spruce/ northern hardwoods) deposited at FMNH and three additional paratypes (varying localities and dates) deposited at CUAC and FMNH.

Status: valid.

Lathrobium (Abletobium) lapidum Haberski & Caterino, 2024

“*Lathrobium (Abletobium) lapidum* sp. nov.” Haberski and Caterino 2024. ZooKeys 1198: 219. Type locality: “USA: VA: Dickenson Co., 37.2724°N, 82.2956°W, Breaks Interstate Park, Camp Branch Trail” (Haberski and Caterino 2024: 219).

Paratype (1 ♀): pointed with labels:

(1) “USA: VA, Scott Co. | Jefferson NF. N of | Dungannon. 36.8584, | -82.4477. ~1600ft | 9.June.2022. CW Harden. | On rock face, under | root/soil mat on base of | boulder.” (2) “CLEMSON-ENT | [QR code] | CUAC000169039” (3) “Caterino DNA voucher | Ext. MSC-11165” (4) on yellow paper “PARATYPE | *Lathrobium* | *lapidum* | Haberski & Caterino” (5) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112352” [hw] “♀”.

Notes: The type series also includes the male holotype (USA, Virginia, Dickenson County, 37.2724°N, 82.2956°W, Breaks Interstate Park, Camp Branch Trail, 9 June 2022, C. Harden, under large rock in sandy soil near rock face, mesic stream hollow) deposited at FMNH.

Status: valid.

Lathrobium (Abletobium) solum Haberski & Caterino, 2024

“*Lathrobium (Abletobium) solum* sp. nov.” Haberski and Caterino 2024. ZooKeys 1198: 224. Type locality: “USA: Virginia: Botetourt Co., Jefferson NF, 0.25mi NW Blackhorse Gap parking, 37.42796N, 79.7558W, 2425ft” (Haberski and Caterino 2024: 224).

Paratypes (2 ♂♂): pointed with labels:

[VMNH112353; ♂] (1) “USA: VA: Botetourt Co. | 37.4280°N, 79.7566 °W | JeffersonNF, 0.25mi NW Blackhorse Gap parking | C.W. Harden | 24.v-19.vii.2019” (2) “Buried pipe trap, cheese | bait, gravelly soil, | deciduous wooded rocky | gully, BHG-02” (3) “CLEMSON-ENT | [QR code] | CUAC000177142” (4) on yellow paper “PARATYPE | *Lathrobium* | *solum* | Haberski & Caterino” (5) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112353” [hw]

“♂”.

[VMNH112354; ♂] (1) “USA: VA: Botetourt Co. | 37.4280°N, 79.7566 °W | JeffersonNF, 0.25mi NW Blackhorse Gap parking | C.W. Harden | 24.v-19.vii.2019” (2) “Buried pipe trap, cheese | bait, gravelly soil, | deciduous wooded rocky | gully, BHG-02” (3) “CLEMSON-ENT | [QR code] | CUAC000177140” (4) on yellow paper “PARATYPE | *Lathrobium* | *solum* | Haberski & Caterino” (5) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112354” [hw] “♂”.

Notes: The type series also includes the male holotype (same data as for paratypes) deposited at FMNH and four additional paratypes (same data as for holotype) deposited at CUAC and FMNH.

Status: valid.

Lathrobium (Abletobium) thompsonorum Haberski & Caterino, 2024

“*Lathrobium (Abletobium) thompsonorum* sp. nov.” Haberski and Caterino 2024. ZooKeys 1198: 226. Type locality: “USA: KY: Monroe Co., 36.6579°N, 85.6259°W, Hestand, Thompson Ln.” (Haberski and Caterino 2024: 226).

Paratypes (1 ♂, 1 ♀): pointed with labels:

[VMNH112356; ♂] (1) “USA: KY, Monroe Co. | Hestand. Thompson Ln. | 36.6579, -85.6259. | 22.xii.2022-19.iv.2023. | CW Harden. Buried pipe | trap. KY-05” (2) on yellow paper “PARATYPE | *Lathrobium* | *thompsonorum* | Haberski & Caterino” (3) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112356” [hw] “♂”.

[VMNH112357; ♀] (1) “USA: KY, Monroe Co. | Hestand. Thompson Ln. | 36.6579, -85.6259. | 19.April-17.June.2023. | CW Harden. Buried pipe | trap. KY-05” (2) on yellow paper “PARATYPE | *Lathrobium* | *thompsonorum* | Haberski & Caterino” (3) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112357” [hw] “♀”.

Notes: The species description erroneously lists the VMNH paratypes as deposited at CUAC. The type series also includes the male holotype (same locality data as for paratypes, collected 28

June - 3 September 2022) deposited at FMNH and ten additional paratypes (same locality data as for holotype, various dates) deposited at CUAC and FMNH.

Status: valid.

Lathrobium (Lathrobium) islae Haberski & Caterino, 2024

“*Lathrobium (Lathrobium) islae* sp. nov.” Haberski and Caterino 2024. ZooKeys 1198: 249. Type locality: “USA: NC: Caldwell Co., 36.1117°N, 81.8068°W, Grandfather Mountain, Calloway Peak” (Haberski and Caterino 2024: 249).

Paratype (1 ♂): pointed with labels:

(1) “USA: NC: Caldwell Co. | 36.1117°N, 81.8088°W | GrandfatherMtSP, 5775’ | CallowayPeak, X.06.2020 | M. Caterino, F. Etzier, | A. Haberski, sifted litter” (2) “CLEMSON-ENT | [QR code] | CUAC000177116” (3) on yellow paper “PARATYPE | *Lathrobium* | *islae* | Haberski & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112355” [hw] “♂”.

Notes: The type series also includes the male holotype (same data as for paratype) deposited at FMNH and four additional paratypes (same data as for holotype) deposited at CUAC and FMNH.

Status: valid.

Lathrobium (Lathrobium) lividum Haberski & Caterino, 2024

“*Lathrobium (Lathrobium) lividum* sp. nov.” Haberski and Caterino 2024. ZooKeys 1198: 255. Type locality: “USA: NC: Yancey Co., 35.7643°N, 82.2629°W, Mt. Mitchell SP, Mt. Mitchell, 6556” (Haberski and Caterino 2024: 255).

Paratype (1 ♂): pointed with labels:

(1) “USA: NC: Yancey Co. | 35.7643°N, 82.2633°W | Mt. Mitchell SP, Mt. Mitchell | 6589’, ix.07.2021 | M. Caterino, E. Recuero, | A. Haberski & P. Wooden” (2) “CLEMSON-ENT | [QR code] | CUAC000177172” (3) on yellow paper “PARATYPE | *Lathrobium* | *lividum* | Haberski & Caterino” (4) [p] “VMNH | Entomology Collection | PARATYPE | VMNH112358” [hw] “♂”.

