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Jumping bristletail (Insecta: Apterygota: Microcoryphia) records in the southeastern United States

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Abstract. Few records of Microcoryphia exist for the southeastern United States, with named species being reported only from Arkansas, Tennessee, and the mid-Atlantic states, and with an unnamed species being reported from Georgia. Records are here provided from 291 specimens housed in the Mississippi Entomological Museum, including ten new species-level state records. This is also the first published report of the order Microcoryphia from Alabama and Mississippi. Species include the machilids *Pedetontoides atlanticus* Mendes in Alabama, Arkansas, Georgia, Mississippi, and North Carolina; *Pedetontus* cf. *atlanticus* in Kentucky; *Pedetontus* (*Verhoeffilis*) *gershneri* Allen in Arkansas; and *Pedetontus* (*Pedetontus*) *saltator* Wygodzinsky and Schmidt in Mississippi and North Carolina; and the meinertellid *Machiloides banksi* (Silvestri) in Alabama, Arkansas, Mississippi, and North Carolina.

Key words. Archaeognatha, Machilidae, Meinertellidae, distribution.

Introduction

The Microcoryphia (=Archaeognatha, or jumping bristletails) are a small order of apterygote insects with monocondylic mandibles (Ferguson 1990). There are about 500 species worldwide (Mendes 1990). Microcoryphia as distinguished from the Thysanura, another apterygote order, by being more rounded instead of being dorsoventrally flattened, by the large contiguous compound eyes instead of small, widely separated compound eyes in the Thysanura, and by the ability to jump, among other characters (Ferguson 1990). The North American fauna includes 30 named species distributed between the primarily tropical Meinertellidae, with eight species, and the widespread Machilidae, which is now considered paraphyletic (Ma et al. 2015). Two of the three currently recognized subfamilies of Machilidae occur in North America, including the Machilinae with six species and the Petrobiinae with 16 species (Table 1).

Most of the diversity of the Nearctic fauna is concentrated in the western half of the continent, with only seven species reported from the eastern half, and it is likely that additional species will be discovered and named in North America (Bowser 2019a). The two families of Microcoryphia are easily distinguished from each other by two characters. The abdominal urosternites are poorly developed and extending posteriorly less than 0.2× the length of the corresponding coxites in Meinertellidae, versus well developed and extending up to 0.7× the length of the corresponding coxites in Machilidae. The antennal scapes have at least some scales in Machilidae but lack scales entirely in the Meinertellidae (Ferguson 1990).

Wygodzinsky and Schmidt (1980) reviewed four species of Microcoryphia in the northeastern United States and adjacent areas of Canada, noting that the distributions of some of those species extend into the southeastern states. Of the Machilidae reported from the southeastern United States, the adventive *Trigoniophthalmus alternatus* (Silvestri) is known from southern West Virginia, *Pedetontoides atlanticus* Mendes was described from North Carolina, and *Pedetontus gershneri* Allen was described from Arkansas (Mendes 1990; Allen 1995; De Jong 2013). *Machilis variabilis* Say is considered to be a *nomen dubium* (Wygodzinsky and Schmidt 1980); however, Folsom (1928) used this name to report some species of Microcoryphia from North Carolina and Tennessee. In the Meinertellidae, *Machiloides banksi* Silvestri is known from the central Atlantic states, Arkansas, and Missouri (Wygodzinsky and Schmidt 1980; Allen 1995), while an unnamed species of *Neomachilellus* has been reported from the Atlantic coast of Florida and Georgia (Wygodzinsky 1969; Sturm 1984).

This paper reports additional southeastern United States distributions of several of these species from specimens in the Mississippi Entomological Museum (MEM) at Mississippi State University.

Table 1. Checklist of the named species of Microcoryphia of North America. Additional unnamed species are known to exist.

