

the southern California populations), with populations in the Sierra Nevada falling into three distinct groups and the fourth being the southern California population (Macey *et al.* 2001). Though three genetic lineages of mountain yellow-legged frogs have been identified in the Sierra Nevada, more genetic sampling is needed to delineate specific boundaries of the three genetic lineages before they are treated or managed as separate units (Macey *et al.* 2001). Therefore, this finding treats the three genetic lineages of the mountain yellow-legged frog in the Sierra Nevada as one DPS, discrete from the mountain yellow-legged frog DPS in southern California.

The biogeographic fragmentation within the Sierra Nevada population of mountain yellow-legged frogs occurs between Kings Canyon National Park and a region slightly north of Yosemite National Park, allowing for the central and northern Sierra Nevada populations to share more genetic similarities than the southern Sierra Nevada and southern California populations (Macey *et al.* 2001). In fact, this study indicates that the southern Sierran group (largely in Fresno County) may be more closely related to the southern California mountain yellow-legged frogs than with those in the central and northern Sierra Nevada (Macey *et al.* 2001). This research suggests that the initial divergence between the northern and southern populations of mountain yellow-legged frogs occurred 2.2 million years before present. Within each of these groups, Macey *et al.* (2001) have detected a similar pattern of divergence that suggests the northern Sierra Nevada and central Sierra Nevada mountain yellow-legged frog populations diverged 1.5 million years before present, and the southern Sierra Nevada and the southern California mountain yellow-legged frog populations diverged from each other approximately 1.4 million years before present. Today, these 4 groups are isolated by arid valleys; this isolation is most pronounced between southern California and the southern Sierra Nevada. The biogeographic pattern of genetic divergence as detected in the mountain yellow-legged frogs of the Sierra Nevada has also been observed in four other reptiles and amphibians, suggesting a common event that fragmented their ranges (Macey *et al.* 2001).

Sierran frogs and southern California mountain yellow-legged frogs also differ ecologically in the types of aquatic habitat they occupy. Mountain yellow-legged frogs in southern California are typically found in steep gradient streams, even though they may range

into small meadow streams at higher elevations (Zweifel 1955; Mullally 1959). In contrast, Sierran frogs are most abundant in high-elevation lakes and slow-moving portions of streams (Zweifel 1955; Mullally and Cunningham 1956), habitat that is distinct from the canyons of southern California's arid mountain ranges, which are inhabited by the southern California DPS of the mountain yellow-legged frog.

Significance. Under our DPS Policy, once we have determined that a population segment is discrete, we consider its biological and ecological significance to the larger taxon to which it belongs. This consideration may include, but is not limited to: (1) Evidence of the persistence of the discrete population segment in an ecological setting that is unusual or unique for the taxon; (2) evidence that loss of the population segment would result in a significant gap in the range of the taxon; (3) evidence that the population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range; or (4) evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.

We have found substantial evidence that all but one (there are no introduced populations of mountain yellow-legged frogs outside of its historic range) of these significant factors are met by the population of mountain yellow-legged frogs in the Sierra Nevada. Furthermore, it is significant because a major reduction in abundance of the species as a whole would occur if the Sierra Nevada population were extirpated. The extinction of the Sierra Nevada population of the mountain yellow-legged frog would result in the loss of a genetic entity, a reduction in the geographic range of the species, a loss of the species persistence in a setting ecologically unique relative to the ecological setting of the southern California population, and a reduction in the number of breeding populations. As discussed above, the Sierra Nevada population appears to be genetically distinct from the southern California population of mountain yellow-legged frogs. The mountain yellow-legged frogs of the Sierra Nevada comprise the main distribution of the species at the northern and central limits of the species' range. Loss of the Sierra Nevada population would be significant as it would eliminate the species from the majority of its range and would reduce the species to fewer than 10 small isolated sites in southern California (50

FR 44382). The geographic isolation of the Sierra Nevada population from the mountain yellow-legged frogs in southern California prevents genetic interchange between these populations.

Conclusion. We evaluated the Sierra Nevada population of the mountain yellow-legged frog to determine whether it meets the definition of a DPS, addressing discreteness and significance as required by our policy. We conclude that the Sierra Nevada population of the mountain yellow-legged frog is discrete from the southern California population, on the basis of their geographic separation, differences in vocalization, differences between their habitats, and apparent genetic differences. We conclude that the Sierra Nevada population of the mountain yellow-legged frog is significant because the loss of the species from the Sierra Nevada would result in a significant reduction in the species' range and its population numbers, and would constitute the loss of a genetically discrete population that differs markedly from the southern California population of mountain yellow-legged frogs. Because the population segment meets both the discreteness and significance criteria of our DPS policy, the Sierra Nevada portion of the mountain yellow-legged frog's range qualifies for consideration for listing. An evaluation of the level of threat to the DPS based on the five listing factors established by the Act follows.

Previous Federal Action

On February 10, 2000, we received a petition, dated February 8, 2000, from the Center for Biological Diversity and Pacific Rivers Council to list the Sierra Nevada population of the mountain yellow-legged frog as endangered. The petitioners stated that the Sierra Nevada population of the mountain yellow-legged frog qualifies for listing under our DPS Policy. On October 12, 2000, we published a 90-day finding on that petition in the **Federal Register** (65 FR 60603) concluding that the petition presented substantial scientific or commercial information to indicate that the listing of the Sierra Nevada population of the mountain yellow-legged frog may be warranted; we also requested information and data regarding the species.

This 12-month finding is made in accordance with a court order which requires us to complete a finding by January 10, 2003 (*Center for Biological Diversity and Pacific Rivers Council v. Norton and Jones*) (No. C 01-2106 SC). This notice constitutes the 12-month finding for the February 10, 2000, petition.