Notes: The species description erroneously lists the VMNH paratype as deposited at CUAC. The type series also includes the male holotype (USA, North Carolina, Yancey County, 35.7643°N, 82.2629°W, Mt. Mitchell State Park, Mt. Mitchell, 6556’, 7 September 2021, M. Caterino & E. Recuero, sifted litter) deposited at FMNH and 39 additional paratypes (varying localities and dates) deposited at CUAC.

Status: valid.

Platydracus praetermissus Newton, 2011

“*Platydracus praetermissus*, spec. nov” Brunke et al. 2011. Canadian Journal of Arthropod Identification 12: 40. Type locality: “ARK: Wash. Co., 3 mi S Devils Den St. Park” (Brunke et al. 2011: 40).

Paratypes (8 ♂♂): pointed with labels:

[VMNH110653; ♂] (1) “VA: Virginia Beach; | Little Creek | Amphibious Base” (2) “12 May 1989 | VDNH survey | K.A. Buhlmann” (3) on yellow paper [p] “PARATYPE | *Platydracus* | *praetermissus* | A. Newton 199” [hw] “5” (4) “VMNH110653”.

[VMNH110654-VMNH110657; 4 ♂♂] (1) “VA: Virginia Beach; | Seashore State Pk, | Scrub pitfall site” (2) “21 June 1989 | VDNH survey | K.A. Buhlmann” (3) on yellow paper [p] “PARATYPE | *Platydracus* | *praetermissus* | A. Newton 199” [hw] “5” (4) “VMNH110654”; same data as previous, “VMNH110655”, “VMNH110656”, “VMNH110657”. [VMNH110658; ♂] (1) “VA: Henrico Co. | Elko Nat. Area | 1 mi W Elko” (2) “15 June 1990 | C.A. Pague” (3) on yellow paper [p] “PARATYPE | *Platydracus* | *praetermissus* | A. Newton 199” [hw] “5” (4) “VMNH110658”.

[VMNH110659-VMNH110660; 2 ♂♂] (1) “VA: Mecklenburg Co. | Elm Hill S.G.M.A. [State Game Management Area] | Df site nr Kerr Dam” (2) “5-19 June 1991 | VMNH survey” (3) on yellow paper [p] “PARATYPE | *Platydracus* | *praetermissus* | A. Newton 199” [hw] “5” (4) “VMNH110659”; same data as previous, “VMNH110660”.

Notes: The species description list five male paratypes (USA, Virginia Beach, Seashore

State Park, 36.90 -76.02, scrub pitfall site, 21 June 1989, K. A. Buhlmann, VDNH survey) as deposited at VMNH. However, a handwritten label (source unknown) in red ink states that one of these was subsequently sent to FMNH (“kept 1, same data, for FMNH”). The type series also includes the male holotype (USA, Arkansas: Washington County, 3 mi S Devils Den State Park, 28-31 May 1979, litter, S. & J. Peck, oak-hickory) deposited at FMNH and 190 additional male paratypes (varying localities and dates) deposited at AMNH, BBC, CAS, CMNH, CNC, CUIC, EIU, FMNH, FSCA, INHS, KHSC, LSAM, MCZ, MEM, PERC, RHTC, RMBC, SEMC, SIU, TAMU, UAAM, UASM, ULKY, UMIC, UMOG, UNHP, UNSM, and WIRC.

Status: valid.

Order Trichoptera
Family Hydroptilidae

Neotrichia doppelganger Keth, 2015

“*Neotrichia doppelganger* new species” Keth et al. 2015. The Caddis Press: 63. Type locality: “USA, Alabama, Marion Co., North Fork Creek at Hwy. 17” (Keth et al. 2015: 63).

Paratypes (5 ♂♂, 6 ♀♀): preserved in isopropanol with labels:

(1) on blue paper “VA: Fauquier Co. | Bull Run Mtn., Shurberg | Home, 4566 Hopewell Rd. | 38.8678°N, 77.7035°W | 26 June- 16 July 2013 | D.R. Smith, Malaise Trap” (2) on blue paper “PARATYPE | *Neotrichia* | *doppelganger* Keth” (3) “Virginia Museum of Natural History | ♂♂: VMNH112443.1-VMNH112443.5 | ♀♀: VMNH112443.6-VMNH112443.11 | PARATYPES”.

Notes: The VMNH paratypes, listed as deposited at USNM in the species description, were donated to VMNH in 2018 (VMNH Accession# 2018-036). One female paratype is missing and could not be located but the vial housing the specimens also contains a single small nematoceran Diptera. The type series also includes the male holotype (USA, Alabama, Marion County, North Fork Creek at Hwy 17, 24 June 1983, S. Harris) deposited at PSU as well as 110 additional paratypes (varying

localities and dates) deposited at CUP, INHS, PSU, and USNM.

Status: valid.

Family Limnephilidae

Pycnopsyche pani Wojtowicz & Flint, 2007

“*Pycnopsyche pani*, new species” Wojtowicz and Flint 2007. Proceedings of the 12th International Symposium on Trichoptera: 349. Type locality: “Virginia, Botetourt Co., McFalls Cr., Rt. 618 at light” (Wojtowicz and Flint 2007: 351).

Paratypes (11 ♂♂, 2 ♀♀): preserved in isopropanol with labels:

[VMNH31188.1-VMNH31188.2; 2 ♂♂] (1) “VIRGINIA: Bath Co.: Warm Spring | Mtn., Trapper’s Lodge bog, | ca 4 mi S of Hot Springs | 10 Sept 1999 S. M. Roble UV” (2) on blue paper “PARATYPE | *Pycnopsyche pani* | Wojtowicz & Flint” (3) “♂♂: VMNH31188.1- | VMNH31188.2”.

[VMNH31189; ♂] (1) “*Pycnopsyche sonso* Milne ♂ | VIRGINIA: Carroll Co.: Blue | Ridge Parkway, mile 209, nr | Pipers Gap | 15 Sept 1992 K.A.Buhlmann | and S. M. Roble UV light” (2) on blue paper “PARATYPE | *Pycnopsyche pani* | Wojtowicz & Flint” (3) “♂: VMNH31189”.