Machilidae

Machilinae

- Mesomachilis (Mesomachilis) leechi* Sturm, 1991
- Mesomachilis (Mesomachilis) nearctica* Silvestri, 1911
- Mesomachilis (Mesomachilis) strenua* Silvestri, 1911
- Mesomachilis (Rarochilis) californica* Sturm, 1991
- Mesomachilis (Rarochilis) canadensis* Sturm, 1991
- Trigoniophthalmus alternatus* (Silvestri, 1904)

Petrobiinae

- Leptomachilis californica* Sturm, 1991
- Meximachilis cokendolpheri* Kaplin, 1994
- Neomachilis halophila* Silvestri, 1911
- Pedetontoides atlanticus* Mendes, 1981
- Pedetontus (Pedetontus) californicus* (Silvestri, 1911)
- Pedetontus (Pedetontus) saltator* Wygodzinsky and Schmidt, 1980
- Pedetontus (Pedetontus) schicki* Sturm, 2001
- Pedetontus (Pedetontus) yosemite* Sturm, 2001
- Pedetontus (Verhoeffilis) calcaratus* (Silvestri, 1911)
- Pedetontus (Verhoeffilis) gershneri* Allen, 1995
- Pedetontus (Verhoeffilis) persquamosus* (Silvestri, 1911)
- Pedetontus (Verhoeffilis) submutans* (Silvestri, 1911)
- Petridiobius (Petridiobius) arcticus* (Folsom, 1902)
- Petridiobius (Pacltiobius) canadensis* Sturm, 2001
- Petrobius brevistylus* Carpenter, 1913

Meinertellidae

- Hypomachilodes forthaysi* Packauskas and Shofner, 2010
- Hypomachilodes texanus* (Silvestri, 1911)
- Machilinus aurantiacus* Schött, 1897
- Machilinus matadero* De Jong, 2014
- Machilinus taoseno* De Jong, 2014
- Machilinus zingiberus* De Jong, 2014
- Machiloides banksi* Silvestri, 1911
- Machiloides petauristes* Wygodzinsky and Schmidt, 1980

Materials and Methods

The Microcoryphia specimens in the MEM included the recently acquired entomological collection from the University of Mississippi. Specimens were identified using dichotomous keys in Ferguson (1990) and Mendes (1990) and by comparison with original published descriptions (Silvestri 1911; Wygodzinsky and Schmidt 1980; Mendes 1981a; Allen 1995). Full label data were recorded, often including geographic coordinates in either U.S. Public Land Survey System township-range-section (T R §) format or Global Positioning System (GPS) Cartesian coordinates. The sex of some immature female specimens could be determined (e.g., by the ovipositor being present but not fully developed) and were included in counts by sex; immature specimens in which sex could not be determined were identified as “juveniles.”

Dates of the holdings of Microcoryphia in the MEM ranged from 1967 to 2015. Nearly 10% (22 specimens) were collected in pitfall traps in and near cotton fields during a 1979-1980 study on the boll weevil, *Anthonomus grandis* Boheman (Coleoptera: Curculionidae), in Panola and Pontotoc counties, Mississippi, and Edgecombe County, North Carolina. Additionally, many specimens were collected across the southeastern United States as part of the annual William H. Cross Expeditions conducted by the Mississippi Entomological Association.

Records in the Global Biodiversity Information Facility (GBIF, <http://www.gbif.org>) were checked for each species. While many of the identifications for specimens reported in the GBIF were provided by experts, some are not; I did not recheck the identification of those specimens, and the data were not considered to have been published in the primary, peer-reviewed literature, unless stated otherwise. The GBIF records are included for more complete information on distribution.

Results and Discussion

A total of 291 specimens of Microcoryphia was examined from across the southeastern United States, representing at least three species in the Machilidae and one species in the Meinertellidae. All but seven pinned specimens were in alcohol. Most of the 93 vials contained only one to six specimens, but two vials of *Machiloides banksi* Silvestri contained >20 individuals.

Most vials had only a single species present, but in three vials, >1 species were present. The presence of multiple species of Microcoryphia at a site may not be unusual, given that Mendes (1981a) reported two species and a number of unidentified juveniles from fallen fruit in a forest in Durham, North Carolina, as well as numerous species from a rotten tree trunk near Corpus Christi, Texas.

