

# The Outside Story



## From Winter to Spring in a Bear Cub's Den By: Barbara Mackay

The transition from February to March is not subtle. With hardly time to recover from a truncated month, we attend Town Meeting, cede an hour to our clocks, and navigate spontaneously erupting frost heaves.

The forest is going through a seasonal transition, too, but at a more leisurely pace, and often invisibly. Bear cubs, for example, are maturing in hidden dens that we might snowshoe right by.

Black bear (*Ursus americanus*) cubs are born in mid-January to early February. The newborns are blind, deaf, and toothless, and covered with hair so fine they appear bald. They weigh about a half a pound and are the size of small squirrels. Barely able to crawl, they sense the heat from their mother's sparsely furred belly and find their way to her protective warmth. She nurses often, shifting position to assist them and to avoid

rolling onto them. Her milk is a protein-rich twenty percent (or more) fat. (Human milk, by comparison, is about four percent fat.)

The mother rouses easily from sleep to tend to her babies, feeding and cleaning them. She rearranges the insulating layer of grass, leaves, and twigs on the floor; and consumes the cubs' feces to keep their home clean and replenish her own resources. Usually there are only twins or triplets, yet to listen to them fight and squeal over nipple space, you would think the sow was feeding a litter of half a dozen.

At one month of age, the cubs' eyes open. They are blue now, but will turn brown during their first summer. A black bear's ability to see is about as good as ours, even better at close distances. Near-sighted vision is important for foragers who gather food within a paw's reach. Unlike many animals, the cubs can see color, a vital adaptation when your summer diet favors berries and cherries. Bears can also detect patterns and movement from a distance. To a human wanderer in the woods trying to mentally *un-focus*, it's wise to remember that a (remarkably quiet) bear needs to get uncomfortably close in order to size you up.

By the time we are discussing ballot issues, the cubs are six weeks old. Their ears open and they can hear for the first time. As the cubs develop, their ears are among the first organs to fully mature. Black bears hear much better than we do, in both frequency (high and low pitches) and sensitivity (loud and soft sounds). They are able to hear in all directions and can discern the exact location of a sound.

The cubs become more mobile as they grow. The den is purposely snug for the same reason a mummy-style sleeping bag is warmer than a rectangular one: there is less space to heat up. The cubs are still small, though, and there is plenty of room to roll around. Movement and play are important for developing the strength and skills they will need outside the den.

Cubs celebrate their two-month mark near the vernal equinox. They are active, noisy toddlers. The more they move, the more nourishment they need, and the mother sacrifices much of her stored fat for them: a nursing female typically loses a third of her body weight during the winter, while a female without newborns loses only a fifth of her weight. (A pregnant sow puts on over one hundred pounds and five inches of fat during the late summer and fall.)

Black bears have a keener sense of smell than any other land animal. Their nasal structure contains one hundred times more mucous membranes than ours. They can pick up human scent one mile away, and a cooking dinner twenty miles away. The cubs are born with this capability, but it is not fully developed until they are full size, almost two years away.

While we endure mud season and enjoy sugar-on-snow, the cubs continue to grow. The mother sleeps when she is not nursing, and sometimes even then. The cubs begin play-fighting, developing physical, social, and intellectual skills.

The cubs are three months old in the middle of April. They weigh about six pounds and are physically ready for the outside world. By then, we may have replaced roof rakes with garden

rakes, but in the woods, there can still be several feet of snow, keeping the bear family in its cramped residence. In our region, it is not uncommon for young cubs to remain denned until late April, or even early May if heavy snow lingers. What a relief it must be to finally come out into spring's fresh air and sunshine.

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