

# Eastern Mud Salamander, *Pseudotriton montanus montanus*

**Status:**

*State:* Threatened

*Federal:* Not Listed

## Identification

The eastern mud salamander is a vibrant red amphibian marked with small black spots. Body coloration and spotting vary with age, as juveniles are often bright red and lightly marked with a few, tiny spots. In contrast, the brick red or brown skin of older individuals is patterned with larger spots, which may be obscured by the darker body coloration. Adults measure 7.5 to 19.5 cm (3.0 to 7.7 in.) in length (Petranka 1998).



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Although similar in appearance to the northern red salamander (*Pseudotriton ruber*), the eastern mud salamander can be distinguished by eye color and the pattern of spotting on the body. The mud salamander has brown eyes, while those of the northern red salamander are yellow. In addition, the spots of the eastern mud salamander are separate and defined, while those of the northern red tend to fuse together.

## Distribution

The eastern mud salamander occurs in the southeastern United States, ranging from southern New Jersey to the Carolinas and northeastern Georgia. In New Jersey, at the northern terminus of the species' range, there have only been two documented records of this salamander. The first record in the state, a specimen collected in Marlton, Burlington County, in 1953, is currently held in the American Museum of Natural History (Conant 1957). A more recent specimen was documented at Atlantic County Park when it was disgorged by a garter snake (*Thamnophis sirtalis*) captured by researchers in March of 1988. Fortunately, the salamander revived and swam away in a pond.

## Habitat

True to its name, the mud salamander inhabits low elevation swamps, bogs, springs, and streams that provide a muddy substrate (bottom) as well as clear, clean water. A fossorial (burrowing) species, this salamander seeks shelter in burrows beneath leaf litter, logs, stones, or bark and may also excavate tunnels in creek banks. Mud salamanders spend much of their time in close proximity to water, yet also burrow in the soil of the surrounding forest. The specimen obtained in Burlington County was excavated from the mud of a densely vegetated ditch within a cranberry bog (Conant 1957).

## **Status and Conservation**

Due to its extreme rarity in the state, the eastern mud salamander was listed as a threatened species in New Jersey in 1979. The New Jersey Natural Heritage Program considers this species to be “demonstrably secure globally,” yet “critically imperiled in New Jersey because of extreme rarity” (Office of Natural Lands Management 1992).

Throughout the 1980s, surveys were conducted to locate mud salamander populations in southern New Jersey, particularly in the Burlington County area where the species was first documented. Despite these efforts, there remain only two sightings of this species in the state.

### **Limiting Factors and Threats**

Because so little is known about the eastern mud salamander in New Jersey, it is difficult to assess potential threats to this species. However, factors that endanger other salamanders, such as degradation of water quality and habitat loss, would also likely affect the mud salamander. The impacts of such threats would be compounded by this species small population size in the state.

### **Recommendations**

Additional surveys are needed to determine the distribution, habitat requirements, and life cycle of the eastern mud salamander in New Jersey. If the species is located, sites should be acquired or protected, high levels of water quality should be ensured, and the population should be monitored.