[VMNH31190.1- VMNH31190.3; 3 ♂♂] (1) “VIRGINIA: Floyd County: | Buffalo Mountain NAP [Natural Area Preserve] | Rt 758 UV trapping site | 21 Aug. 2003 R. L. Hoffman” (2) on blue paper “PARATYPE | *Pycnopsyche pani* | Wojtowicz & Flint” (3) “♂♂: VMNH31190.1- | VMNH31190.3”.

[VMNH31191; ♂] (1) “*Pycnopsyche sonso* | VIRGINIA: Giles County: Big | Stony [Stony] Creek, 3 mi NE Goldbond | 15 Sept 2004 Roble & Hoffman” (2) on blue paper “PARATYPE | *Pycnopsyche pani* | Wojtowicz & Flint” (3) “♂: VMNH31191”.

[VMNH31192; ♂] (1) “VIRGINIA: Grayson Co.: MRNRA [Mount Rogers National Recreation Area], | Wilburn Ridge, 5000 ft ASL | 1 Sept 1993 S.M.Roble and | C.S.Hobson (UV trap)” (2) [hw] “PARATYPE” (3) “♂: VMNH31192”.

[VMNH31193.1- VMNH31193.2; 2 ♂♂] (1) “*Pycnopsyche sonso* subsp. | VIRGINIA:

Patrick Co.: UV | light at Little Rockcastle | Creek, 2 mi W of Woolwine | 11 Sept 1996 R. L. Hoffman" (2) on blue paper "PARATYPE | *Pycnopsyche pani* | Wojtowicz & Flint" (3) "♂♂: VMNH31193.1- | VMNH31193.2".

[VMNH31200; ♀] (1) "Pycnopsyche sp. ♀ | VIRGINIA: Grayson County: Fox | Creek Falls, ca. 2 mi. W of | Troutdale, Va. Hy. 603 | 18 Sept. 1988 R.L.Hoffman" (2) [hw] "Pycnopsyche | sp. B. ♀" | [p] "Det. O.S. Flint 2005" (3) [hw] "PARATYPE" (3) "♀: VMNH31200".

[VMNH31599; ♀] (1) "VIRGINIA: Floyd County: | boggy site off Rt. 758, 5 miles west jct with | Blue Ridge Parkway | 23 August 2001 R. L. Hoffman UV" (2) [hw] "Pycnopsyche | n.sp.B. ♀" | [p] "Det. O.S. Flint 2005" (3) on blue paper "PARATYPE | *Pycnopsyche pani* | Wojtowicz & Flint" (3) "♀: VMNH31599".

[VMNH110681; ♂] (1) "VIRGINIA: Patrick Co.: Little | Rock Castle Creek, end of Rt | 605, 2 mi W of Woolwine | 31 August 2002 R.L.Hoffman UV" (2) on blue paper "PARATYPE | *Pycnopsyche pani* | Wojtowicz & Flint" (3) "♂: VMNH110681".

Notes: Wojtowicz and Flint (2011) list two additional male and two female paratypes (1♂, 2♀♀: Virginia, Carroll Co., Stewart's Creek Wildlife Management Area, Rt.796, W Lambsburg, 16 September 2006, R.L. Hoffman; and 1♂: Virginia, Patrick County, Rye Cove Creek, Rt. 615, 2.3 mi above Rt. 631, 4 mi W Stuart, 10 September 2006, R.L. Hoffman) deposited at VMNH. These specimens are missing and could not be located. The type series also includes the male holotype (USA, Virginia, Botetourt County, McFalls Cr., Rt. 618 at light, 19 September 1963, A. B. Gurney) deposited at USNM and 140 additional paratypes (varying localities and dates) deposited at CUAC, INHS, JAWC, JSWC, MCZ, PSU, ROM, SNPC, USNM, UTC-UTCI, and VPI&SU.

Status: valid.

Order Siphonaptera
Family Ceratophyllidae

Jellisonia eckerlini Hastriter, 2004

"*Jellisonia eckerlini*, new species" Hastriter 2004. *Annals of Carnegie Museum* 73(4): 222. Type locality: "Costa Rica. Cartago: '13 km from end of road at crater', Mount Irazu (~9°58'N 83°51'W), 2590 m" (Hastriter 2004: 222).

Paratypes (2 ♂♂, 2 ♀♀): slide mounted with labels:

[VMNH112455; ♂] (1) [p] "PARATYPE" [hw] "♂" | [p] "*Jellisonia* | (*Jellisonia*) | *eckerlini* | MW Hastriter" (2) "M-Pnud6-99 | *Peromyscus mexicanus* | 13 km S Empalme, | 2439 m, San Jose Prov., | Costa Rica | 5 January 1999 | R.P. Eckerlin" (3) "PARATYPE | VMNH112455".

[VMNH112456; ♀] (1) [p] "PARATYPE" [hw] "♀" | [p] "*Jellisonia* | (*Jellisonia*) | *eckerlini* | MW Hastriter" (2) [hw] "M-Pnud5-99" | [p] "ex: peromyscus" | [hw] "mexicanus nudipes" | [p] "loc:" [hw] "Costa Rica | san Jose Prov. | 13km S. Empalme" [p] "elev." [hw] "8000'" | [p] "coll: | date:" [hw] "5 Jan. 1999 | R. Eckerlin" (3) "PARATYPE | VMNH112456".

[VMNH112457; ♀] (1) [p] "PARATYPE" [hw] "♀" | [p] "*Jellisonia* | (*Jellisonia*) | *eckerlini* | MW Hastriter" (2) "M-R2-86 | *Reithrodontomys* sp. ♂ | 14 km SE Empalme, | 2500s m, San Jose Prov., | Costa Rica | 23 March 1986 | R.P. Eckerlin" (3) "PARATYPE | VMNH112457".

[VMNH112458; ♂] (1) [p] "PARATYPE" [hw] "♂" | [p] "*Jellisonia* | (*Jellisonia*) | *eckerlini* | MW Hastriter" (2) "M-Pnud2-99 | *Peromyscus mexicanus* | Cerro de la Muerte, | 3354 m, San Jose Prov., | Costa Rica | 4 January 1999 | R.P. Eckerlin" (3) "PARATYPE | VMNH112458".

Notes: The type series also includes the male holotype and female allotype (Costa Rica. Cartago: "13 km from end of road at crater," Mount Irazu (~9°58'N 83°51'W), 2590 m, ex *Peromyscus* sp., 26 July 1962, J.T. Creighton) deposited at CMNH as well as 28 additional paratypes (varying localities and dates) deposited at CMNH, MWHC, RELC, and USNM. VMNH's paratypes are part of the R.P. Eckerlin collection donated to VMNH in 2024

(Accession # 2024-030).

