NATURAL HISTORY NOTES

CAUDATA — SALAMANDERS

***EURYCEA BISLINEATA* (Northern Two-lined Salamander). NEST GUARDING.** On 21 April 2017, we discovered two nests belonging to *Eurycea bislineata* in streams adjacent to Eastern Kentucky University's Lilley Cornett Woods Appalachian Ecological Research Station in Letcher County, Kentucky, USA. The first nest was located on the underside of a submerged rock in Island Branch (37.08632°N, 82.98456°W, WGS 84). It contained 38 eggs and was attended by a single male (SVL = 47.27 mm; 1.2 g) (Fig. 1). The second nest was on the underside of a submerged rock in Whitaker Branch (37.08876°N, 82.99012°W, WGS 84). It contained 47 eggs and was attended by a female (SVL = 45.81 mm; 1.6 g) and a male (SVL = 48.66 mm; 1.8 g) (Fig. 2).

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FIG. 1. Male Northern Two-lined Salamander (*Eurycea bislineata*) with a nest.

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FIG. 2. Female (left) and male (right) Northern Two-lined Salamanders (*Eurycea bislineata*) with a nest.

Attendance of nests by females is commonly observed in members of the *E. bislineata* species complex, but published observations of males with nests are thus far limited to *E. junaluska* and *E. aquatica* (Bruce 1982. Copeia 1982:755–762; Graham et al. 2010. IRCF 17:168–172). Although the species observed here is traditionally classified as *E. cirrigera*, molecular phylogenetic data suggest that this name is inappropriate (see 'Lineage D' in Kozak et al. 2006. Mol. Ecol. 15:191–207; Pierson et al., unpubl. data). Instead, we refer to them conservatively as *E. bislineata*. To the best of our knowledge, these observations represent the first evidence of nest attendance by males in this species and suggest that the behavior might be more widespread in the *E. bislineata* species complex.

We thank Rebecca Leloudis for field assistance. This field research was conducted with permission of the Department of Natural Areas (DKFWR Permit # SC1611150).

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***EURYCEA LONGICAUDA* (Long-tailed Salamander). COLOR ABERRATION.** *Eurycea longicauda* patterning is typically characterized by black spotting across the dorsum of the body, and can vary in spot size, number, and presence on the head and tail (Behler and King 1979. The Audubon Society Field Guide to North American Reptiles and Amphibians. Alfred A. Knopf, Inc., New York. 744 pp.). Two dorsolateral lines of spotting are present, generally consisting of larger spots that form a broken line across the body, and extend to cover the lateral sides of the tail as chevrons (Behler and King 1979, *op. cit.*). The lateral region of the body and limbs are covered by heterogeneously sized spots, but are often small (Behler and King 1979, *op. cit.*).

We observed and photographed an adult female *E. longicauda* at 2137 h on 4 May 2016 in Huntingdon County, Pennsylvania, USA (40.538408°N, 77.882875°W; WGS 84) with an aberrant pattern (Fig. 1). The specimen was discovered as it crossed a public road (State Rt. 1005) through mature deciduous forest during a light rain. The individual lacked dorsal spotting and distinct dorsolateral lines or spotting. Further, the individual lacked lateral and limb spotting, but black flecking was present across both; the toes are particularly well pigmented and black. As the pattern progressed posteriorly it began to form small bands, which developed into light and poorly developed chevrons with flecking between each chevron. While melanin-based dorsal patterning appeared to be greatly reduced, the underlying skin coloration (yellow-orange) seemed typical. One previous report on aberrant coloration in *E. longicauda* described an individual that was 45.9% unpatterned, particularly lacking on the lateral sides, hind limbs, and the anterior region of the tail (McCallum et