CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

Proposals resulting from reviews by the Animals and Plants Committees

A. Proposal

Deletion of *Fusconaia subrotunda*, *Lampsilis brevicula*, and *Lexingtonia dolabelloides* from Appendix II.

B. Proponent

The United States of America

C. Supporting Statement

1. Taxonomy

1.1 Class	Mollusca
1.2 Order	Unionoida
1.3 Family	Unionidae
1.4 Genus and species	*Fusconaia subrotunda* (Lea, 1831) *Lampsilis brevicula* *Lexingtonia dolabelloides* (Lea, 1840)
1.5 Scientific synonyms	*Lampsilis brevicula* (= *L. reeviana brevicula*) (Call, 1887)
1.6 Common names	English: pearly mussels, riffle shells *F. subrotunda* Long solid mussel *L. brevicula* Ozark lamp pearly mussel and Ozark broken ray *L. dolabelloides* Slabside pearly mussel
1.7 Code numbers	*F. subrotunda*(866.001.004.003) *L. brevicula*(866.001.005.001) *L. dolabelloides*(866.001.006.001)

2. Biological Parameters

2.1 Distribution

Fusconaia subrotunda occurs in Alabama, Indiana, Kentucky, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia in the Ohio, Cumberland and Tennessee River Systems.

Lampsilis brevicula occurs in Missouri and Arkansas. In Missouri it is found in those rivers and streams that flow southward off the Salem and Springfield Plateau (Oesch, 1984), including the Meramec River in Missouri and Arkansas, and the Current River and Big Piney River drainages. Also reported in the Big Buffalo Fork of the White River and may occur in the Osage River systems in Arkansas

Lexingtonia dolabelloides is found in the Tennessee River system, including Middle Fork Holston River in Virginia (Stansberg and Clench, 1974) the Duck River in Tennessee (Isom and Yokley, 1968), the Paint Rock River in Alabama (Isom and Yokley, 1973), and the Elk River Basin in Tennessee (Isom, et al., 1973).

2.2Habitat availability

Construction of dams and changes in river bottoms have often altered the habitat of pearly mussels, resulting at least in extirpation of local populations.

F. subrotunda is well adapted to strong currents and coarse gravel due to its heavy shell and subrounded shape (Bates 1969) and occurs in large rivers in gravel.

L. brevicula "is found in cool, clear water in stable gravel...and may become numerous before other [naiad] species find the water warm and nutrient-rich enough to survive in." (Oesch, 1984).

L. dolabelloides "resides in shoal and riffle habitats of intermediate-sized streams, characterized by moderate to fast flowing water and a clean heterogeneous substratum" (Ahlstedt, 1984 as cited in Neves, 1990).

2.3Population status

F. subrotunda is not listed as threatened or endangered under the U.S. Endangered Species Act and is not a candidate for inclusion in this list. The species is categorized as near threatened by IUCN (Baillie and Groombridge, 1996) and Williams, et. al. (1993) considered the species to be of special concern.

L. brevicula is not listed as threatened or endangered under the U.S. Endangered Species Act and is not a candidate for inclusion in this list. The species is categorized as low risk by IUCN (Baillie and Groombridge, 1996, and Williams, et. al. (1993) considered the species to be of special concern.

L. dolabelloides is not listed as threatened or endangered under the U.S. Endangered Species Act and is not a candidate for inclusion in this list. The species is categorized as near threatened by IUCN (Baillie and Groombridge, 1996) and Williams, et. al. (1993) considered the species to be threatened.

2.4/2.5 Population/Geographic Trends

F. subrotunda has been extirpated from Illinois, and is endangered in Indiana and Ohio (Cummings and Mayer, 1992).

L. brevicula populations appear to be stable.

L. dolabelloides is "rare throughout its range in the upper Tennessee River drainage and very rare in Virginia. This species appears to be declining in Virginia, possibly due to habitat degradation and limited reproduction" (Neves, 1990) in specific drainages.

2.6Role of the species in its ecosystem

While the importance of these pearly mussel species to other entities in the ecosystem is not well known, the importance of specific fish species to a particular life stage of specific mussel species has been identified for several mussel species.