Status: valid.

Jellisonia painteri Hastriter & Eckerlin, 2003

“*Jellisonia painteri*, new species” Hastriter and Eckerlin 2003. Annals of Carnegie Museum 72(4): 216. Type locality: “Guatemala. Zacapa Department: Rio Hondo, Sierra de las Minas, 6 km NNW San Lorenzo (15°08'26"N, 89°40'36"W), 2200 m” (Hastriter and Eckerlin 2003: 216).

Paratypes (4 ♂♂, 6 ♀♀): slide mounted with labels:

[VMNH112459-VMNH11262; 4 ♀♀] (1) [p] “PARATYPE” [hw] “♀” | [p] “*Jellisonia* | (*Jellisonia*) | *painteri* | Hastriter & Eckerlin” (2) “MANCA 524, 2200m | *Habromys lophurus* | Rio Hondo, Sierra de las | Minas, Zacapa Dpto., | Guatemala | 12 April 1998 | R.P. Eckerlin” (3) “PARATYPE | VMNH112459”; same data as previous, “VMNH112360”, “VMNH112361”, “VMNH112362”.

[VMNH112463; ♂] (1) [p] “PARATYPE” [hw] “♂” | [p] “*Jellisonia* | (*Jellisonia*) | *painteri* | Hastriter & Eckerlin” (2) “MANCA 532, 2200m | *Habromys lophurus* | Rio Hondo, Sierra de las | Minas, Zacapa Dpto., | Guatemala | 13 April 1998 | R.P. Eckerlin” (3) “PARATYPE | VMNH112463”.

[VMNH112464; ♂] (1) [p] “PARATYPE” [hw] “♂” | [p] “*Jellisonia* | (*Jellisonia*) | *painteri* | Hastriter & Eckerlin” (2) [p] “MANCA 543, 2200m | *Peromyscus grandis*” [hw] “♀” | [p] “Rio Hondo, Sierra de las | Minas, Zacapa Dpto., | Guatemala | 13 April 1998 | R.P. Eckerlin” (3) “PARATYPE | VMNH112464”.

[VMNH112465; ♀] (1) [p] “PARATYPE” [hw] “♀” | [p] “*Jellisonia* | (*Jellisonia*) | *painteri* | Hastriter & Eckerlin” (2) [p] “MANCA 577, 2200m | *Habromys lophurus*” [hw] “♀” | [p] “Rio Hondo, Sierra de las | Minas, Zacapa Dpto., | Guatemala | 15 April 1998 | R.P. Eckerlin” (3) “PARATYPE | VMNH112465”.

[VMNH112466; ♀] (1) [p] “PARATYPE” [hw] “♀” | [p] “*Jellisonia* | (*Jellisonia*) | *painteri* | Hastriter & Eckerlin” (2) [p] “MANCA 590, 2200m | *Habromys lophurus*” [hw] “♀” | [p] “Rio Hondo, Sierra de las | Minas, Zacapa Dpto.,

| Guatemala | 15 April 1998 | R.P. Eckerlin” (3) “PARATYPE | VMNH112466”.

[VMNH112467; ♂] (1) [p] “PARATYPE” [hw] “♂” | [p] “*Jellisonia* | (*Jellisonia*) | *painteri* | Hastriter & Eckerlin” (2) [p] “MANCA 609, 2200m | *Habromys lophurus*” [hw] “♀” | [p] “Rio Hondo, Sierra de las | Minas, Zacapa Dpto., | Guatemala | 17 April 1998 | R.P. Eckerlin” (3) “PARATYPE | VMNH112467”.

[VMNH112468; ♂] (1) [p] “PARATYPE” [hw] “♂” | [p] “*Jellisonia* | (*Jellisonia*) | *painteri* | Hastriter & Eckerlin” (2) [p] “MANCA 505, 2200m | *Peromyscus grandis*” [hw] “♂” | [p] “Rio Hondo, Sierra de las | Minas, Zacapa Dpto., | Guatemala | 11 April 1998 | R.P. Eckerlin” (3) “PARATYPE | VMNH112468”.

Notes: The type series also includes the male holotype (Guatemala. Zacapa Department: Rio Hondo, Sierra de las Minas, 6 km NNW San Lorenzo (15°08'26"N, 89°40'36"W), 2200 m, ex *Habromys lophurus*, 12 April 1998, R. P. Eckerlin) and female allotype (same data as holotype except host and date [ex *Peromyscus grandis*, 10 April 1998]) deposited at USNM as well as 16 additional paratypes (of varying localities and dates) deposited at CMNH, MWHC, and USNM. VMNH's paratypes are part of the R.P. Eckerlin collection donated to VMNH in 2024 (Accession # 2024-030).

Status: valid.

Kohlsia traubi Tipton & Mendez, 1961

“*Kohlsia traubi*, new species” Tipton and Mendez 1961. Annals of the Entomological Society of America 54(2): 269. Type locality: “[Panama, Chiriqui] at Casa Tilley below town of Cerro Punta, elevation 5,300 feet” (Tipton and Mendez 1961: 269).

Paratypes (4 ♂♂, 4 ♀♀): slide mounted with labels:

[VMNH112469; ♂] (1) [p] “PARATYPE | *Kohlsia traubi*” [hw] “♂” | [p] “Tipton & Mendez, 1961 | Det: V. J. Tipton | Date:” [hw] “July 60” (2) [p] “Coll. No.” [hw] “6195” | [p] “Ex: *Peromyscus nudipes* | Loc: Panama: Chiriqui, | Bambito-Cerro Punta” | [hw] “Casa Tilley | Ele. 5300” | [p] “Coll: Keenan & Tipton | Date:”

[hw] “3” [p] “May 1960” (3) “PARATYPE | VMNH112469”.

[VMNH112470; ♀] (1) [p] “PARATYPE | Kohlsia traubi” [hw] “♀” | [p] “Tipton & Mendez, 1961 | Det: V. J. Tipton | Date:” [hw] “July 60” (2) [p] “Coll. No.” [hw] “5799” | [p] “Ex: Peromyscus nudipes | Loc: Panama: Chiriqui, | Bambito-Cerro Punta” | [hw] “Casa Shannon” | [p] “Coll: Keenan & Tipton | Date:” [hw] “28” [p] “January 1960” (3) “PARATYPE | VMNH112470”.

