



FILE 8

Hibernation

During the autumn, prior to hibernation, bears go through a period of hyperphagia, consuming large quantities of foods with a high caloric content in order to lay down a thick layer of fat for the winter dormancy. Physiologically, bear hibernation consists of them falling into a state of dormancy or winter lethargy, with their heart rate dropping from 40-50 beats per minute down to c. 10, the breathing rate halves and the body temperature falls 4 or 5 °C. The bears stop eating, drinking, defecating or urinating and maintain their vital functions through burning the fat reserves laid down in the autumn.

Female bear dens

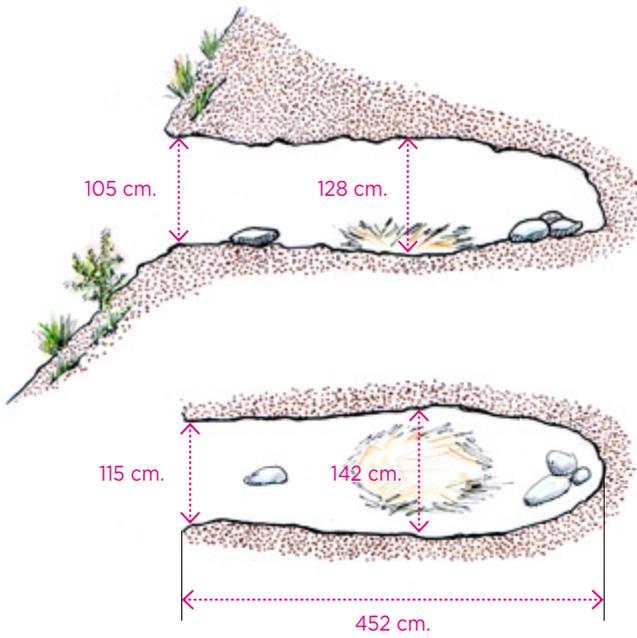
Hibernation is preceded by the search for an adequate cave and then its preparation with a bed made from grasses and fine twigs. In the Cantabrian Mountains, 80% of these dens are in existing caves, with the remaining 20% actively dug into the ground. The female bears actively select slopes with particularly difficult access and impenetrable vegetation.

Those areas with clusters of these dens and daytime lairs are of especially high conservation value and critical for bear survival.

The non-hibernation option

Some family groups of Cantabrian bears either do not hibernate or only experience a very short period of winter dormancy. For some female bears with cubs, remaining active during mild winter with plenty of food available may be more energetically viable than hibernating. For female bears with cubs, the cost of lactating is huge. Bears which reach winter with good fat reserves (non-lactating females, males and well-developed juveniles) are better off spending the harsh winter conditions hibernating; in contrast, those that enter winter with lower fat reserves (lactating females and growing juveniles) can compensate by remaining actively searching for food, if this is abundant enough.

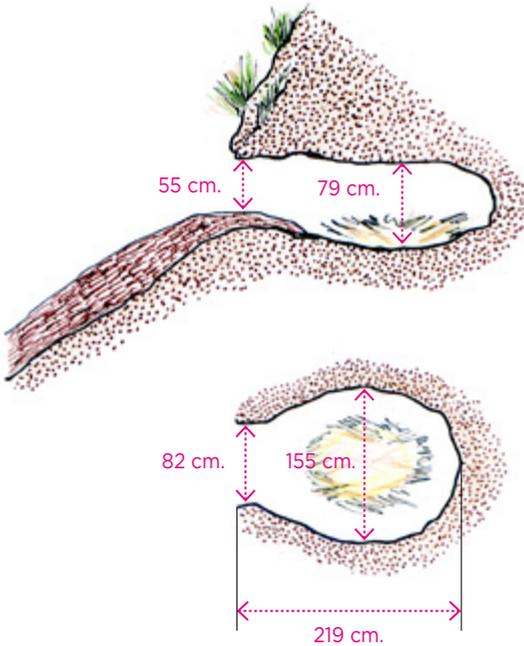
Natural birthing den; average measurements:



SIDE VIEW

VIEW FROM ABOVE

Excavated birthing den; average measurements:



SIDE VIEW

VIEW FROM ABOVE



A FEMALE BEAR WITH CUB HAS DECIDED NOT TO HIBERNATE