Machilidae

Pedetontoides atlanticus Mendes, 1981

The distinctive males of this monospecific genus are easily recognized and separated from other southeastern United States machilid males due to the presence of parameres on both the eighth and ninth abdominal segments. Among the Nearctic Microcoryphia, this character is otherwise present only in the genus *Meximachilis* Wygodzinsky, represented in the United States by *M. cokendolpheri* Kaplin from New Mexico. In both males and females of *P. atlanticus*, the posterior angle of the fourth urosternite is acutely pointed, although it can approach a right angle, which is characteristic of *Pedetontus* species. Previously, this species was known only from the type series of 12 adults and 5 juveniles from Durham, North Carolina (Mendes 1981a). These records add Alabama, Arkansas, Georgia, and Mississippi as **new state records** to the known distribution of this species.

ALABAMA: Cherokee County: 1♂+1♀, Little River Wildlife Management Area, 1300–1380', T7S R10E §15SW-16SE, Crest Road, 22 May 1990, D. Hildebrandt & T. Schiefer; **DeKalb County:** 2♂, DeSoto State Park, 1600–1700', T6S R10E §19W, Trail O, 18 May 1990, R. Brown & D. Pollock; 3♂, DeSoto State Park, 1400–1500', T6S R10E §29NW, pitfall trap in deciduous woods, 18–24 May 1990, D. Hildebrandt & T. Schiefer; 3♀, DeSoto State Park, 1600–1700', T6S R10E §19W, carrion-baited pitfalls, 19–24 May 1990, J. Hildebrandt & J. MacGown; 1♂+2♀, DeSoto State Park, 1600–1700', T6S R10E §19W, pitfalls, 19–24 May 1990, J. Hildebrandt & T. Schiefer; 1♀, DeSoto State Park, 1360–1460', T6S R10E §19SE–20SW, 19 May 1990, Azalea Trail, R. Brown & D. Pollock; **Jackson County:** 1♂, Bingham Mountain, Davis Cove, 1,300', 14 May 2004, P. K. Lago; **Monroe County:** 1♂, Haines Island Park, black light, N31°43'23" W87°28'10", 26 May 1995, R. L. Brown; **ARKANSAS: Logan County:** 1♂, Cove Lake, 1020', T7N R25W §35SE, blacklight trap, 14–20 May 1989, R. L., and B. B. Brown; 1♂, Magazine Mt, 2500', T6N R25W §23NW, 15–16 May 1989, R. L. Brown & J. MacGown; 1♂, Magazine Mt., 16 May 1989, P. R. Miller; 2♂, Magazine Mt., 1350', T6N R25W §16, 17 May 1989, J. MacGown & Q. Fang; 1♂, Cove Lake Campground, pitfall, 18 May 1989, P. & G. Miller; **GEORGIA: Bartow County:** 1♂+3♀, Red Top Mountain State Park, pit trap – human dung, 3 May 1992, M. S. Caterino; **MISSISSIPPI: Adams County:** 1♂, Natchez State Park, 23 March 1985, R. L. Brown & S. Cho; **Franklin County:** 2♂+1♀+2

