AMBYSTOMA MACULATUM (Spotted salamander). VERTEBRAL ABNORMALITY and POLYDACTYLY. We collected an adult Ambystoma maculatum near Blacksmith Pond (41.95466 °N, 72.12436 °W; WGS 84; 252 m elev.) in Tolland County, Connecticut, USA on 29 September 2018 with a supernumerary digit on the right hindfoot (Fig. 1). The specimen was euthanized (CT DEEP permit 0121019f) and deposited at Yale Peabody Museum of Natural History (YPM HERA 023576). Subsequent x-ray imaging revealed a phalangeal pattern of 2-2-3-4-4-2 for the right hindfoot (deviating from the typical pattern of 1-2-3-4-2) (Fig. 2). In addition, the pelvic articulation in the specimen is asymmetric with the sacral rib extending from the 14th trunk vertebra (which is typical) on the left, while the sacral rib extends from the 13th trunk vertebra on the right side (Fig. 2). Thus, it is notable that the limb abnormality corresponds laterally with the trunk abnormality, suggesting it is congenital and due to regeneration. This observation corroborates a study by Worthington (1974. Herpetologica 30:216-220) which found a high incidence of trunk abnormality and strong association with limb deformities in an A. maculatum population in Mississippi. Peabody and Brodie (1975,Copeia 1975:741–746) experimentally induced variation in trunk vertebrae count by manipulating temperature and salinity of the larval habitat. In contrast, the specimen considered here was collected from a relatively undisturbed, rural, research forest (Yale Myers Forest) near a vernal pool for which we have monitored water chemistry since 1999 with no notable aberration. Spot count symmetry in A. maculatum has been shown to be an indicator of body condition (Davis and Maerz. 2007. Appl. Herpetol. 4:195–205). The specimen has equal number of spots (N=14) left and right of midline.

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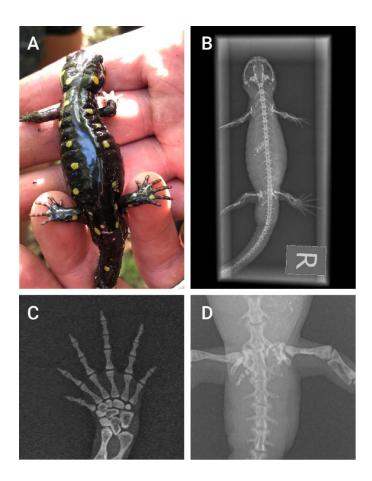


FIG. 1. Ambystoma maculatum (YPM HERA 023576) with supernumerary digit on left hindfoot (A). Dorsal x-ray images (B) display abnormalities of the right hindfoot (C) and trunk vertebrae (D).