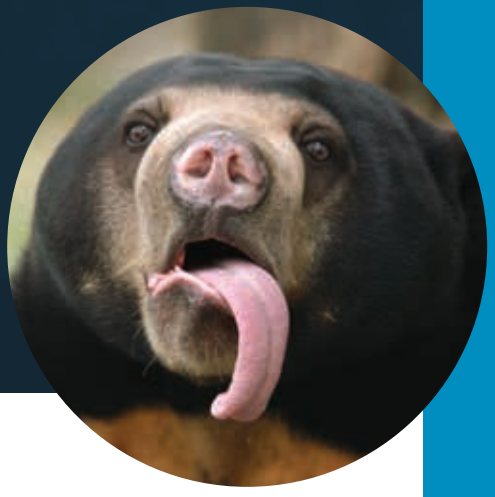
28TH IBA CONFERENCE

Co-existing with Bears on Dynamic Landscapes



IBA 2024

INTERNATIONAL ASSOCIATION FOR BEAR RESEARCH AND MANAGEMENT

EDMONTON, ALBERTA, CANADA SEPTEMBER 2024

Day: Thursday **Time:** 11:40 – 11:55 **Room:** Salon 4

Theme: Captive Bears, Zoos, and Physiology

Abstract Number: 251
Presentation Type: Oral Presentation
Presentation Title: Evidence for density-dependent effects on body composition of grizzly bears in a changing Greater Yellowstone Ecosystem
Presenter Name: Andrea Corradini
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Primary Author Occupation: Professional

Abstract:

The Greater Yellowstone Ecosystem, although recognized as one of the world's least impacted temperate ecosystems, has undergone environmental alterations over the last decades. During this period, concerted management efforts have allowed the grizzly bear population to increase significantly. As a result, the range and density of the bear population have also increased, despite a decline of some high-calorie foods. This study investigated the intraspecific processes driving bear population demographics in the face of climatic and human impacts affecting the availability of some key food resources. We examined lean body mass and percent body fat from >400 grizzly bears over two decades and in relation to a temporally and spatially explicit index of grizzly bear density, individual traits, and geographic areas. Specifically, we hypothesized that individual lean body mass declined as population density increased, and that density had an age-dependent effect. Further, we hypothesized that the ability to gain body fat during the active season was independent of population density and environmental changes, as omnivory helped buffer energy intake from fluctuation in high-calorie food sources. We found that lean body mass was negatively related with grizzly bear population density, particularly in young females. Although higher bear densities had a more negative impact on female bears, they still reached their typical total body mass as they matured (>7 years of age), which may be due to delaying reproduction or dispersal to areas with fewer bears. In contrast, we found that the seasonal rate of body fat gain remained constant as grizzly bear population density increased, despite recent environmental changes, possibly by shifting feeding tactics. Our study shows that individual performance is influenced more by intraspecific competition than landscape-level food changes, highlighting a notable resilience of Yellowstone grizzly bears to environmental alterations.

Day: Thursday **Time:** 13:30 – 13:36 **Room:** Salon 4

Theme: Employing IUCN's Species Conservation Cycle for Bears: Examples from Around the World

Abstract Number: 992
Presentation Type: Oral Presentation
Presentation Title: Intro to session: Employing IUCN's Species Conservation Cycle for Bears: Examples from Around the World
Presenter Name: David Garshelis
Presenter Affiliation: IUCN SSC Bear Specialist Group
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All Authors: David Garshelis
Primary Author Occupation: Retired

Abstract:

The IUCN network includes ~10,000 volunteer experts within more than 160 Specialist Groups under the Species Survival Commission (SSC). The IUCN sets goals and appoints or reappoints leaders and volunteer experts on a quadrennial schedule, coincident with meetings of the World Conservation Congress. During the 2017–2020 quadrennium, the SSC established the "Species Conservation Cycle" as the conceptual framework for Specialist Group activities. As such, the Bear Specialist Group (BSG) created quadrennial targets categorized by the 5 components in this conservation cycle. The first 3 components occur sequentially (the cycle), while the other 2 are transversal: Assess – Measure status and trends of populations, threats to populations, adherence to goals of a plan, or effectiveness of conservation actions. Assessments are evidence-driven, both at the start of the cycle, and then starting again, after planning and acting. Plan – Develop conservation strategies and policies to reduce threats and improve conservation status of species or populations. This component relies on findings from the assessment stage, and considers technical, spatial, and socio-political aspects. Act – Carry out actions outlined in the plan aimed at directly improving conservation status. Actions are often conducted in concert with parties that helped develop the plan. Network – Create collaboration, partnerships, and capacity building to more effectively implement the Assess–Plan–Act conservation cycle. These collaborations include both direct participants, as well as people or organizations that can facilitate or enhance accomplishments. Communicate – Disseminate information to enhance conservation. Communication should highlight each aspect of the cycle (results from the assessment; goals of the plan; ongoing actions), targeted at various specific audiences. This short talk introduces this BSG session, which will highlight activities of some individual BSG members or teams employing these components to conserve bears on all 4 continents.