

A Primer on Sage Grouse Taxonomy
(Drafted by the U.S. Fish and Wildlife Service)

Greater sage-grouse

The Greater sage-grouse (*Centrocercus urophasianus*) occurs across 11 Western states. In 1946, it was separated into two different subspecies by John Aldrich, based on coloration differences in 8 museum specimens. The “western subspecies” (*C. urophasianus phaios*) includes the greater sage-grouse populations in Washington State, central Oregon, northeastern California (Aldrich 1946). The “eastern subspecies” (*C. urophasianus urophasianus*) encompasses the remainder of the greater sage-grouse range. Populations in the Sierra Nevada range of California and northwestern Nevada were identified as an intermediate between the eastern and western subspecies (Aldrich 1963).

A survey of the greater-sage grouse involving samples from 16 populations in California, Nevada, Oregon and Washington found no genetic evidence supporting the subspecies designation (Benedict *et al.* 2003). Conversations with State wildlife biologists familiar with sage-grouse did not reveal any behavioral or ecological differences between the subspecies. The American Ornithological Union acknowledged that the subspecies differentiation within sage-grouse should be re-examined, but due to time constraints, that review may be several years in the future. In 2002, based on the genetic and ecological data available, the U.S. Fish and Wildlife Service made the determination that we would no longer recognize the two subspecies of the greater sage-grouse, and would consider it a single species across its range.

When the Gunnison sage-grouse was separated from the Greater sage-grouse (see below), there was extensive discussion regarding the species common name. While many alternatives were discussed (e.g. northern sage-grouse), the official name is the Greater sage-grouse. However, many individuals continue to use alternative common names.

Mono Basin/Lyon populations

The genetic survey by Benedict *et al.* (2003) found that the population of greater sage-grouse straddling the southwestern Nevada and eastern California border had likely been isolated from the remainder of the species range based on the abundance of unique haplotypes found in this population. Additional genetic surveys are being completed for this population. Morphological and behavioral studies will also be necessary to determine if this population constitutes a subspecies of the greater sage-grouse, or even an entirely different species.

Gunnison Sage Grouse

Wings collected in the Gunnison Basin of Colorado (west central portion of the state) by the Colorado Division of Wildlife for hunting information were observed to be significantly smaller than sage-grouse wings collected from anywhere in the State. Research conducted in the 1980's found that the Gunnison Basin birds differed significantly from all other sage-grouse in their

plumage, morphology and behavior. A genetic analysis of these birds also found significant differences. Therefore, in 2000, sage-grouse from 6 counties in Colorado and one in Utah were designated as a separate species (*Centrocercus minimus*) (Young *et al.* 2000). Due to restrictions in habitat and low population numbers, the Gunnison sage-grouse is a candidate for listing under the Endangered Species Act of 1973, as amended.

Literature Cited

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- Benedict N., S.J. Oyler-McCance, S.E. Tayler, C.E. Braun, and T.W. Quinn 2003. Evaluation of the eastern (*Centrocercus urophasianus urophasianus*) and western (*Centrocercus urophasianus phaios*) subspecies of sage-grouse using mitochondrial control-region sequence data. Conservation Genetics.
- Young, J.R., C.E. Braun, S.J. Oyler-McCance, J.W. Hupp, and T.W. Quinn. 2000. A new species of sage-grouse (Phasianidae: *Centrocercus*) from southwestern Colorado. Wilson Bulletin 112 (4): 445-453.