Species: Mountain Chorus Frog (*Pseudacris brachyphona*)
Global Rank: G5
State Rank: S1
State Wildlife Action Plan: Immediate Concern and Pennsylvania Responsibility Species
Climate Change Vulnerability Index: Highly Vulnerable
Confidence: Low

Habitat:

Mountain chorus frog is a terrestrial species found in deciduous woodlands and upland wooded areas that requires small bodies of water for egg laying and larval metamorphosis. The species is discontinuously distributed from western Pennsylvania southwest to northeastern Mississippi, central Alabama, and Georgia (NatureServe 2010).

Threats:

Threats to this species include: loss and alteration of habitat, loss of breeding wetlands, and acidification of breeding pools by acid deposition (NatureServe 2010).

Main Factors Contributing to Vulnerability Rank:

Distribution relative to anthropogenic barriers: Urban and agricultural land surrounding the current distribution of known occurrences in Pennsylvania likely prevents northward movement of the species in response to climate change.

Dispersal ability: The young frogs probably do not disperse distances of more than 100 m/yr.

Predicted macro sensitivity to changes in temperature: Within the species range in Pennsylvania, mountain chorus frogs have experienced a very small temperature variation in the past 50 years.

Predicted micro sensitivity to changes in precipitation, hydrology, or moisture regime: Mountain chorus frogs are completely dependent on aquatic habitats (i.e., vernal pools, ditches, small ponds) for egg laying and the larval stage. The hydrology of these systems may be altered due to climate change effects.

Migrations and movements: Mountain chorus frogs are nonmigratory and populations do not make substantial distributional shifts in response to changing environmental conditions.

Occurrences of bottlenecks in recent evolutionary history: Given the extreme change in distribution over the past few decades (Hulse et al 2001), bottlenecks are assumed to have occurred for this species. PHNP data indicate that the occupied area was drastically reduced in the past 500 years.

Literature Cited:

Hulse, A.C., C.J. McCoy, and E. Censky. 2001. Amphibians and reptiles of Pennsylvania and the Northeast. Comstock Publishing Associates. Cornell University Press, Ithaca. 419 pp.

NatureServe. 2010. NatureServe central Databases. Arlington, Virginia. USA.