Juveniles, Trib. of McGehee Cr., T6N R4E §26SW, 27 July 1992, on trunk of tree, T. L. Schiefer; **Grenada County:** 2♂+2♀, T21N R2E §12–13N & R3E §7S–18N, 7–14 August 1991, pitfall traps in woods, M. W. MacGown; **Hancock County:** 3♂+5♀, Point Clear Island, 24 June 1987, S. Testa; **Jones County:** 1♂, Laurel, under rotten log, 4 September 1981, T. Ishee; **Lafayette County:** 1♀, 9 mi. NE Oxford, 19 October 1982, R. Upchurch; 1♀, 8 mi. NE Oxford, 10 October 1993, R. Weens; **Oktibbeha County:** 1♂, Starkville, 2 September 1981, white pan trap on ground, W. L. Cross; 1♀, 6 mi. SW Starkville, 3 September 1984, R. L. Brown; 4♂+2♀, Dorman Lake, pitfall trap, 11–15 August 1989, T. Schiefer; **Pontotoc County:** 1♀, 1 mi. SE Ecu, 2 July 1980, pitfall in woods, W. H. Cross, 4784-4; 1♀, 1 mi. SE Ecu, 27 August 1980, pitfall in woods, W. H. Cross, 4759-6; 1♀, 1 mi. SE Ecu, 28 August 1980, pitfall peripheral to cotton field, W. H. Cross, 4760-1; 1♀, 1 mi. SE Ecu, 28 August 1980, pitfall in swamp, W. H. Cross, 4760-1; 3♂, 1 mi. SE Ecu, 28 August 1980, pitfall in swamp, W. H. Cross, 4760-4; 1♀, 1 mi. SE Ecu, 12 September 1980, pitfall in swamp, W. H. Cross, 4762-3; 1♀, 1 mi. SE Ecu, 26 September 1980, pitfall in woods, W. H. Cross, 4764-2; 3♀, 1 mi. SE Ecu, 26 September 1980, pitfall in woods, W. H. Cross, 4764-3; **Tishomingo County:** 1♂, Tishomingo State Park, boulder formation near water, 17 June 1986, S. Testa.

Pedetontinus cf. atlanticus

This specimen agrees in all aspects with the other specimens of *P. atlanticus* except that the first tarsal segment is darkened on all three pairs of legs. Bowser (2019a) reported specimens from the Western Interior Basin of British Columbia that are nearly identical to the figures in Mendes (1981a) but differ by the more conical nature of the distal segments of the male labial palpi, and he considered them to be potentially an undescribed species. Likewise, these Kentucky specimens may represent a separate species; however, the lack of multiple specimens in hand causes me to be reluctant to designate them as such. This record represents a **new state record** for this genus, family, and order.

KENTUCKY: Carter County: 1♀, Carter's Cave State Park, cliff face, 23 June 1983, G. T. Baker.

Pedetontus (Verhoeffilis) gershneri Allen, 1995

In this species, the 6th abdominal segment has only one pair of exsertile vesicles, placing it in the subgenus *Verhoeffilis* Paclt with *P. submutans* Silvestri, *P. persquamosus* Silvestri, and *P. calcaratus* Silvestri, and distinguishing it from *P. californicus* Silvestri, *P. superior* Silvestri, and *P. saltator* Wygodzinsky and Schmidt in the nominal subgenus, which have two pairs of exsertile vesicles. The apical segments of the maxillary and labial palpi in this species lack strong spines, and it is known only from Arkansas, separating it from the other species in the subgenus *Verhoeffilis*, which are also mostly found in the Pacific Coast states and Canadian provinces (Allen 1995).

This species was previously known only from the type series collected on Magazine Mountain, Arkansas (Allen 1995), and the specimens from the MEM were also collected at the type locality. While this species was described from moist forest floor among leaf and pine litter, Allen (1995) also reported *Machiloides banksi* Silvestri from xeric rock ledge habitat elsewhere on Magazine Mountain. It is therefore interesting that these species with apparently differing habitat preferences were both collected in the same sample on 17 May 1989. Perhaps pitfall traps were placed in intermediate habitats or multiple pitfall traps from different habitats were composited.

ARKANSAS: Logan County: 1♂+3♀, Magazine Mt., 1350', T6N R25W §16, 17 May 1989, J. MacGown & Q. Fang.

Pedetontus (Pedetontus) saltator Wygodzinsky and Schmidt, 1980

With two exsertile vesicles on the 6th abdominal segment, this species is in the nominal subgenus with *P. californicus* and *P. superior*, two species found in California and Idaho (Silvestri 1911, Mendes 1990, De Jong 2014). It is distinguished from *P. californicus* by the shorter line of contact between the compound eyes and from *P. superior* by the shorter ovipositor in mature specimens, extending only to

the tip of the styli of the 9th abdominal segment (Wygodzinsky and Schmidt 1980).