[VMNH112471; ♀] (1) [p] “PARATYPE | Kohlsia traubi” [hw] “♀” | [p] “Tipton & Mendez, 1961 | Det: V. J. Tipton | Date:” [hw] “July 60” (2) [p] “Coll. No.” [hw] “5840” | [p] “Ex: Peromyscus nudipes | Loc: Panama: Chiriqui, | Bambito-Cerro Punta” | [hw] “Casa Lewis” | [p] “Coll: Keenan & Tipton | Date:” [hw] “31” [p] “January 1960” (3) “PARATYPE | VMNH112471”.

[VMNH112472; ♀] (1) [p] “PARATYPE | Kohlsia traubi” [hw] “♀” | [p] “Tipton & Mendez, 1961 | Det: V. J. Tipton | Date:” [hw] “July 60” (2) [p] “Coll. No.” [hw] “6022” | [p] “Ex: Peromyscus nudipes | Loc: Panama: Chiriqui, | Bambito-Cerro Punta” | [hw] “Finca Martinz” | [p] “Coll: Keenan & Tipton | Date:” [hw] “14 Feb” [p] “May 1960” (3) “PARATYPE | VMNH112472”.

[VMNH112473; ♀] (1) [p] “PARATYPE | Kohlsia traubi” [hw] “♀” | [p] “Tipton & Mendez, 1961 | Det: V. J. Tipton | Date:” [hw] “July 60” (2) [p] “Coll. No.” [hw] “6029” | [p] “Ex: Peromyscus nudipes | Loc: Panama: Chiriqui, | Bambito-Cerro Punta” | [hw] “Finca Martinz” | [p] “Coll: Keenan & Tipton | Date:” [hw] “14 Feb” [p] “May 1960” (3) “PARATYPE | VMNH112473”.

[VMNH112474; ♂] (1) [p] “PARATYPE | Kohlsia traubi” [hw] “♂” | [p] “Tipton & Mendez, 1961 | Det: V. J. Tipton | Date:” [hw] “July 60” (2) [p] “Coll. No.” [hw] “5872” | [p] “Ex: Peromyscus nudipes | Loc: Panama: Chiriqui, | Bambito-Cerro Punta” | [hw] “lava flow” | [p] “Coll: Keenan & Tipton | Date:” [hw] “3 Feb 60” (3) [p] “PARATYPE | VMNH112474”.

[VMNH112475; ♂] (1) [p] “PARATYPE | Kohlsia traubi” [hw] “♂” | [p] “Tipton & Mendez, 1961 | Det: V. J. Tipton | Date:” [hw] “July 60” (2) [p] “Coll. No.” [hw] “5963” | [p] “Ex: Peromyscus nudipes | Loc: Panama: Chiriqui, | Bambito-

Cerro Punta” | [hw] “lava flow” | [p] “Coll: Keenan & Tipton | Date:” [hw] “9 Feb 60” (3) [p] “PARATYPE | VMNH112475”.

[VMNH112476; ♂] (1) [p] “PARATYPE | Kohlsia traubi” [hw] “♂” | [p] “Tipton & Mendez, 1961 | Det: V. J. Tipton | Date:” [hw] “July 60” (2) [p] “Coll. No.” [hw] “6254” | [p] “Ex: Peromyscus nudipes | Loc: Panama: Chiriqui, | Bambito-Cerro Punta” | [hw] “El Hato | lava flow | Ele: 4800” | [p] “Coll: Keenan & Tipton | Date:” [hw] “5 May 60” (3) [p] “PARATYPE | VMNH112476”.

Notes: The type series also includes the male holotype and female allotype (Panama, Chiriqui, Casa Tilley below town of Cerro Punta, elevation 5,300 feet, 3 May 1960, ex *Peromyscus nudipes nudipes*, collected by C.M. Keenan and V.J. Tipton) deposited at USNM as well as 98 additional paratypes (of varying localities and dates) deposited at GML, NHMUK, RTC, USNM, and VJTC. VMNH’s paratypes are part of the R.P. Eckerlin collection donated to VMNH in 2024 (Accession # 2024-030).

Status: valid.

**Smitipsylla maseri* Lewis, 1971

“*Smitipsylla maseri*, sp. n.” Lewis 1971. The Journal of Parasitology 57(6): 1355. Type locality: “Nepal, Phulung Ghyang, Nuwakot District, 11,250 ft” (Lewis 1971: 1355).

Paratypes (1 ♂, 1 ♀): slide mounted with labels:

[VMNH112477; ♀] (1) with “PARATYPE” stamped in red across data [p] “LEWIS COLLECTION” | [hw] “8689 ♀ | SMITIPSYLLA | MASERI | LEWIS, 1971” | [hw; red ink] “3-43” | [p] “det. R. E. Lewis” (2) with “PARATYPE” stamped in red across data [p] “LEWIS COLLECTION” | [hw] “PETAURISTA | ELEGANS | NEPAL: BAGMATI, | NUWAKOT, PHULUNG” | GHYANG | 18-V-1967” | [p] “col.” [hw] “C. O. MASER (3) “PARATYPE | VMNH112477”.

[VMNH112478; ♂] (1) with “PARATYPE” stamped in red across data [p] “LEWIS COLLECTION” | [hw] “8689 ♂ | SMITIPSYLLA | MASERI | LEWIS, 1971” | [hw; red ink] “3-42” | [p] “det. R. E. Lewis” (2) with “PARATYPE” stamped

in red across data [p] “LEWIS COLLECTION” | [hw] “PETAURISTA | ELEGANS | NEPAL: BAGMATI, | NUWAKOT, PHULUNG” | GHYANG | 18-V-1967” | [p] “col.” [hw] “C. O. MASER (3) “PARATYPE | VMNH112478”.

Notes: The type series also includes the male holotype and female allotype (same data as VMNH paratypes except for elevation and date [11,250 ft and 27 May 1967]) deposited at USNM as well as 72 additional paratypes (of varying localities and dates) deposited at FMNH, NHMUK, RELC, and other collections. VMNH’s paratypes are part of the R.P. Eckerlin collection donated to VMNH in 2024 (Accession # 2024-030).

Status: valid.

Family Ctenophthalmidae

Anomiopsyllus nidiophilus Tipton & Mendez, 1968

“*Anomiopsyllus nidiophilus*, new species” Tipton and Mendez 1968. Pacific Insects 10(1): 179. Type locality: “Cerro Potosi, Nuevo Leon, Mexico, elevation 3350 m” (Tipton and Mendez 1968: 181).

