

A NOTABLE SUCCESS IN THE BREEDING OF BLACK BEARS

By ARTHUR B. BAKER

It is well known to those familiar with collections of wild animals in zoological gardens and parks that bears in such places seldom produce young, and that to rear the cubs is still more unusual; so that it is generally conceded that the conditions incident to captivity almost preclude successful propagation. It is therefore worthy of notice that in a private park near Akron, Ohio, a pair of black bears has regularly bred and raised cubs during the last twelve years.

A little more than twenty years ago, Mr. R. H. Lodge established a picnic park along the shore of little "Silver Lake," at Cuyahoga Falls, near Akron, Ohio, operating it for several years by himself, and later with his son, Mr. W. R. Lodge. From the outset a small collection of North American animals was one of its features, and this was increased from time to time. In 1888 a pair of black bears was added. The female, captured on the north shore of Lake Superior, was received in July when about six months old, and a male of the same age was obtained shortly afterward from central Michigan. The two grew up together and when too old to be safely handled were placed in a brick pit built for their use. Here they have since lived (August, 1903), and that they have thriven during the fifteen years of captivity is apparent from the accompanying illustration (plate LI), which shows the two old bears and their three seven-months-old cubs.

The first cub was born toward the end of January, 1892, when the parents were four years old. The male was then seen at the entrance to the den with a dead cub in his mouth, but a prompt and careful examination of the premises failed to discover any others. With the exception of three years, when conditions were unfavorable, this pair of bears has since produced young each year, the record of births being as follows:

1892, January 23. One male cub, found dead.

1893, January 24. Two males and one female.

1894. No cubs born, owing to young of previous year having run with the mother throughout the summer.

- 1895, January 23. One male and one female.
1896, January 24. Two males and one female.
1897. One male (exact date of birth not noted, but between January 21 and 27).
1898, January 24. One male and one female.
1899, January 27. Three males.
1900. No cubs born, as young of previous year had run with the mother during the summer.
1901, January 26. Two males and one female.
1902. No cubs born.
1903, January 21. Two males and one female.

After the first litter, all of the cubs were raised, except five which met accidental death at ages varying from one to eight months.

The bears are kept in a circular brick pit 20 feet in diameter and 12 feet deep, built on the eastern slope of a hill where the ground is dry and there is good drainage. On the upper side, the top of the brick wall rises about three feet above the surface of the ground. The floor of the pit is of terra-cotta blocks set in cement and slopes toward the entrance gate, where drainage is provided by a gutter of the same materials. The brick-lined entrance passage, about 10 feet long and 6 feet high, is provided with inner and outer gates of iron grating and thus affords a chamber to separate the bears from the main pit when desirable. There is a water tank about 3 by 6 feet at one side of the pit. Two retiring dens are excavated in the bank, each about 5 by 6 feet and 4 feet high. These are 8 or 10 feet beneath the surface of the ground, are lined with brick and connected with the pit by a 24-inch circular opening. The entrance passage is provided with a similar but somewhat larger retiring den with a ventilating shaft in the top, while the only opening in the others is that leading to the pit. There is a supply of water, under pressure, within convenient reach, and the pit is frequently and thoroughly washed with a hose. When the retiring dens require to be cleaned, the bears are confined in the gateway passage.

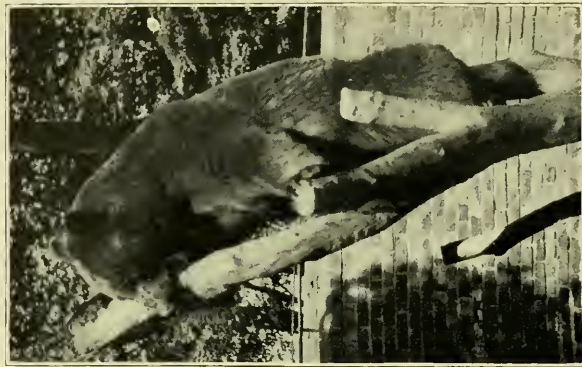
The male bear is put with the female about the first of June and they mate in the latter part of June or the first week in July. They remain together in the pit until the time of hibernation. The cubs are born between the 21st and the 27th of January. Their presence in the den is at once made evident by their whimpering, which can easily be heard at the ventilator, but they are not seen till early in March. They are surprisingly small as compared with the size of the adult, for they weigh, at birth, only nine to twelve ounces.



THE FAMILY OF BEARS AT SILVER LAKE PARK.



BLACK BEAR, TWELVE HOURS OLD; WEIGHT TWELVE OUNCES.
(Springfield, Mass.)



