



# Did You Know?

## Moose



- 1 The biggest:** Moose (*Alces alces*) are the largest members of the deer family, and Alaska moose (*Alces alces gigas*) are the largest of all the moose subspecies. The largest bull recorded at the Moose Research Station on the Kenai Peninsula in Alaska was 1,697 lbs in November, which included antlers.<sup>1</sup> Comparatively, that bull moose was heavier than an average dairy cow!
- 2 Large antlers:** Pairs of antlers from mature bull moose average 45-50 pounds in Interior Alaska, with the heaviest weighing up to 75 pounds!<sup>2</sup> Mature moose can grow about an inch of antler a day, which can result in a pound of antler added daily.<sup>3</sup> Female moose don't grow antlers.
- 3 A belly full:** The diet of moose varies seasonally – they eat shoots and leaves in the summer and woody twigs in the winter. How much a moose has to eat varies as well. In the summer, their rumen (the first of their 4 stomachs) can weigh 90 pounds and in the winter 112 lbs!<sup>4</sup>
- 4 Moose don't get cold easily:** Moose are well suited to long Alaskan winters. Scientists have not found the temperature at which a moose begins to expend energy to stay warm. Moose have been tested down to -22°F, but they weren't cold yet!<sup>5</sup> In fact, moose live where the coldest temperature was ever recorded in Alaska, which was -80°F along the Dalton Highway in 1971!<sup>6</sup>
- 5 But moose get hot:** The temperature at which moose have to work to cool off by panting changes by the season due to their different coats – in winter, this is above 28°F and about 62°F in the summer.<sup>5</sup> This is one reason why you will often see moose in lakes during the heat of summer days!
- 6 Shifting ranges:** The southern extent of the moose's range is moving northward, likely due to warming temperatures and changing plant communities.<sup>7</sup> Conversely, moose have moved further north in the last 150 years, likely due to shrub expansion in the arctic tundra.<sup>8</sup>
- 7 Long history in Alaska:** The earliest evidence of moose hunting in Alaska dates to around 13,000 years ago and comes from the Broken Mammoth archaeological site in the middle Tanana River valley.<sup>9</sup> Moose have probably been hunted as long as people have been in Alaska.



**8** **Shifting priorities:** Males don't eat for approximately 2 weeks during the rut<sup>10</sup> and can lose up to 20% of their body weight. Males use their large antlers to establish dominance by sparring with other males during rut, and at peak rut the sparring may turn deadly. Remains have been found where two males became permanently locked together by their antlers, and numerous creeks around Alaska are named 'Antler Creek' because of this.

**9** **Twice as nice:** One commonly used measure of habitat quality for moose is the percentage of females that deliver twins each year.<sup>11</sup> If a greater proportion of females have twins in the spring, the habitat is deemed to be highly productive for moose. If there are not many twins born in the spring, then the population may be food limited and could be declining if this is a new trend. Moose have been observed with triplets on rare occasions.<sup>12</sup>

