



YELLOWSTONE NATURE NOTES

Vol. XV January-February, 1938 Nos. 1-2

HIBERNATION OF BEARS

by William E. Kearns, Assistant Naturalist

Not long ago, I read an article in the Saturday Evening Post by J. Frank Dobie on "The Last of the Grizzly Hunters." The statement that bears "lay up and suck their paws," (hibernate) from "November for four months," caused me to do a bit of investigating of the "theories" for bears hibernating.

Here in Yellowstone, the beginning is largely determined by the weather, but the majority of both grizzly (*Ursus horribilis imperator*) and black (*Euarctos americanus cinnamomum*) bears go into hibernation in October and November. The earlier the snows come and the colder the weather, the sooner the bear seeks out his den. When seasonal conditions are more favorable, some of the bears may remain out as late as December. The period spent in hibernation will vary from four to five months, and here again, weather plays an important role, and is often the deciding factor. A few bears may appear in February, but it is usually mid-March or even the first of April before the majority appear.

Few actual observations have been made of wild bears in hibernation, and in the time of my father and other old timers, supposition and conjecture took the place of fact. With some, the belief was rampant that all bears gorged themselves on pine needles immediately before going into their dens for the "all-winter sleep," assuming that these needles would form a lining in the bear's stomach and keep him from getting hungry before the weather moderated and he could again find food. Still another, as suggested by Mr. Dobie, was that the animal would suck his paws; until by spring they were too sore for

the bear to more than hobble about.

With the majority, the belief is still current that an animal in hibernation loses all consciousness, and that bodily processes slow down to a point where the heart scarcely beats and the blood barely flows. With the Marmot (*Marmota flaviventris* *hosophora*) and the Picket Pin (*Citellus armatus*) this is true, but not so for either the grizzly or black bear found in Yellowstone. Observations made in specially constructed dens indicate that the bear is not absolutely in a state of coma, but rather, the opposite. Upon the approach of the observer, the bear would move, sometimes growl, and open-eyed, would repel the annoyer if too aggravated. While on a ski trip around the grand loop during the winter of 1935, I went to visit the den of a black bear in the hope of getting pictures. His winter quarters were beneath the floor of the kitchen of the lodge at Old Faithful and near a trap door. Lifting this door, I lowered my camera and the necessary paraphernalia to the ground some four feet beneath, intending to follow. Fortunately, I looked first with the aid of a flashlight and saw a large black bear moving toward me as rapidly as the floor joists would permit. Hastily retrieving my outfit, I just had time to lower the door, closing it almost in the bear's face.

Usually the bears select some spot not so accessible for man, and authentic pictures of bears in hibernation are rare. Dens beneath buildings are often used, natural caves, wind-falls in dense timber offer quarters, and the big animals often dig their own den. Strange as it may seem, the site is usually on the north slope of a hill. It would seem reasonable that a den dug in the warmer south slope, which is freed from snow at an earlier date, would be the preference, but not so with bruin. Here again, the bear is wise for the prevailing winds are from the southwest and the snow piles deeply on the north slopes, covering the dens with a thick, warm blanket which helps to keep out the bitter cold of winter.

On January 1,
1937, Junior
Naturalist
Oberhansley led a
party of fifteen
people on a ski
trip to visit the
den of a black
bear which was
hibernating on the
northern slope of
a hill to the
north of Mammoth.



Although the party proceeded as quietly as possible on nearing the den, the bear was wide awake and came to within 4-1/2 feet of the entrance. The opening of this den was about 1-1/2 feet across, and had been dug into the hillside in the midst of a small stand of cedar trees. This bear came out of hibernation on March 7. He did not eat the heavily crusted snow, contrary to other observations when bears had eaten quantities of the icy substance, and after basking in the sun for a short time, this bear retired to his den for another nap.

This last summer, road crews at Fishing Bridge constructed a heavily-oiled surfaced road in front of the operator's buildings. Beneath the Haynes Picture Shop was a den which a black bear had used for several winters. When Mr. Bear returned late in October to look over his winter apartment, he found the entrance entirely blocked with a thick section of roadway. Undaunted, he tore away the hard, almost rock-like surface in huge chunks, and proceeded with preparations of his winter bed.

Mrs. Pierson called me on the phone the other day to tell me that while her husband, Dave Pierson, with Tom Phillips and Rudy Schmidt, were out feeding hay to the buffalo at the Buffalo Ranch on January 22, they observed a small black bear, probably a two year old, come from the direction of Druid Peak and disappear up the slopes of Specimen Ridge. He was very thin, and one of the boys suggested that he might be sick.

