

Pine Barrens Treefrog, *Hyla andersonii*

Status:

State: Endangered

Federal: Not listed

Identification

Vibrant green and boldly marked, the Pine Barrens treefrog is arguably one of New Jersey's most beautiful amphibians. A purple stripe with a yellowish-white border extends from the snout through the eye down each side of the body. Although the underparts are white, there is a vibrant orange patch beneath each hind leg that shows a flash of color when the frog jumps. Its throat has a purplish tinge, which is particularly visible on the male. Adults measure 2.8 to 4.4 cm (1.13 to 1.75 in.) in length (Conant and Collins 1991).



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The call of the Pine Barrens treefrog is a rapid and nasal quonk-quonk-quonk, which is repeated frequently. The series may be reiterated faster on warm evenings and slower on cool nights.

Habitat

The Pine Barrens treefrog requires specialized acidic habitats, such as Atlantic white cedar (*Chamaecyparis thyoides*) swamps and pitch pine (*Pinus rigida*) lowlands that are carpeted with dense mats of sphagnum moss (*Sphagnum* spp.). Plant species found at breeding sites include those mentioned above as well as highbush blueberry (*Vaccinium corymbosum*), greenbrier (*Smilax* spp.), red maple (*Acer rubrum*), swamp azalea (*Rhododendron viscosum*), swamp magnolia (*Magnolia virginiana*), viburnums (*Viburnum* spp.), inkberry (*Ilex glabra*), mountain laurel (*Kalmia latifolia*), sheep laurel (*K. angustifolia*), blackjack oak (*Q. marilandica*), scrub oak (*Q. ilicifolia*), sundew (*Drosera* spp.), pitcher plant (*Sarracenia purpurea*), sweet pepperbush (*Clethra alnifolia*), and various orchids (*Habenaria* spp.). Structural characteristics of preferred habitats include an open canopy, a dense shrub layer, and heavy ground cover. Soil types include sands and muck.

Temporary woodland ponds, white cedar or cranberry bogs, and seepage areas along tributaries of major rivers and streams serve as breeding ponds for the Pine Barrens treefrog. Occasionally, disturbed areas -- such as borrow pits, roadside ditches, vehicle ruts, or pools found along power line corridors -- may be used as breeding sites, provided that appropriate shrubby and herbaceous vegetation is available. Treefrogs prefer ponds that support sphagnum moss, sedges, grasses, or aquatic plants and are surrounded by dense, woody vegetation. Breeding ponds, which may dry up by mid-summer, contain shallow water, with depths often less than 60 cm (23.6 in.) and in some cases less than 10 cm (3.9 in.) (Freda and Morin 1984). The water is clean, yet acidic, with pH values

ranging from 3.38 to 5.9 (Zappalorti and Johnson 1981). The preference for acidic water serves to reduce competition with other frog species that cannot tolerate this low pH.

Status and Conservation

In 1979, the Pine Barrens treefrog was listed as an endangered species in New Jersey due to its restricted range and declining population, habitat loss, and the pollution of breeding ponds. The New Jersey Natural Heritage Program considers this species to be “apparently secure globally,” yet “rare in New Jersey,” (Office of Natural Lands Management 1992).

Although endangered, the Pine Barrens treefrog is currently considered stable in New Jersey. Because of large expanses of protected habitat within the Pinelands National Reserve of southern New Jersey, the state serves as a stronghold for this species throughout its entire range. In areas of suitable habitat, particularly on public land, Pine Barrens treefrogs may seem abundant. However, protection of this species is warranted, as suitable habitat is limited to specialized Pine Barrens ecosystems that are patchily distributed throughout the southeastern U.S.