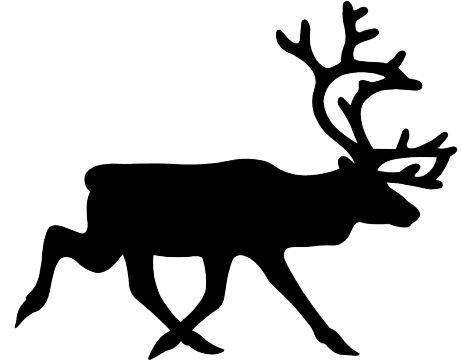




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## About the Western Arctic Caribou Herd Migration

Migration is a complex process and we often take for granted the established patterns we expect—where caribou are likely to be and when. But those patterns are changing. Using long-term monitoring data, the National Park Service compared caribou location and movement information with weather and vegetation data to see if we could learn more about what is influencing caribou migration patterns. While there is more to learn and always variability in nature, we have gained some insights in recent research.



### **The caribou migration is later.**

- Before 2000, caribou fall migration began in mid-August. After 2000, migrations began in September. Recently, caribou haven't crossed the Kobuk River until late October and November.

### **Weather conditions are the main cues for fall migration.**

- Fall migration is determined largely by the weather conditions caribou experience. Generally, when caribou experience colder temperatures and the first snowfall, that is their cue to start migrating.
- Fall temperatures are getting warmer. In the last 50 years, the average fall temperature has increased 7.5 °F in Kotzebue. Cold weather is coming later. The first snowfall is now generally 2-3 weeks later than it was 50 years ago.

### **Caribou adjust along the way.**

- Because the herd is spread out, animals in different places may experience different conditions and they adjust their migration accordingly. Even after they start the fall migration, caribou may change their speed or route based on the conditions they experience. If they are in a warmer place, they may slow down or stay in that area until it gets colder again.

### **What about spring migration?**

- Spring migration has remained fairly consistent, within about a week from the previous year.
- Here, too, caribou adjust the speed and timing of their spring migration, but to a lesser degree than fall migration.

### **What can we expect in the future?**

- While weather is variable year to year, the climatic trend is for fall weather to keep getting warmer and winter to start later. The caribou migration is likely to respond by also being later in the year.

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### **Links**

<https://www.nps.gov/im/arcn/caribou.htm>  
<https://www.nps.gov/articles/000/migrationdecisions.htm>  
<https://www.nps.gov/articles/boumigrationclimatepests.htm>  
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