Paratypes (3 ♂♂, 5 ♀♀): slide mounted with labels:

[VMNH112479; ♂] (1) [hw] “PARATYPE ♂” | [p] “*Anomiopsyllus*” | [hw] “*nidiophilus* | Tipton & Mendez” | [p] “Det: V. J. Tipton | Date:” [hw] “NOVEMBER” [p] “1965” (2) [p] “Coll No. CP” [hw] “181” | [p] “Ex: Rodent Nest | Loc: Mexico: Nuevo Leon, | Cerro Potosi | Elevation:” [hw] 11,000” | [p] “Coll: V. J. Tipton et al | Date:” [hw] “24 April” [p] “1964” (3) “PARATYPE | VMNH112479”.

[VMNH112480; ♂] (1) [hw] “PARATYPE ♂ | *Anomiopsyllus* | *nidiophilus* | Tipton & Mendez” (2) [p] “Coll No. CP” [hw] “181” | [p] “Ex: Rodent Nest | Loc: Mexico: Nuevo Leon, | Cerro Potosi | Elevation:” [hw] 11,000” | [p] “Coll: V. J. Tipton et al | Date:” [hw] “24 April” [p] “1964” (3) “PARATYPE | VMNH112480”.

[VMNH112481; ♂] (1) [hw] “PARATYPE ♂ | *Anomiopsyllus* | *nidiophilus* | Tipton & Mendez” (2) [p] “Coll No. CP” [hw] “181” | [p] “Ex: Rodent Nest | Loc: Mexico: Nuevo Leon, | Cerro Potosi | Elevation:” [hw] 11,000” | [p]

“Coll: V. J. Tipton et al | Date:” [hw] “24 April” [p] “1964” (3) “PARATYPE | VMNH112481”.

[VMNH112482; ♀] (1) [hw] “PARATYPE ♀” | [p] “*Anomiopsyllus*” | [hw] “*nidiophilus* | Tipton & Mendez” | [p] “Det: V. J. Tipton | Date:” [hw] “[paper torn; word incomplete]NE” [p] “1965” (2) [p] “Coll No. CP” [hw] “181” | [p] “Ex: Rodent Nest | Loc: Mexico: Nuevo Leon, | Cerro Potosi | Elevation:” [hw] 11,000” | [p] “Coll: V. J. Tipton et al | Date:” [hw] “24 April” [p] “1964” (3) “PARATYPE | VMNH112482”.

[VMNH112483; ♀] (1) [hw] “PARATYPE ♀” | [p] “*Anomiopsyllus*” | [hw] “*nidiophilus* | Tipton & Mendez” | [p] “Det: V. J. Tipton | Date:” [hw] “Nov” [p] “1965” (2) [p] “Coll No. CP” [hw] “181” | [p] “Ex: Rodent Nest | Loc: Mexico: Nuevo Leon, | Cerro Potosi | Elevation:” [hw] 11,000” | [p] “Coll: V. J. Tipton et al | Date:” [hw] “24 April” [p] “1964” (3) “PARATYPE | VMNH112483”.

[VMNH112484; ♀] (1) [hw] “PARATYPE ♀” | [p] “*Anomiopsyllus*” | [hw] “*nidiophilus* | Tipton & Mendez” | [p] “Det: V. J. Tipton | Date:” [hw] “June” [p] “1965” (2) [p] “Coll No. CP” [hw] “181” | [p] “Ex: Rodent Nest | Loc: Mexico: Nuevo Leon, | Cerro Potosi | Elevation:” [hw] 11,000” | [p] “Coll: V. J. Tipton et al | Date:” [hw] “24 April” [p] “1964” (3) “PARATYPE | VMNH112484”.

[VMNH112485; ♀] (1) [hw] “PARATYPE ♀” | [p] “*Anomiopsyllus*” | [hw] “*nidiophilus* | Tipton & Mendez” | [p] “Det: V. J. Tipton | Date:” [hw] “Nov” [p] “1965” (2) [p] “Coll No. CP” [hw] “181” | [p] “Ex: Rodent Nest | Loc: Mexico: Nuevo Leon, | Cerro Potosi | Elevation:” [hw] 11,000” | [p] “Coll: V. J. Tipton et al | Date:” [hw] “24 April” [p] “1964” (3) “PARATYPE | VMNH112485”.

[VMNH112486; ♀] (1) [hw] “PARATYPE ♀ | *Anomiopsyllus* | *nidiophilus* | Tipton & Mendez” (2) [p] “Coll No. CP” [hw] “181” | [p] “Ex: Rodent Nest | Loc: Mexico: Nuevo Leon, | Cerro Potosi | Elevation:” [hw] 11,000” | [p] “Coll: V. J. Tipton et al | Date:” [hw] “24 April” [p] “1964” (3) “PARATYPE | VMNH112486”.

Notes: The type series also includes the male holotype and female allotype (same data as

paratypes) deposited at USNM as well as 218 additional paratypes (of varying elevation and dates) deposited at BPBM, BYU, CNC, ENCB, GML, NHMUK, RML, RTC, and VJTC. VMNH's paratypes are part of the R.P. Eckerlin collection donated to VMNH in 2024 (Accession # 2024-030).

Status: valid.

Ctenophthalmus levanticus Lewis, 1964

"*Ctenophthalmus levanticus*, n. sp." Lewis 1964. Annals of the Entomological Society of America 57(2): 152. Type locality: "Ammik, Bekaa Valley, Republic of Lebanon, 2833 feet" (Lewis 1964: 152).

Paratypes (4 ♂♂, 4 ♀♀): slide mounted with labels:

[VMNH112487; ♂] (1) [p] "NO." [hw] "6150" [p] "SUB." | [p; red ink] "PARATYPE" | [p] "Ctenophthalmus | levanticus" [hw] "♂" | [p] "Lewis, 196 | DATE" [hw] "XI-1962" | [p] "DET. R.E.Lewis" [hw; red ink] "1-41" (2) [p] "HOST" [hw] "SPALAX | EHRENBURGI | NEST" | [p] "LOC." [hw] "AMMIK, | BEKAA VALLEY, | LEBANON" | [p] "DATE" [hw] "9-III-1962 | R.E. LEWIS" [p] "COL." (3) "PARATYPE | VMNH112487".

[VMNH112488; ♀] (1) [p] "NO." [hw] "6150" [p] "SUB." | [p; red ink] "PARATYPE" [hw] "♀" | CTENOPHTHALMUS | LEVANTICUS" | LEWIS, 1964" [hw; red ink] "1-42" | [p] DATE" [hw] "12-II-1963" | [p] "DET. R.E.Lewis" (2) [p] "HOST" [hw] "SPALAX | EHRENBURGI | NESTS" | [p] "LOC. LEBANON," | [hw] "AMMIK, BEKAA | VALLEY" | [p] "DATE" [hw] "9-III-1962 | R.E. LEWIS" [p] "COL." (3) "PARATYPE | VMNH112488".

