

**From:** [Grizzle, Betty](#)  
**To:** [Shoemaker, Justin](#)  
**Subject:** Re: Taxonomy  
**Date:** Wednesday, January 18, 2017 1:03:21 PM

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FYI - Mike Schwartz has offered to speak with researchers in Sweden about this (they are involved with a wolverine genome effort).

On Wed, Jan 18, 2017 at 10:52 AM, Shoemaker, Justin <[justin\\_shoemaker@fws.gov](mailto:justin_shoemaker@fws.gov)> wrote:  
This prompted me to reread the full DPS analysis in our 2010 12-mo finding. The arguments in there could use a revisit, especially if we are considering a change in the taxon to which the lower 48 wolverine belongs. Lets bring this up on the Friday call.

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On Wed, Jan 18, 2017 at 9:52 AM, Grizzle, Betty <[betty\\_grizzle@fws.gov](mailto:betty_grizzle@fws.gov)> wrote:  
Cut and pasted from Banci (1994): (some formatting may be lost)

### **Taxonomy and Morphological Variability**

Most authorities consider all wolverines in North America and Eurasia to belong to a single species (*Gulo gulo*) (Ogoev 1935; Anderson 1946; Rausch 1953; Kurten and Rausch 1959; Krott 1960; Corbet 1966). Subspecific designations have been recognized to varying degrees. Hall and Kelson (1959) recognized *G. gulo katschemakensis* from the Kenai Peninsula, Alaska, but Dagg and Campbell (unpublished data 1974) considered this subspecies invalid. The Pacific wolverine, *G. gulo luteus*, was first described by Elliot (1903) from California and Grinnell et al. (1937) recognized this as a southern subspecies on the basis of skull characteristics alone. **Further evidence to support a subspecific classification for the Pacific wolverine has not emerged.** In an evaluation of the status of *G. gulo vancouverensis*, skulls of the Vancouver island wolverine (Banci 1982) differed in size and shape from those on the British Columbian mainland, although the comparison was based on a small sample. However, these mainland wolverines also differed from those in the Yukon, two populations that likely interbreed. Further, **ecotypic variation** was reflected in at least three regional mainland populations (Banci 1982).

**Variation in body size of wolverines suggests ecotypic variation.** Adult females in the Southern

Arctic ecoprovince are the largest (K. Poole, pers. comm.). The smallest adult females occur in the Northern Rocky Mountain Forest, the Pacific Northwest Coast and Mountains, and the Shining Mountains ecoprovinces. In general, the most sexually dimorphic wolverines occur in the south and the least in the north. These results are consistent with those of Banci (1982), who found that skull measurements that differentiated among geographic areas differed by sex.

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