

Ambystomatid Salamanders

Conant and Collins (1998) listed 27 amphibian species and 38 reptile species that probably occur in Hamilton County, Tennessee. Although all species do not use wetland habitats, adjacent uplands provide shelter and individual movements may result in incidental captures. However, two salamander species in the family Ambystomatidae utilize ephemeral wetlands for yearly breeding migrations (Conant and Collins 1998). Both species are characterized by a large body size (adults >70 mm total length) and limbs that overlap when pressed against the body (Powell *et al.* 1998). *Ambystoma opacum* is a medium-sized ambystomatid with a range extending from eastern Texas to the east coast and northward to Connecticut and New York. Adults average 77-127 mm in total length, and are identifiable by a black ground color with conspicuous white or gray crossbands (Petranka 1998). They prefer deciduous forests, and are one of only two ambystomatids that mate and oviposit on land, with females nesting near the dried beds of temporary ponds (Petranka 1998). *Ambystoma opacum* is relatively unique because of a fall breeding cycle, which occurs two to three months before the first *Ambystoma maculatum* breeding movements. *A. opacum* are sexually dimorphic during the breeding season, when males exhibit a distinctly brighter white than females (Noble and Brady 1933). Males also exhibit significantly larger areas of white on the body (Todd and Davis 2007). Our second Ambystomatid of interest, *Ambystoma maculatum*, is a large-bodied salamander with a range extending from eastern Texas and Oklahoma to the east coast and north to Canada. Adults average 150-250 mm total length, and are identifiable by the two irregular rows of yellowish spots that line the entire body (Petranka 1998). Reproduction in *A. maculatum* occurs after the *A. opacum* breeding period, beginning late winter or early spring when adults migrate from the uplands to temporary ponds or ephemeral wetlands to lay eggs during periods of rainfall (Husting 1965, Petranka 1998). Males are easily identified before breeding by presence of swollen cloacal lips, which are absent in females. Mature deciduous forests offer “optimal” habitats for adults, but populations are known to occur in coniferous forests with vernal pools as well (Petranka 1998).

Authored by Joseph F. Simpson III

October 31, 2010