The next morning, the feeders frightened him from the haystack where he had dug-in and the bear ran toward a distant stack. He was not observed eating hay. Monday morning about 9:30 A.M., the little fellow was again seen, headed for a near by stack. From all appearances, the coyotes had pre-empted his bed of the night before. The bear was seen almost daily and his condition was so pitiful that the men fed him scraps nearly every

morning. A week after he was first observed, he spent the night sleeping on top of the hay and although the thermometer registered 37 degrees below zero, he was up and ready for breakfast Sunday morning. As suddenly as he had appeared, the bear vanished, probably in a newly acquired den in one of the numerous haystacks.

Several days later, the Piersons reported that a second two-year old black bear was in the vicinity, and that he had moved in to dine on the contents of the garbage cans at the Ranch House. This second bear was in much better condition than number one, and was marked quite differently so that there was no doubt as to his identity. Mrs. Pierson stated that "he seems to hear alright, but from the half-baked way in which he acts, his eyesight must not be right." When a person approached, the bear would jump, raise his head, and finally seem to smell-out the source of the disturbance. It has been suggested that he may have been suffering from snow-blindness.

The second arrival wasn't satisfied with the scanty fare afforded at the garbage cans, and moved in on the Piersons' porch where he helped himself to bacon and butter, and later made-up his bed on their back porch. The latest report (February 14) is that this bear is still at the Ranch and eating from the garbage cans.

Wondering how many instances of this sort had been recorded, I perused back issues of Nature Notes with the following results: in the issue of February 28, 1926, this item concerning bears is noted:

"On the 6th of January, a large black bear and three cubs were outside at the rear of the Lake Hotel. The old bear is seen nearly every day. In coming out they are very careful to keep in the same tracks on paths made on previous trips and do not exert themselves very much. These bears have taken for their winter abode the cook's quarters of the hotel. The place left open is not large and underneath the floor makes a good den for them. Even after the snow was on they spent many hours pulling coarse slough grass and dragging it in for a bed. It seems possible now that the old bear will be out almost every day during the winter, if fed."

Ranger "Ben" Arnold who was at Lake the winter of 1925-1926 as winterkeeper for the lodge, relates the incident of two big black bears, "Nicodemus and Nebuchadnezzar," coming out from their hibernation den under the hotel building after the trails were well packed, and states that they remained out more or less all winter. On one occasion,

they "stole" a pair of pants belonging to Ed Admunsen, hotel winterkeeper, from the clothes line and took them to the den, supposedly for lining. (Al was a big fellow, and they were an immense pair of pants!) On an other escapade they visited the Laundry room of the hotel and removed a heavy fabric belt from one of the machines. Dragging it to their den, they chewed it until it was ruined for further use. These two bears visited the garbage cans of the rangers and winterkeepers, but did not venture from the beaten trails at any time.

A further reference in Nature Notes is found in the issue of February 28, 1927, as follows:

"A large black bear that has been hibernating under the hotel at Yellowstone Lake appeared on the trails in the vicinity of the buildings on the 19th of February. He was out during an interval of two days. His activities consisted in part, of the theft of a ham from the winter keeper and after finding nothing further of interest he returned to his den. This is the first and only activity of bears reported since late last fall, with the exception of the captive bear, Juno, at headquarters station. Frequent visits have been made to his den during the past two months and we find that he is easily aroused but is very sluggish in his movements. He accepts very little food and rarely emerges from the den. His disposition is harmless and gentle."

Mrs. Marguerite L. Arnold informs me that several years ago, former Park Naturalist Edmund Sawyer attempted to feed Juno, the chained pet, while, he was in hibernation, but she states, "the bear just wasn't interested."

On Christmas day, Ranger David Condon saw a black bear running across the firing-line just north of the Park, and on January 8, Junior Naturalist F. R. Oberhansley viewed the carcass of a bear in the same vicinity. These men surmise that this animal might have been literally bombarded out of his den by the heavy firing of the hunters massed in the area, and that the bear was unable to make good his escape.

Bears have been observed outside their dens in winter at various times through the years, usually after unseasonably warm days, but with the exceptions noted (with others unrecorded and unknown), the bears did not go more than a step or two from the entrance of their dens.

From actual observations of bears in

hibernation, we know then, that they sleep for indefinite periods, are restless at times, even to leaving their dens, and that when on such foraging expeditions they may eat. However, as far as I've been able to ascertain, the bear in hibernation will not eat. Ranger Frank Childs offered bacon and sweets to several bears while they were hibernating, but without exception, they refused the proffered food.

[<<< Previous](#)

[> Cover <](#)

[Next >>>](#)

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27-Dec-2004