2.7Threats

Inasmuch as these species are generally adapted to highly oxygenated stream and river habitats, populations are negatively affected by impoundments, domestic sewage, treatment plant effluent, industrial outfalls, agricultural silt and pesticide run-off, dredging and channelization. In addition, to the extent that the exotic zebra mussel is able to invade the habitat of specific species, these populations will be threatened.

Trade is not perceived as a threat although there may be some potential use of *Fusconaia subrotunda* as "seeds" in the pearl industry. Recent changes in U.S. regulations allow for advance notification and inspection of shipments of mussel shells being exported from the United States.

3.Utilization and Trade

3.1National utilization

The proposal submitted by the Swiss Confederation to delete six species of pearly mussels, including these three species, to COP6 in 1987 noted that there was no recent information about trade in these three species. A review of 1986-89 import and export declarations to the U.S. Fish and Wildlife Service by the IUCN Trade Specialist Group (Brautigam, 1990) did not identify any exports of these three species and noted only the import of 21 items of *Lampsilis brevicula* with an assigned value of $124. A further check of all export declarations for 1994 to the present did not indicate any shipments of these three species.

3.2Legal international trade

While trade in these three species included in Appendix II is legal under CITES and U.S. law, there are no records of exports of these native U.S. species from the United States for the several years for which records have been examined.

3.3Illegal trade

There are no known indications of illegal trade in these three species.

3.4Actual or potential trade impacts

Shells of *Lampsilis brevicula* and *Lexingtonia dolabelloides* are not structurally suitable for buttons or pearl blanks, and although shells of *Fusconaia subrotunda* might be used for these purposes, they are not preferred and there has been no reported trade in this species.

No known domestic trade in the United States.

3.5Captive breeding or artificial propagation for commercial purposes (outside country of origin)

There is no known breeding of these three species for commercial purposes outside of the United States.

4.Conservation and Management

4.1Legal status

4.1.1National

Sixty-four species of pearly mussels of the 297 identified by Turgeon et al. (1988) and *Pleurobema rubrum* are listed as endangered or threatened under the U.S. Endangered Species Act. However, none of these three species proposed for deletion from CITES Appendix II are listed under this Act. However, some populations may be listed as threatened or endangered under laws of various States in the United States.

4.1.2International

These three species are endemic to the United States, and we are not aware of any international protection other than those associated with the Appendix II listing.

4.2Species management

State and federally funded population surveys are conducted periodically on sections of different streams and rivers. Environmental effects of various projects on riverine habitat are conducted prior to initiation of these projects. The States have closed selected stretches of streams and river to shell harvesting. Captive breeding efforts are being undertaken for selected endangered species.

4.3Control measures

In addition, to prohibitions on those species listed as endangered or threatened species, State laws provide protection for species of special concern at the State level, including harvest regulations. The federal Lacy Act makes violation of State wildlife laws a federal offense. Recent changes in U.S. regulations allow for advance notification and inspection of shipments of mussel shells being exported from the United States.

5.Information on Similar Species

Several of the pearly mussels are similar in appearance to the three being proposed for downlisting. Shells of *Fusconaia subrotunda* are similar to shells of other species in the genus Fusconaia as well as some of those in the genus *Pleurobema*. Shells of *Lexingtonia dolabelloides* are especially similar to the shells of *Pleurobema oviforme*. Females of *Lampsilis brevicula* bears a general resemblance to *Unio clarkianus* and *Unio gerhardtii*, and the *L. brevicula* is similar in appearance to the other subspecies *L. reeviana brittsi* and *L. r. reeviana*.

6.Other Comments

The three species being proposed for deletion from Appendix II are endemic to the United States, so no other range State consultations were warranted.

7.Additional Remarks

Of the six species of pearly mussels listed in Appendix II, three are proposed for deletion from Appendix II. Of the other three, *Epioblasma torulosa rangiana* and *Pleurobema clava* are now listed as endangered under the U.S. Endangered Species Act and are categorized as critically endangered by IUCN (Baillie and Groombridge, 1996). In addition, *Cyprogenia aberti* is categorized as endangered by IUCN (Baillie and Groombridge, 1996) and IUCN/TRAFFIC (in comments to the U.S. proposal on pearly mussels submitted at COP9) reported that the species was harvested in selected States.

8.References

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