[VMNH112489; ♀] (1) [p] "NO." [hw] "6150" [p] "SUB." | [p; red ink] "PARATYPE" [hw] "♀" | [p] "Ctenophthalmus | levanticus | Lewis, 196" [hw] "4" | [p] "DATE" [hw] "12-II-1963" | [p] "DET. R.E.Lewis" [hw; red ink] "1-43" (2) [p] "HOST" [hw] "SPALAX | EHRENBURGI | NESTS" | [p] "LOC. LEBANON," | [hw] "AMMIK, BEKAA | VALLEY" | [p] "DATE" [hw] "9-III-1962 | R.E. LEWIS" [p] "COL." (3) "PARATYPE | VMNH112489".

[VMNH112490; ♀] (1) [p] "NO." [hw] "6150" [p]

"SUB." | [p; red ink] "PARATYPE" [hw] "♀" | [p] "Ctenophthalmus | levanticus | Lewis, 196" [hw] "4" | [p] "DATE" [hw] "12-II-1963" | [p] "DET. R.E.Lewis" [hw; red ink] "1-44" (2) [p] "HOST" [hw] "SPALAX | EHRENBURGI | NESTS" | [p] "LOC. LEBANON," | [hw] "AMMIK, BEKAA | VALLEY" | [p] "DATE" [hw] "9-III-1962 | R.E. LEWIS" [p] "COL." (3) "PARATYPE | VMNH112490".

[VMNH112491; ♀] (1) [p] "NO." [hw] "6150" [p] "SUB." | [p; red ink] "PARATYPE" [hw] "♀" | CTENOPHTHALMUS | LEVANTICUS | LEWIS, 1964" | [p] "DATE" [hw] "12-II-1963" | [p] "DET. R.E.Lewis" [hw; red ink] "1-45" (2) [p] "HOST" [hw] "SPALAX | EHRENBURGI | NESTS" | [p] "LOC. LEBANON," | [hw] "AMMIK, BEKAA | VALLEY" | [p] "DATE" [hw] "9-III-1962 | R.E. LEWIS" [p] "COL." (3) "PARATYPE | VMNH112491".

[VMNH112492; ♂] (1) [p] "NO." [hw] "6152" [p] "SUB." | [p; red ink] "PARATYPE" | [p] "Ctenophthalmus | levanticus" [hw] "♂" | [p] "Lewis, 196" [hw] "4" | [p] "DATE" [hw] "X-1962" | [p] "DET. R.E.Lewis" [hw; red ink] "1-39" (2) [p] "HOST" [hw] "SPALAX | EHRENBURGI | NEST" | [p] "LOC. Dahr el Baidar | Lebanon | DATE" [hw] "24-III-1962 | R.E. LEWIS" [p] "COL." (3) "PARATYPE | VMNH112492".

[VMNH112493; ♂] (1) [p] "NO." [hw] "6152" [p] "SUB." | [p; red ink] "PARATYPE" | [p] "Ctenophthalmus | levanticus" [hw] "♂" | [p] "Lewis, 196" [hw] "4" | [hw; red ink] "1-40" | [p] "DATE" [hw] "X-1962" | [p] "DET. R.E.Lewis" (2) [p] "HOST" [hw] "SPALAX | EHRENBURGI | NEST" | [p] "LOC. Dahr el Baidar | Lebanon | DATE" [hw] "24-III-1962 | R.E. LEWIS" [p] "COL." (3) "PARATYPE | VMNH112493".

[VMNH112494; ♂] (1) [p] "NO." [hw] "6152" [p] "SUB." | [p; red ink] "PARATYPE" | [p] "Ctenophthalmus | levanticus" [hw] "♂" | [p] "Lewis, 196" [hw] "4" [p] "DATE" [hw] "X-1962" | [p] "DET. R.E.Lewis" [hw; red ink] "1-46" (2) [p] "HOST" [hw] "SPALAX | EHRENBURGI | NEST" | [p] "LOC. Dahr el Baidar | Lebanon | DATE" [hw] "24-III-1962

| R.E. LEWIS" [p] "COL." (3) "PARATYPE | VMNH112494".

Notes: The type series also includes the male holotype and female allotype (Ammik, Bekaa Valley, Republic of Lebanon, 2833 feet, nest, 9-III-1962) deposited at USNM as well as 508 additional paratypes (of varying localities and dates) deposited at CNC, FMNH, FPC, NHMUK, RML, RTC, SRAPI, and USNM. VMNH's paratypes are part of the R.P. Eckerlin collection donated to VMNH in 2024 (Accession # 2024-030).

Status: valid.

Family Hystrichopsyllidae

Palaeopsylla tauberi Lewis, 1973

"*Palaeopsylla tauberi*, sp. n." Lewis 1973. The Journal of Parasitology 59(1): 187. Type locality: "Melumche, Sindu District, Nepal (28°03' N, 85°33'), 8,100 ft" (Lewis 1973: 187).

Paratypes (2 ♂♂, 2 ♀♀): slide mounted with labels:

[VMNH112495; ♀] (1) with "PARATYPE" stamped in red across data [p] "LEWIS COLLECTION" | [hw] "9747 ♀ | PALAEOPSYLLA | TAUBERI | LEWIS, 1973" | [hw; red ink] "3-2" | [p] "det. R. E. Lewis" (2) [p] "LEWIS COLLECTION" | [hw] "SORICULUS | NIGRESCENS | NEPAL: SOLUKHUMBU | DIST., KHUMJUNG (2 | MI NE NAMCHE BAZAR) | 15 OCTOBER 1968" | [p] "col" [hw] "R.M. MITCHELL" (3) "PARATYPE | VMNH112495".

[VMNH112496; ♂] (1) with "PARATYPE" stamped in red across data [p] "LEWIS COLLECTION" | [hw] "9749 ♂ | PALAEOPSYLLA | TAUBERI | LEWIS, 1973" | [hw; red ink] "3-3" | [p] "det. R. E. Lewis" (2) [p] "LEWIS COLLECTION" | [hw] "SORICULUS | CAUDATUS | NEPAL: SOLUKHUMBU | DIST., KHUMJUNG (2 | MI NE NAMCHE BAZAR) | 15 OCTOBER 1968" | [p] "col" [hw] "R.M. MITCHELL" (3) "PARATYPE | VMNH112496".

