

AMENDMENTS TO APPENDICES I AND II OF THE CONVENTION

Other Proposals

A. PROPOSAL

Transfer of Clemmys muhlenbergii from Appendix II to Appendix I.

B. PROPONENT

The United States of America.

C. SUPPORTING STATEMENT

1. Taxonomy

11. Class: Reptilia
12. Order: Testudinata
13. Family: Emydidae
14. Species: Clemmys muhlenbergii (Schoepff)
15. Common Names: English: bog turtle, Muhlenberg's turtle
French:
Spanish:
16. Code Numbers:

2. Biological Data

21. Distribution: Clemmys muhlenbergii has a fragmented and localized range in the eastern United States, which is conventionally referred to as northern and southern populations with a hiatus of 250 miles between sites in Maryland from those in Virginia. The northern population ranges from southeastern New York and Massachusetts south to Maryland, west to Pennsylvania, with disjunct populations in western Pennsylvania (Iverson, 1986). The southern population ranges in the Appalachian Mountains from southern Virginia to Georgia, west to Tennessee (Iverson, 1986; Tryon and Herman, 1990).
22. Population: The population density of bog turtles in their habitat has been estimated to range from 5 to 125 individuals per hectare (ha) (Eglis, 1967). At some sites, the density has been measured at 140 per ha (Campbell, 1960; Bury, 1979). Tryon (1990) reported that two Tennessee research sites contained 60 and 50 turtles, respectively.

Female bog turtles reach sexual maturity between the fifth and eighth year (Barton and Price, 1955; Ernst, 1977). Clutch size varies from one to five eggs, but most frequently three to five eggs are laid. There is no evidence that multiple clutches are deposited in a single season (Bury, 1979). Bog

turtles and their eggs are preyed upon by raccoons, skunks, dogs, foxes and other predators (Klemens, 1990 and in press).

The range of the bog turtle is rapidly contracting, especially at the periphery of the range in the southern Appalachian and New England. Several disjunct populations are now thought to be extinct. Although many new sites were discovered between 1970-1985, the number of viable populations continues to decrease. Because many bog turtle populations are already threatened by habitat loss and losses of breeding individuals, the removal of mature turtles may compromise a population (Herman, 1991; Klemens, pers. comm.). The following state by state evaluations elaborate upon these trends.

Northern Population

Massachusetts: Of three populations recently discovered by Klemens (1990 and in press), one is robust and viable, one is questionable, and one appears to be dying out.

Connecticut: Twelve populations have been recorded, but no more than four currently have any turtles. Bog turtles have become extinct over most of their Connecticut range since the 1970's and now occur only in two rural townships (Klemens, 1990 and in press). Beth Lapin of the Connecticut Nature Conservancy (pers. comm.) considers bog turtles extinct in Connecticut.

New York: There are approximately 75 populations on record but fewer than 15 are viable (Breisch, 1991, pers. comm.).

New Jersey: Bog turtles occurred in 17 counties in New Jersey but now are found only in 12 (Zappalorti, 1991). In 1978, bog turtles were found at 68 localities, but a survey in 1989 found no turtles at 44 localities, representing a net loss of 65% of the known populations. Development is the major cause of habitat loss, followed by natural succession, wetlands alternation and pollution (Zappalorti and Farrell, 1989; Zappalorti, 1991).

Pennsylvania: A total of 51 bog turtles localities have been recorded. Of these, 24 still contain turtles. Based on the number of juveniles present at these 24 localities, only 10 of these are viable (Clark Shiffer, Pennsylvania Fish Commission, pers. comm., 1991) Wilkinson (1991) of the Pennsylvania Natural Heritage Program (Nature Conservancy) indicated that bog turtles occurred at 45 localities in southern Pennsylvania and four in northwestern Pennsylvania. Wilkinson considered bog turtles secure at 4-6 localities statewide.

Maryland: Glenn Therres (1991) of the Maryland Non-Game Wildlife Program reported that bog turtles were first found in Baltimore County in 1941. By 1975, this species had been reported from 30 localities, but only 17 still contained turtles. The habitat available for most populations was less than 2 acres, the largest was 5 acres. In 1976-1978, an intensive survey resulted in turtles being found at 177 localities. However, this was strictly a study to determine the presence or absence of individuals, with no effort to assess population size or to define the number of viable populations.

Delaware: Of 11 known populations, only four are viable (Gelvin-Innvaer, 1991).

Southern Population

Of 96 reported populations in the southern Appalachians, only 52-54% are viable (Tryon and Herman, 1990).

Virginia: Twenty-two populations have been reported thus far, it is likely that others remain to be discovered. Of these 22 populations, 13 are viable (Tryon and Herman, 1990).

North Carolina: Sixty-seven populations have been recorded, it is likely that others remain to be discovered. Of these 67, 37 are viable (Tryon and Herman, 1990).

South Carolina: Two populations have been recently discovered, and it is unlikely that others exist. Neither population is viable (Tryon and Herman, 1990).

Tennessee: Two viable populations have been reported (Tryon and Herman, 1990).

Georgia: A total of only 10 turtles have been found at three localities. At least one of these populations is dying out (Tryon and Herman, 1990).

3. Trade Data

31. National Utilization: Over the past five years, an increasing number of bog turtles have been advertised for sale on reptile dealers' list, ranging from a low of \$250 for a single male to over \$850 for a breeding pair. The number of individuals offered for sale (over the past two years) ranged from one to seven per list, including allegedly "captive-bred specimens".
32. Legal International Trade: Although this species has been listed in Appendix II since 1975, international trade as reported to CITES is non-existent. It was proposed for removal from Appendix II in 1987, but due to concerns regarding unreported trade, the United States argued for its retention. There are indications that international trade levels are considerably higher than those reported to CITES.
33. Illegal Trade: Herman (1991), a herpetologist at the Atlanta Zoo, reported that from 1989 to early 1991 approximately 1000 bog turtles were exported to Japan. As these figures differ significantly from the CITES data, this represents a significant amount of unreported trade. In 1989, a group of Ohio hobbyists collected more than 30 out of 200 marked turtles at several North Carolina study sites (Strong, 1989). There is a sharp increase in the number of C. muhlenbergii advertised for sale by hobbyist suppliers and reptile dealers.
34. Potential Trade Threats: Bog turtles are highly prized by hobbyists and pet owners. Since this species is declining throughout its range, any trade could be detrimental to its survival in the wild.

4. Protection Status

41. National: The current protection status within each state is as follows:

Massachusetts:	Endangered
Connecticut:	Endangered
New York:	Endangered
New Jersey:	Endangered
Pennsylvania:	Endangered
Delaware:	Endangered
Maryland:	Non-game protection, scientific permit for collection.
Virginia:	Endangered
North Carolina:	Threatened
Tennessee:	Species in need of management
South Carolina:	NONE
Georgia:	Non-game protection

42. International: This species has been listed in Appendix II of CITES since 1975.

43. Additional Protection Needs: Since the bog turtle is disappearing in many areas throughout its range, a CITES Appendix-I listing will eliminate international trade. A resolution was passed by the newly formed Chelonia Advisory Group of the American Association of Zoological Parks and Aquariums (AAZPA) that no turtle of the genus Clemmys be purchased unless proof of captive breeding is established (Herman, 1991).

8. References

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