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## **\*\*KODIAK BROWN BEARS SURF THE SALMON RED WAVE: DIRECT EVIDENCE FROM GPS COLLARED INDIVIDUALS**

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One of the goals of Ecosystems Base Fisheries Management (EBFM) is recognizing and mitigating indirect effects of fisheries on trophic interactions. Most research on indirect effects has considered how the abundance of managed fishes influences trophic interactions with other species. However, recent work has shown that attributes besides abundance, such as life history variation, can strongly mediate species interactions. For example, phenological variation within prey species may enhance foraging opportunities for mobile predators by increasing the duration over which predators can target vulnerable life stages of prey. Here, we present direct evidence of individual brown bears (*Ursus arctos middendorffi*) exploiting variation in sockeye salmon spawning phenology by tracking salmon runs across a 2,800 km<sup>2</sup> region of Kodiak Island. Data from 40 GPS collared brown bears show bears visited multiple spawning sites in synchrony with the order of spawning phenology. The average time spent feeding on salmon was 67 days, while the average duration of spawning for one population was only 40 days. The number of sites used was correlated with the number of days a bear exploited salmon, suggesting phenological variation in the study area influenced bear access to salmon, a resource which strongly influences bear fitness. These results suggest fisheries managers attempting to maximize harvest while minimizing impacts on brown bears should strive to protect the population diversity that underlies the phenological variation used by wildlife consumers. These results underscore the need to understand how fisheries affect life history diversity in addition to abundance in order to minimize negative effects of fisheries management on non-target species, a goal of EBFM.