

Black bear behavior in seven dens in northeastern Minnesota, 2010–2013

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The 5–7 months black bears (*Ursus americanus*) spend in dens in northern regions represent the least observed half of their lives. Advances in webcam and cellular technology enabled us to observe undisturbed behavior in remote dens of wild black bears. During 2010–2013, we installed video cameras and microphones in 6 dens in northeastern Minnesota and transmitted continuous live video and sound from before 8 January until dens were vacated in spring. Occupants included 2 mothers and their 7 offspring (4 litters). To determine daily time budgets, >100 collaborators recorded standardized data, minute-by-minute, during the 4 winters by using live or archived video footage. Sound recorded in a seventh den containing a third mother and her yearling female provided additional data on frequency of suckling by yearlings. The remote recordings revealed activities not reported from direct observations. In this presentation, remote videos document the bears eating snow, icicles, foot pads, and a fecal plug; urinating; defecating; nursing; responding to cubs' cries; caring for cubs; playing; rearranging bedding; sleeping; and reacting to perceived danger. Video recordings before and during the 7 births include den preparations, physical changes in mothers' bodies, labor (up to 22 hours), and parturition. Cub development and eye-opening are shown. All 5 yearlings suckled throughout the denning period.