THE FATHER OF THE AKRON
FAMILY.

The eyes are closed and remain so for a month or more, and a little short, velvety hair on their bodies is the only indication of the heavy coat which they later acquire. (See plate LII.)

As the mother is likely not to breed while giving attention to the cubs, they usually are separated from her before the end of May, and thereafter are raised by hand. For the first few weeks their food consists entirely of milk; then they are gradually transferred to the mixed diet of the older bears. The cubs are vicious in their greediness and cannot be trusted to take their milk together; when only three and a half months old, one killed his brothers in a fight over a pan of milk.

The food given to the older bears is approximated as nearly as circumstances permit to that which they would obtain in the wild state. Scraps from the hotel and picnic tables furnish a considerable part of their fare during the summer, but throughout the season they are liberally supplied with such suitable green food as can be obtained. Dandelion tops, clover, and some other vegetables come with early spring and are followed by green corn, berries, and watermelons; and in the fall acorns are gathered for the bears. Green corn seems to be the favorite food and is consumed most largely in the fall, when the bears become very fat.

Accumulated fat and the approach of cold weather combine to dull the bears' interest in the outside world, so that they turn their attention to securing retreats for winter, for at the first severe weather each animal begins to make ready its den by dragging into it large quantities of dry leaves. They become more and more sluggish and about the middle of December withdraw to the dens for their long winter sleep. Usually they remain undisturbed until the beginning of March, when the first warm days bring them out to reconnoiter, and they soon afterward resume their interest in the activities of bear life.

The old bear is a model mother to the cubs as long as they remain under her care, even refusing on their account the attentions of her mate, but when they are taken away her affection for them seems soon to end. The two cubs of 1898 were removed in May and returned to the mother early in October, after first being kept for two weeks with only a grating between. She had seemed to recognize them, but when they were put together she at once caught the little male by the head and killed him, and only forcible measures prevented her from climbing the tree and repeating the operation on the other cub, which had taken refuge there. The father cannot be trusted at all with his offspring while they are very small. This

fact is recognized at Silver Lake Park and has been only too often proved in zoological collections elsewhere.

A number of the bears reared at Silver Lake have been sent to other parks, while some have been sold for meat. Several females were kept till they reached breeding age, at four years, and a second pit was built for them similar to the original one. They have produced a number of cubs.

The success of the Messrs. Lodge with their bears should not be attributed to any one feature of their management. The large amount and the character of the uncooked vegetable food used, probably have much to do with it, but the opportunity for isolated hibernation in snug, dry dens, and the manner of treating the mother and young, must have contributed largely to the result. The fact that there has not been a case of sickness among their bears, nor a death except through accident, is sufficient measure of their success.

It must not be inferred that bears have not bred in captivity elsewhere in the United States, for instances are well known, including the following: A grizzly bear in one zoological garden produced, in twelve litters, twenty-two cubs, but only one was reared. In another, twelve cubs out of thirteen died on the day of birth and one lived eleven days. Mr. W. T. Hornaday, Director of the New York Zoological Park, writes as follows regarding a birth in Prospect Park, Brooklyn: "In a den of about 20 by 30 feet, in which were five black bears, the oldest female gave birth to two cubs, and reared them. Her den was shallow, and its interior was badly exposed, but the mother persistently fought off all would-be intruders, and took good care of her young."

In Forest Park, at Springfield, Massachusetts, several cubs were born, one of which was reared. A black bear from the Yellowstone National Park, which was received at the National Zoological Park at Washington, on October 15, 1893, gave birth to two cubs on the 4th of the following February; one was accidentally killed by the mother the following day, while the other she reared to maturity. The weight at birth was nine ounces and the length eight and a half inches. The eyes were first opened on the thirty-ninth day.

Hibernation in captivity appears to be more unusual than breeding, though several instances of this have been noted, and one, given by Mr. W. T. Hornaday, is especially interesting. The bear in question was at Mandan, North Dakota. He was kept on a long chain in a vacant lot, and on the advent of severe weather dug a hole about five feet deep in the open prairie, going down at an angle

of about 45 degrees. He retired into this hole on December 14 and did not reappear until March 17 of the following year.

In closing this brief account, acknowledgment is made of the courtesy of Messrs. R. H. and W. R. Lodge in giving information and furnishing photographs, also of attentions received from them during a visit to Silver Lake Park. It is hoped that a knowledge of their methods in caring for bears may be of service to others who have these animals in their charge.



Black bear, four months old,
Springfield, Mass.