[VMNH112497; ♂] (1) with "PARATYPE" stamped in red across data [p] "LEWIS COLLECTION" | [hw] "9753 ♂ | PALAEOPSYLLA | TAUBERI | LEWIS, 1973" | [hw; red ink] "3-4" | [p] "det.

R. E. Lewis" (2) [p] "LEWIS COLLECTION" | [hw] "SORICULUS | NIGRESCENS | NEPAL: SOLUKHUMBU | DIST., KHUMJUNG (2 | MI NE NAMCHE BAZAR) | 15 OCTOBER 1968" | [p] "col" [hw] "R.M. MITCHELL" (3) "PARATYPE | VMNH112497".

[VMNH112498; ♀] (1) with "PARATYPE" stamped in red across data [p] "LEWIS COLLECTION" | [hw] "9753 ♀ | PALAEOPSYLLA | TAUBERI | LEWIS, 1973" | [hw; red ink] "3-1" | [p] "det. R. E. Lewis" (2) [p] "LEWIS COLLECTION" | [hw] "SORICULUS | NIGRESCENS | NEPAL: SOLUKHUMBU | DIST., KHUMJUNG (2 | MI NE NAMCHE BAZAR) | 15 OCTOBER 1968" | [p] "col" [hw] "R.M. MITCHELL" (3) "PARATYPE | VMNH112498".

Notes: The type series also includes the male holotype and female allotype (Melumche, Sindu District, Nepal (28°03' N, 85°33'), 8,100 ft, from *Soriculus nigrescens*, 26 August 1968, R.M. Mitchell) deposited at USNM as well as 44 additional paratypes (of varying localities and dates) deposited at CNC, FMNH, NHMUK, RTC, RELC, and USNM. VMNH's paratypes are part of the R.P. Eckerlin collection donated to VMNH in 2024 (Accession # 2024-030).

Status: valid.

Hystrichopsylla guatemalensis Lewis & Eckerlin, 2004

"*Hystrichopsylla guatemalensis*, new species" Lewis and Eckerlin 2004. Proceedings of the Entomological Society of Washington 106(4): 757. Type locality: "Guatemala, El Progreso Department, San Agustin Acasaguastlan, Reserva Biosfera de la Sierra de las Minas, Montaña Pinalon 15°24'54" N 89°55'59"W, 2700 m" (Lewis and Eckerlin 2004: 758).

Paratypes (1 ♀): slide mounted with labels:

[VMNH112499; ♀] (1) [hw] "Hystrichopsylla ♀ | guatemalensis | Lewis & Eckerlin" | [p] "PARATYPE" (2) [p] "No." [hw] "MANCA 700" | [p] "Ex." [hw] "Sorex | veraepacis ♂" | [p] "Loc." [hw] "GUATEMALA | Dept. El Progreso | San Agustin Acasaguastlan | Sierra de las minas 2700m" | [p] "Coll." [hw] "3 May 1998 | R. Eckerlin" (3) "PARATYPE |

VMNH112499”.

Notes: The type series also includes the male holotype (Ex *Sorex veraepacis*, Guatemala, El Progreso Department, San Agustín Acasaguastlan, Reserva Biosfera de la Sierra de las Minas, Montaña Pinalon 15°24'54" N 89°55'59"W, 2700 m, 4-V-1998, R. Eckerlin), and female allotype (same host species as holotype; Guatemala, Zacapa Department, Rio Hondo, 6 km NNW of San Lorenzo, Reserva Biosfera de la Sierra de las Minas, 15°08'26" N 89°40'36"W, 2200 m, 4-VII-1996, S. G. Perez) deposited at USNM as well as 11 additional paratypes (varying localities and dates) deposited at EBUSAC, CMNH, RELC, and USNM. VMNH's paratypes are part of the R.P. Eckerlin collection donated to VMNH in 2024 (Accession # 2024-030).

Status: valid.

Family Ischnopsyllidae

Hormopsylla kyriophila Tipton & Mendez, 1966

“*Hormopsylla kyriophila*, new species” Tipton and Mendez 1966. Field Museum of Natural History: 303. Type locality: “about 25 miles northeast of Panama City (Panama), elevation sea level” (Tipton and Mendez 1966: 304).

Paratypes (1 ♂, 1 ♀): slide mounted with labels: [VMNH112500; ♀] (1) [p; red ink; very faded] “Paratype” [hw] “♀ | Hormopsylla | kyriophila | Det: V.J. Tipton | Date: June 61” (2) [hw] “Coll. No: 7563 | Ex: Tadarida | yucatanica | Loc: Panama: | Pacora, | Belfry of Church. | Colls: Keenan & Tipton | Date: 21 June 61” (3) “PARATYPE | VMNH112500”.

[VMNH112501; ♂] (1) [p; red ink; very faded] “Paratype” [hw] “♂ | Hormopsylla | kyriophila | Det: V.J. Tipton | Mar 1962” (2) [p] “Coll. No.”

[hw] “8824” | [p] “Ex:” | [hw] “Bat Guano” | [p] “Loc: Panama: Canal Zone” | [hw] Pacora, | Belfry of Church” | [p] “Coll: Keenan & Tipton | Date:” [hw] 12 Jan” [p] “196” [hw] “2” (3) “PARATYPE | VMNH112501”.

Notes: The type series also includes the male holotype (*Tadarida yucatanica*, collected under roof tile on belfry of church at Pacora, about 25 miles northeast of Panama City (Panama), elevation sea level, 21 June 1961, collected by C. M. Keenan and V. J. Tipton) and female allotype (same data as holotype, except 20 June 1961, deposited at USNM, as well as 29 additional paratypes (varying localities and dates) deposited at FMNH, GML, NHMUK, RTC, and VJTC. VMNH's paratypes are part of the R.P. Eckerlin collection donated to VMNH in 2024 (Accession # 2024-030).

Status: valid.

ACKNOWLEDGMENTS

We thank Chuck Harp and Marek Borowiec (C.P. Gillette Museum of Arthropod Diversity) for providing information regarding the types of *Perlesta puttmanni* and *P. roblei*, Jeffrey Shultz (University of Maryland, College Park) for providing information regarding the *Leiobunum* types, and Janet Reid (Research Associate, VMNH) and Judith Winston (Research Associate, USNM) for sharing their knowledge regarding the Copepoda and Bryozoa types at VMNH. We also thank VMNH Registrar Jill Harris for access to the museum's archives and for providing information on the early history of VMNH's invertebrate collection. Steven M. Roble (Natural Heritage Program, Virginia Department of Conservation and Recreation) and Marc Milne (University of Indianapolis) provided valuable comments that improved the manuscript.

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