This species was previously reported only from the northeastern United States in Connecticut, Massachusetts, New Jersey, New York, and Pennsylvania. Online (Bartlett and Sellers 2018a, 2018b, 2018c, iNaturalist.org 2019) records of observations in GBIF of *P. saltator* include reports from Alaska, California, Massachusetts, Ontario, and Washington, DC, suggesting either a broad transcontinental distribution or a disjunct bi-coastal distribution. The Barcode of Life Database (BOLD) Barcode Index Number for *P. saltator*, based on a specimen from Alaska, is MOBIL6483-17 (IBLC 2017). The records detailed herein extend the distribution southward to Mississippi and North Carolina as **new state records** for the genus and species. Wygodzinsky and Schmidt (1980) suggested that the species might be parthenogenetic, because the 54 specimens they examined, including juveniles, were all females. These 32 specimens from the MEM corroborate that hypothesis.

MISSISSIPPI: Issaquena County: 1♀, 12 mi. SW Mayersville, Shipland Wildlife Management Area, 20 June 1992, M. S. Caterino; 1♀, 2 mi. SW Shipland, at light trap, 20 June 1992, P. K. Lago; **Lafayette County:** 1♀, 4 mi. W Oxford, cotton, 24 June 1977, A. E. Zuccaro; 1♀, Oxford, 31 October 1977, M. O. Mann; 1♀, Oxford, 18 October 1982, P. K. Lago; 1♀, Oxford, 19 June 2004, M. E. Pearson; **Marshall County:** 1♀, Holly Springs, 18 October 1980, H. H. Rather; **Noxubee County:** 1♀, Noxubee Wildlife Refuge, 8 December 1989, P. K. Lago; **Oktibbeha County:** 3♀, 6 mi. SW Starkville, 3 August 1984, J. Pooaitti; 1♀, Dorman Lake, 3 March 1985, J. Minr; 1♀, Dorman Lake, 3 March 1985, A. Schuster; 1♀, Starkville, 12 June 1985, C. M. Felland; **Panola County:** 3♀, 6 mi. SW Como, 20 June 1979, pitfall peripheral to cotton field, W. H. Cross, 4519 SA-1; 3♀, 3 mi. WSW Sardis, 1 August 1979, pitfall peripheral to cotton field, W. H. Cross, 4622 W-1; 2♀, 14 mi. ESE Batesville, 15 September 1992, P. K. Lago; d♀, 14 mi. ESE Batesville, 22 September 1992, P. K. Lago; **Pontotoc County:** 1♀, 1 mi. SE Ecu, 3 July 1980, pitfall peripheral to cotton field, W. H. Cross, 4750-1; 1♀, 1 mi. SE Ecu, 3 July 1980, pitfall in woods, W. H. Cross, 4750-6; 1♀, 1 mi. SE Ecu, 28 August 1980, pitfall in cotton field, W. H. Cross, 4760; 1♀, 1 mi. SE Ecu, 11 September 1980, pitfall in woods, W. H. Cross, 4761-3; 1♀, 1 mi. SE Ecu, 12 September 1980, pitfall in swamp, W. H. Cross, 4762-3; 1♀, 1 mi. SE Ecu, 25 September 1980, pitfall in woods, W. H. Cross, 4763-5; **NORTH CAROLINA: Edgecombe County:** 1♀, 3 mi. W Tarboro, pitfall in cotton field, 13 June 1979, W. H. Cross, 4556; 1♀, 3 mi. W Tarboro, pitfall peripheral to cotton field, 13 June 1979, W. H. Cross, 4548 S1; 1♀, 3 mi. W Tarboro, pitfall in cotton field, 13 June 1979, W. H. Cross, 4549; 1♀, 2 mi. NW Tarboro, pitfall in cotton field, 24 July 1979, W. H. Cross, 4588; 1♀, 2 mi. NW Tarboro, pitfall in cotton field, 26 July 1979, W. H. Cross, 4591.

