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Reproduction and family life

Brown bears are promiscuous animals. The bond between a pair lasts a few days and the males take no part in rearing the cubs. The mating season is in spring and the beginning of summer, females give birth in January in the den and the cubs remain with their mother for 16 - 18 months, so that females, —in the majority of cases— give birth every two years.

Mating

During the spring months, male bears court females with patience and persistence. Males and females usually graze close together and every now and again, the male approaches, with the female running a short way away. The next stage sees the bears play-hugging each other, they chase, nibble each other and interchange gentle touches. The males then approach the female's hindquarters, sniffing them to see if they are receptive or not and try to mount them. If the females are not receptive, they may rebuff the males with bites and paw swipes, though more frequently by just sitting on the ground. These pairs stay together for a few days.

Females come onto heat twice during each breeding season, with each lasting between one and ten days. When a female comes out of oestrus, the males lose interest and leave to look for other receptive females. Males undertake long journeys during the breeding season in search of mates. The females are also promiscuous, also seeking to mate with as many males as possible, apparently as a mechanism to avoid future infanticide of her offspring. The results from genetic studies indicate the existence of litters of cubs with multiple paternity.

Ovulation of the females is induced, i.e. provoked by mating, leading to a greater chance of pregnancy. Implantation is deferred, with the fertilised egg floating freely in the uterus until it implants in autumn. Only then does gestation start, continuing for the following two months. In the middle of hibernation and in the security of the den, the female gives birth to between one and three cubs.

Birth and rearing

The cubs are born in January, deep inside the cave where the pregnant female bear went to hibernate. At birth they weigh 350-400 g, are blind, hairless and incapable of maintaining their body temperature. Their eyes open after one month and they can walk after two. They finally leave the den in April or May, after a few days staying near the entrance, barely even looking out. They soon start exploring outside, with the mother keeping a close eye on them playing as she sits or lays close by, quickly moving to retrieve them if they stray a few metres away. There is lots of physical contact between the bears at this point. After a few days in the close vicinity of the den, they move off to start to feed in other areas.

During the first few weeks after leaving the den, the female is especially attentive to the nearby presence of males with infanticidal intentions, which could kill the cubs in order to bring the female back into breeding condition. This infanticide is a male evolutionary strategy to increase their reproductive success. A female which loses her cubs due to an attack of this kind comes onto heat again and the male responsible can mate with her and so pass on his genes. Although this is a difficult behaviour to detect and observe, it has been recorded at least a dozen times in the Cantabrian Mountains over the past few decades.

The activity of the family group hinges around the search for food. Female bears have three functional pairs of teats supplying highly energetic milk, this containing c. 33% fat. Cubs continue to suckle until they become independent, but from six months onwards they ingest solid food above all and quickly gain weight, reaching 20 or 25 kg by the end of their first year. Play is an important part of a cub's life, for motor development and to learn about their social surroundings. During periods of relative calm and at whatever time of day, cubs play in numerous different ways: they run, jump, climb, use branches, trunks, logs and also fight amongst themselves. They can play alone, with their siblings or with their mother and give the appearance of having limitless energy supplies.

The cubs stay with the mother at least until the spring or summer of the following year, by which time they are one and a half years old and weigh around 40 kg. The break-up of family units in the Cantabrian Mountains has been observed between April and June, coinciding with the females coming back into breeding condition. After being abandoned by the mother, the cubs typically stay together for a few months or up to a year before splitting up completely and commencing their solitary lives as adults.



FEMALE BEAR FEEDING HER TWO CUBS