

## Posters

### Fluctuating Asymmetry in Antlers of Alaskan Moose: Size Matters

**R. Terry Bowyer** (Institute of Arctic Biology, and Department of Biology and Wildlife, University of Alaska Fairbanks, Fairbanks, AK 99775; 907-474-5311; e-mail: ffrtb@uaf.edu).

Kelley M. Stewart (Institute of Arctic Biology, and Department of Biology and Wildlife, University of Alaska Fairbanks, Fairbanks, AK 99775; e-mail: ftkms1@uaf.edu)

John G. Kie (United States Forest Service, Pacific Northwest Research Station, 1401 Gekeler Lane, La Grande, OR 97850; 541-962-6529; e-mail: jkie@fs.gov.us)

William C. Gasaway (Alaska Department of Fish and Game) (Deceased)

We studied characteristics of paired antlers, including types of asymmetry, from a large sample ( $n = 1,501$ ) of Alaskan moose (*Alces alces gigas*). Size of antlers developed rapidly from 1 to 6 years of age, reached a plateau in prime individuals (7-11 years old), and regressed slightly in senescent males (12-17 years old). Antlers exhibited relatively high asymmetry (57-92%), depending upon the characteristic measured. We observed no evidence of anti-symmetry (bimodal or platykurtotic distribution of differences in characteristics) in moose antlers, but number of tines was greater on left than right antlers, indicating the possibility of directional asymmetry in that trait. Palm length, palm width, and beam circumference of antlers met criteria for assessing absolute and relative fluctuating asymmetry (FA) in moose. Absolute and relative FA occurred for palm characteristics, but not beam circumference. Relative FA varied inversely with the overall size of antlers for attributes of the palm. That result was expected for a secondary sexual characteristic where greater developmental stability occurred in large compared with small antlers. Likewise, when we investigated relative FA within age classes, smaller-antlered males exhibited greater variability than did larger-antlered moose in palm characteristics. Because large-antlered males, which mate most often among moose and other polygynous cervids, expressed the least relative FA, we hypothesize that this metric may index quality of individual moose. We also hypothesize that FA may be related to breakage of antlers, but further research is needed on that topic. Whether symmetry of antlers is a form of honest advertisement or whether females select mates based on FA is unknown and also deserves additional study.

SESSION 9

Saturday 8:30-12:00

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