Pedetontus sp.

These specimens were stored in isopropyl alcohol, and the exsertile vesicles are completely decomposed on almost all specimens. They are likely *P. saltator*, but it is impossible to tell how many vesicles existed on each of the abdominal segments, which would be diagnostic. As noted above, 3 males and 5 females of *Pedetontoides atlanticus* were collected at the same site by the same collector on 24 June 1986, but those specimens were in good condition (despite the dilute isopropyl alcohol preservative) and the shape of the urosternites and the presence of the parameres on the 8th abdominal segment in males distinguished that genus. These specimens recorded here are not *Pedetontoides*.

MISSISSIPPI: Hancock County: 6♂+5♀, Point Clear Island, pitfall human dung, 29 June 1986, P. K. Lago; 1♂, Point Clear Island, 15 August 1986, S. Testa; 2♂+2♀, Point Clear Island, pitfall, 17 August 1986, S. Testa; 1♂+1♀, Point Clear Island, pitfall human dung, 17 August 1986, S. Testa.

Meinertellidae

Machiloides banksi Silvestri, 1911

The very short urosternites and lack of scalges on basal antennal segments place these specimens in the family Meinertellidae, and the presence of styli on the coxae of both the meso- and metathoracic legs places them in the genus *Machiloides* Silvestri. The only other known Nearctic species of this genus

is *M. petauristes* Wygodzinsky and Schmidt, from which *M. banksi* is separated by the pigmentation pattern of the clypeus, maxillary palpi, and legs, and the longer maxillary palp segment 4 (Wygodzinsky and Schmidt 1980). *Machiloides petauristes* is known from New Jersey; 31 other species of the genus live in temperate South America, central and southern Africa, Madagascar, southeastern Australia and Tasmania, and Spain (Wygodzinsky and Schmidt 1980, Mendes 1981b, Notario-Muñoz et al. 2013). Wygodzinsky and Schmidt (1980) also reported members of *Machiloides* from Tennessee but did not indicate which species, while Notario-Muñoz et al. (2013) portrayed the Nearctic distribution of the genus *Machiloides* in a rough map as extending in the eastern United States from the Mississippi River to the Florida peninsula, north to Lake Erie and New England.

Machiloides banksi was previously known in the primary, peer-reviewed literature from Virginia, Maryland, North Carolina, and Arkansas (Silvestri 1911; Wygodzinsky and Schmidt 1980; Mendes 1981b). Online records from GBIF (Bartlett and Sellers 2018a, 2018b, 2018c; Bowser 2019b, 2019c; retrieved 21 August 2019) of observations of *M. banksi* include the following: **Alabama:** Tuscaloosa County: Tuscaloosa, 14 February 2016, J. Abbott; **Arkansas:** Prairie County: Wattensaw State Game Area, I-40 pulloff between Fredonia and Hazen, 12 May 2009, J. Cossey; **Georgia:** Dekalb County: Stone Mountain, 15 July 2011, Matt Edmonds; **Missouri:** Stone County: Nixa. James River off of Covered Bridge Road just upstream of Bowser Residence, 10 April 2013, Matt Bowser and Ethan Bowser; **North Carolina:** Durham County: Durham, Burden's Creek Beech Slope, between highway 55 and Alston, 19 March 2011, "Cotinus"; **Virginia:** no additional locality data, 7 March 2009, Scott Justis. Despite the online records, the records from Alabama and Mississippi in the MEM represent **new state records** for this species, genus, and family in the published, peer-reviewed literature.

The BOLD Barcode Index Number for *M. banksi*, based on specimens from Arkansas, is AAM7560 (Ratnasingham and Hebert 2007). This was the only species represented in the MEM by occasional large numbers per sample, with up to 60 individuals in one vial.

