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Appendix I
Specimens Examined

*Sorex cinereus cinereus*. NORTH CAROLINA. Haywood Co. 1200 yards S Shining Rock (UNCW 1585); McDowell Co. 7 km N Old Fort, FR 482, 1950 ft. (UNCW 4968).

*Sorex cinereus fontinalis*. MARYLAND. Bethesda (USNM 290876). VIRGINIA. Accomack Co. Locustville (MVZ 136676).

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NEW MILLIPED RECORDS FOR VIRGINIA AND GEORGIA: *AMERACTIS SATIS* (ZOSTERACTINIDAE, JULIDA, DIPLOPODA) – *Ameractis satis* was described by Causey in 1959 from caves in White and Overton counties, Tennessee, as the type species of a monotypic genus. Hoffman (1964) reviewed the North American "nemasomatid" millipeds and found the gonopods of *A. satis* to be distinctive enough to warrant the naming of a new tribe in Namasomatidae, Ameractini (*recte*: Ameractinini). Enghoff (1982), as part of a revision of the entire nemasomatoid complex, recognized further unusual features of the gonopods of *A. satis*. Like most Julida, a "sternal trough" in the posterior gonopods accommodates the flagella of the anterior gonopods, but in *A. satis* conducts them back to unusual closed furrows on the anterior gonopod telopodites. Enghoff realized that these furrows were shared with *Zosteractis interminata* Loomis, described in 1943 from caves in Missouri, and was unique to these two genera. The family name Zosteractinidae Loomis 1943 was available, and Enghoff transferred *Ameractis* to it. Enghoff also described a new species, *Ameractis chirogona*, from an epigean site in the Great Smoky Mountains National Park. Thus the family Zosteractinidae now consists of two genera and three species.

Enghoff (1982) published a spot map of the distribution of *A. satis*, showing it to occur in caves in White, Overton, Monroe, Decatur, and Roane counties in Tennessee, Marshall County in Alabama (as predicted by Hoffman, 1964) and Madison and McDowell counties in North Carolina. According to Hoffman (1964), T. C. Barr reported to him that the species was present in caves in Cumberland and Hamilton counties, Tennessee, as well. Because *A. satis* is a small, pale species of milliped it is easily overlooked and probably occurs in many other localities in the Cumberland Plateau in Tennessee, and may also be expected in Kentucky. The additional Alabama, North Carolina, Georgia and Virginia records given below make *A. satis* the most widely distributed species of troglobitic milliped in North America.

One might suspect that dispersal of this small, delicate, supposedly troglobitic milliped across the formidable barriers separating the Cumberland Plateau karsts from those of the Ridge and Valley Province would be highly unlikely, nor is there any obvious vicariance explanation for the distribution, at least at the species level (the two regions do share troglobitic genera, but no other species, of milliped). With this in mind we carefully compared our Virginia specimen (details below) with Enghoff's illustrations. While Enghoff's (and Hoffman's) drawings show the anterior gonopod telopodites of *A. satis* as featureless at their tips, under high magnification we detected in our specimen a small, acute projection and what appears to be a terminal vesicle or depression. These are clearly seen in exact detail in Enghoff's SEM pictures of the anterior gonopod telopodite tips. Such detailed correspondence would seem to support the hypothesis that the Virginia specimen is conspecific with Cumberland Plateau *Ameractis*.

The records from Roane, Hamilton, and Monroe counties, Tennessee, are in the Great Valley and in part of the Tennessee River drainage. This may provide the biogeographic connection at least with the easternmost Tennessee localities where *A. satis* has been found, and through the Holston River drainage with the Virginia record.

The northernmost record of *A. satis* in North Carolina

is about 120 air kilometers south-southwest of the new Virginia record in Washington County. Millard Cave, where the single male specimen (Virginia Museum of Natural History) was collected on 18 September 1996, is developed in the lower Ordovician to upper Cambrian carbonate rocks of the Conococheague Formation. It is a small cave, encompassing about 60 m of accessible passage. The milliped was collected on dry driftwood in a small passage that extends northward from the main passage. This side passage contains a series of rimstone dams of precipitated calcite. They were dry during the September 1996 visit, but during December of 1996, were flooded up to two feet in depth. The cave is located on private property 2.3 km southwest of the town of Wallace in Washington County, Virginia (UTM zone 17, 4054780 N, 397405 E).

With characteristic kindness, Henrik Enghoff forwarded to us new records of *Ameractis satis* that have reached him since his 1982 revision, and permitted us to publish them. They include a new first record for the state of Georgia. The new North Carolina record deserves comment because it is obviously not from a cave, as are all previous records of *A. satis*; instead it comes from a high elevation locality on the Blue Ridge. This ridge should be checked by further collecting, and the species searched for at other high elevation epigean sites. Ability to disperse to epigean sites would help to explain the wide distribution of *A. satis*. All specimens mentioned below are in the Florida State Collection of Arthropods, Gainesville:

**Alabama**: Jackson Co., Coon Creek Cave, 9.6 km NE of Pisgah, 28 August 1965, S. Peck; Indian Rocks Cave, 5.6 km S of Skyline, 1 August 1967, S. Peck. **North Carolina**: Graham Co., 0.96 mi. SE of Beech Gap, 4700', 28 May 1958, L. Hubricht, 2 females. **Georgia**: Dade County, Morrison Cave, 3.2 mi. E of Trenton, 13 July 1965, S. Peck.

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NEW DISTRIBUTIONAL RECORD FOR *ORCONECTES VIRILIS* HAGEN, 1870, IN THE NEW RIVER, VIRGINIA – The northern crayfish, *Orconectes (Gremicambarus) virilis* Hagen, 1870, is a species common to the midwestern United States and Canada. Hobbs (1989) listed the range from Saskatchewan to Ontario, and from Montana and Utah to Arkansas, New York, and Maine. It has been introduced into California, Maryland, parts of New England, Alabama, Tennessee, Mississippi, West Virginia, Pennsylvania, parts of Mexico, and possibly into other states (Cooper et al., 1998; Hobbs, 1989; Jezerinac et al., 1995). Schwartz et al. (1963) collected *O. virilis* in pristine and polluted sections of the Patapsco River, Maryland. Physical habitat of the individual reaches ranged from 4.8 to 107 m in width, 0.3 to 1.5 m in average depth, and included gravel, mud, cobble, sand, and sludge. *Orconectes virilis* is abundant in ponds, where it is commonly cultured for bait and food and sold alive by biological supply houses (Jezerinac et al., 1995). In Virginia, it was first collected in 1928 in Indian Creek, Powell River (Lee County) (USNM 129405), and has since been reported from Broad Run, Potomac River (Loudoun County) (23 July 1977, USNM 148123). *Orconectes virilis* was first recorded in West Virginia in 1970 from the New River in Summers County(USNM 13344; Jezerinac et al., 1995). Herein we