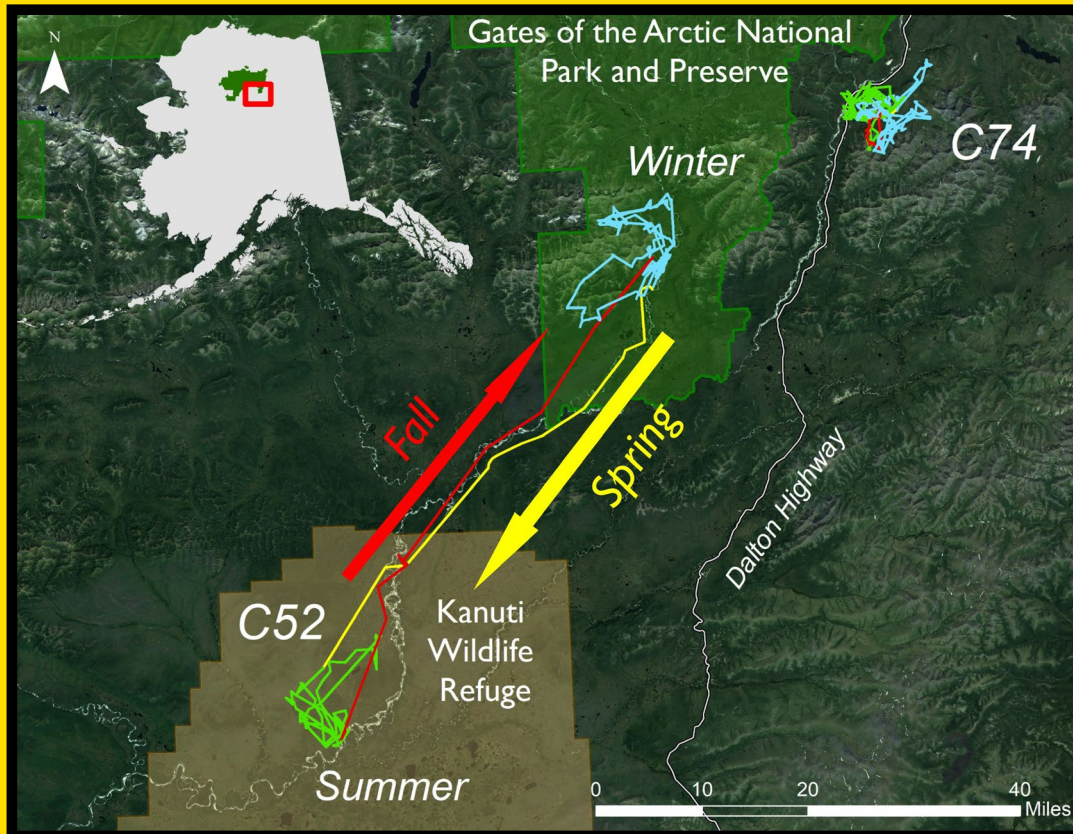


Left: A bull moose crossing the Kobuk River, Kobuk Valley National Park, Alaska. NPS photo, Kyle Joly.

Lower far left: A bull moose in Kobuk Valley National Park in the fall. NPS photo, Kyle Joly.

Lower near left: Two moose bedded down in the early morning during winter in Yukon-Charley Rivers National Preserve. In the winter, moose will only spend 6-8 hours a day actively foraging.<sup>13</sup> NPS photo, Matt Cameron.

Questions? Contact NPS Wildlife Biologist, Matt Cameron, at: [matthew\\_cameron@nps.gov](mailto:matthew_cameron@nps.gov)



**Same species, different individual habits:** The paths of two female moose that were tracked using GPS collars in a study in Gates of the Arctic National Park and Preserve are colored blue for winter, yellow for spring (yellow arrow), green for summer, and red for fall (red arrow) months. Moose C52 migrated over 55 miles each way in spring and fall, whereas moose C74 stayed in one small, mountainous area all year. Surprisingly, both migratory and non-migratory moose moved roughly the same distance within a given year, about 300 miles, which is comparable to walking from Wasilla to Fairbanks!

**10** **Favorite habitat:** Moose prefer to eat young woody vegetation such as willow, birch and aspen. The best moose habitat is generally considered to be floodplains<sup>14</sup> and areas burned about 15 years before due to the flush of fresh shrub regrowth!<sup>15</sup>

**11** **Seasonal moose nuggets:** While most people think of moose droppings as the characteristic hard, oblong nuggets, moose scat in the summer is loose and resembles a dairy cow patty since they are eating fresh growing vegetation. In the winter, moose switch to eating woody material, which is when you find hard moose nuggets. There's so little nutrition in the winter browse, moose nuggets are mostly wood and have even been used as incense.<sup>16</sup>

**12** **Do the dewlap:** Both male and female moose have dewlaps, also known as a "bell," which grow under their jaw. Young males often have the largest bells,<sup>17</sup> and their exact function remains a mystery. In other ungulates, dewlaps have been linked with heat exchange.<sup>18</sup>



Right: Bull moose, photo Dylan Schertz.

## References

Numerals correspond to superscript in 'Did You Know' handout factoids.

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