ALABAMA: Baldwin County: 4♂+11♀+1 Juvenile, Bon Secour National Wildlife Refuge, pitfalls in oak-pine forest, N30°14'48" W87°49'45", 12–16 May 1994, J. MacGown; **DeKalb County:** 1♂, DeSoto State Park, 1360–1460', T6S R10E §20SW-29NW, 19–23/24 May 1990, White Trail behind chalet on rock wall, T. Schiefer; **ARKANSAS: Logan County:** 1♀, Magazine Mt., 1350', T6N R25W §16, 17 May 1989, J. MacGown & Q. Fang; **MISSISSIPPI: Adams County:** 1♂, 5 mi. S Natchez, 3 July 1978, P. K. Lago; **Lafayette County:** 1♀, 6 mi. N Oxford, 26 August 1993, J. G. Himes; **Noxubee County:** 1♀, Noxubee Wildlife Refuge, 5 May 1985, W. P. Chan; 2♀, Noxubee Wildlife Refuge, 24 April 1990, P. Brown; **Oktibbeha County:** 1♀, Starkville, 5 May 1985, J. Jackson; 1♂, Mississippi State University, 23 March 1986, D. Stout; 1♂+1♀, Dorman Lake, 20 April 1986, T. Davis; **Panola County:** 1♀, 14 mi. ESE Batesville, goat dung pit trap, 23 January 1992, P. K. Lago; **Tishomingo County:** 1♂, 12 mi. S Iuka, rotten log, 17 March 1977, S. Hurdle; 37♂+23♀, Tishomingo State Park, 21 July 1978, P. K. Lago; 4♂+6♀, Tishomingo State Park, rock cliff, 8 September 1980, P. K. Lago & M. O. Mann; 1♀, Tishomingo State Park, 28 July 1983, S. Sibley; 5♂+10♀, Tishomingo State Park, boulder formation near water, 17 June 1986, S. Testa; 2♂+4♀+4 Juvenile, Tishomingo State Park, 7 March 1987, S. Testa; 1♀, Tishomingo State Park, 28 October 1993, J. W. Meek; 1♂+3♀, Tishomingo State Park, 28 October 1993, P. K. Lago; 1♂, Tishomingo State Park, 30 August 1997, J. Grisham; 17♂+5♀, Tishomingo State Park, 20 May 2004, P. K. Lago; **Winston County:** 1♂, Tombigbee National Forest, N33°10'31" W89°02'38", in mixed mesic forest, 3 May 1999, D. M. Pollock; 1♂, Tombigbee National Forest, Jones Creek, N33°15'54" W88°54'3", 4 February 2003, J. G. Hill; **NORTH CAROLINA: Moore County:** 1♂, Pinehurst, pine litter, 2-5 March 1967, P. H. Darst.

Unidentified Microcoryphia (poor condition, pinned, or immature):

ALABAMA: DeKalb County: 2♂+1♀, ~5 mi. SE Ft. Payne off Hwy 176, 2–3 mi. S intersection Hwy 176 & 35, Little River Wildlife Management Area, 9 June 2001, H. Grisham & D. Hildebrandt; **Jackson County:** Bingham Mtn Area, Hollytree, 22 September 2000, H. Grisham; Bingham Mtn. Area, Hollytree, 8 August 2015, H. Grisham; **Madison County:** Berry Mtn. Area, Maysville, 15 November 2007, H. Grisham; Berry Mtn. Area, 15 June 2008, H. Grisham; **MISSISSIPPI: Hancock County:** 2 Juveniles,

2 mi. N Waveland, Bayou La Croix, pitfall at edge of marsh, 22 May 1982, W. H. Cross; **Tishomingo County**: 1 Juvenile, base of tree, 31 March 1984, K. Corban.

In conclusion, these reports indicate that multiple species of Microcoryphia from both extant families are widespread throughout the southeastern United States. Other regional museum collections should be examined to identify further extensions of these distributions, find additional specimens of the potentially new species herein reported as *Pedetontus* cf. *saltator* or other undescribed species, and potentially determine the identity of the unnamed *Neomachilellus* species previously reported from the Atlantic coast of Florida and Georgia.

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