COLONIES OF ILLINOIS BATS INVADED BY BUSINESS

BY COLIN CAMPBELL SANBORN CURATOR OF MAMMALS

From the war clouds on the horizon there comes to our ears the thunderous threat of various types of alphabet bombs. Farsighted businessmen, in making plans for this eventuality, are quietly looking about numbers of these bats, which were offered to various institutions and biological supply houses in the city, including Chicago Natural History Museum.

Although the Museum has an adequate representation of the local bats, the staff of the Division of Mammals is always in-



Courtesy Acme Newspictures

WINTERING BATS IN ABANDONED ILLINOIS MINE In an old limestone mine near the town of La Salle about 5,000 bats were found hibernating. Owners of the mine plan to use it as a vault for vital papers in case of atomic war.

for underground storage rooms where records and files can be safely stored outside the area of strategic targets.

The American Record Storage and Depository Company of Chicago selected an old limestone mine near La Salle, Illinois, for the development of a bomb-proof storage shelter. This old mine, unworked for fifty years, was used to hide a still during the "Dry Era" and was tried unsuccessfully as a mushroom garden, but otherwise it had not been of financial value.

THOUSANDS OF BATS

The company was surprised to find the mine inhabited, however, by some thousands of bats quietly roosting on the walls and ceiling until spring arrived to arouse them from their frigid sleep and to send them forth to other caves or abandoned mines where the phenomenon of producing and raising more bats would take place. Unfortunately, development and construction work necessitated the removal of some terested in examining colonies of bats and in identifying the species as a matter of record. Melvin Kahn, president of the company, generously granted permission to visit the mine and arranged to have its agent in La Salle act as guide.

So it happened that on the morning of March 19, with the thermometer at 18 degrees and flurries of snow in the air, this Curator, accompanied by Rupert L. Wenzel, Curator of Insects, drove south to examine the bat colony. In spite of the cold the first hardy bird migrants were making valiant efforts to sing, and snatches of song from robins, song sparrows, and redwinged blackbirds reached us faintly now and then on the frigid wind.

PARASITES STUDIED

The interest of Curator Wenzel lay not in the bats themselves so much as in the parasites that live on, and only on, the bats and that do not transfer themselves to human beings. In this northern area these consist of mites, fleas, and bat "bedbugs." These latter live in the cracks in the walls of roosting places and come out when hungry to have a meal of blood from the nearest bat.

Our indoctrination and introduction to the mine was given us by Roy Phlak, the architect for the company, who showed us plans of the mine workings and then guided us to and through the mine. He left us then to our own bat-hunting methods, with a promise to bring a search party if we did not return to La Salle by a certain fixed hour.

The mine, dug into the side of a hill, was comprised of an upper and a lower level. In the upper level the ceiling was low. There were many entrances admitting more light and cold air than desirable in bats' winter bedrooms and so this level was uninhabited.

HANG IN CLUSTERS

The lower level was roughly one large room about 500 feet square, with many halls and their connecting passageways leading away from the one open entrance. It was warm, about 50 degrees, dark, fairly dry, and apparently most acceptable to the bats. We found them in clusters of from two to fifty hanging from ledges on the ceiling or against the walls. Others were solitary, seemingly not needing the companionship or the heat of their kind. Many old drill holes, made for blasting when the mine was in operation, were also occupied by the bats. In some they hung from the top of the hole and in others they lay piled one on top of another helterskelter, as though, when tired of hanging, they had fallen in a heap. In all, it was roughly estimated that there were about 5,000 bats in the mine.

A careful examination of these clusters and solitary individuals showed that there were four species of bats in the colony. The big brown bat (Eptesicus fuscus), represented by not more than a dozen individuals, hung rather low on the walls, not more than three feet from the floor. The pipistrelle (Pipistrellus subflavus) was found in small numbers in one hall well back from the entrance. Its reddish color and small size at once identified it. The majority of the bats were the little brown bat (Myotis lucifugus), and they occupied spots on the ceiling and the walls in all parts of the cave. The moisture on them, reflected in the rays of our electric lanterns, gave them a varicolored appearance so that some looked white and others almost black. Brought into daylight, however, with the drops of water shaken off, they were all the same color.

Among the little brown bats were some that seemed to have much larger and broader ears and were more yellowish on the underparts than the others. These proved to be Trouessart's long-eared bat (Myotis keenii septentrionalis), whose range includes almost all of the eastern half of the United States. We were very glad to find it because there are only three previous records of its occurrence in Illinois. It was present in small numbers, scattered here and there throughout the mine.

We brought home twenty bats representing the four species and these Curator Wenzel examined microscopically for parasites. He found on the little brown bat three specimens of a flea (*Modopsylla insignis*) hitherto poorly represented in the Museum collection and two or three species of mites. No "bedbugs" were found in the cave and none on the bats, but this was not surprising as they are not very active during cold weather.

This colony of bats is the largest known close to Chicago. The mine did not appear to be used as a breeding place during the summer, but it is possible a few bats might be found in it then. How long the bats have used the mine cannot be estimated. It is to be hoped that all their retreats will not be taken from them because bats are important in the destruction of noxious insects.

The effects of the policy of Moscow reach even into the underground roosting places of bats!

NEW INDIAN HALL-

(Continuéd from page 3)

These Indians, who made their living by farming and by hunting the buffalo, lived in houses made of poles that were covered with reed mats or grass thatching. The exhibits in this section show their house types, household goods, tools and utensils, clothing, art, and warfare.

Two general exhibits are displayed in the new hall. One shows the Asiatic origin of the Indians, their spread in America, and the various culture areas that had been established by the time of discovery. The other deals with the modification of Indian culture brought about by contact with the culture of the White men.

DISPLAYED IN MODERN MANNER

The new hall is well lighted and the newest exhibition techniques have been employed. Each exhibition case has individual illumination so that the complete contents are easily seen, and every effort has been made to add to the attractiveness of the exhibits. The upright floor cases have been painted a neutral gray color and are placed back to back in order to make a compound case 4 feet wide, 12 feet long, and 7 feet high. Each half of such a compound case provides an exhibition space about 12 feet long, 7 feet high, and 2 feet wide. For protection against damage by moths and other insects, each floor-case is equipped with a built-in fumigating tank that can be

serviced without opening the case. Hanging wall-cases along one side of the hall are 4 feet high, 6 feet long, and one foot wide. Other cases of varied sizes contain miniature dioramas.

The story of the Indians of the Woodlands and Prairies is told in terms of dioramas, idea-exhibits, and arrangement of selected specimens in carefully planned categories. In general, the idea-exhibits provide a social context for exhibits of specimens by category, and the dioramas illustrate ideas and activities that would be extremely difficult or impossible to convey by specimens alone. Various tones of green have been used as background colors for the exhibits of the Indians of the Woodlands and shades of yellow for the Indians of the Prairies. Throughout the hall there has been an effort to avoid overcrowding within the cases.

MAPS AID VISITORS

Labels are brief and composed of cut-out letters, except for a general label that is printed and framed. With each general label there is an accompanying map showing location or distribution of the Indians represented.

Clothing is displayed on manikins of papier-mache. These manikins are featureless and stylized so that attention is focused on the clothing. The old-style manikins were poor substitutes for reality and frequently drew attention to such a degree that the observer did not notice the clothing, which, after all, was the point of the exhibit.

The exhibits in the new hall were planned by the curatorial staff of the Department of Anthropology and executed by Artist Gustaf Dalstrom. The installations were undertaken by Preparator Walter C. Reese. Dioramist Alfred Lee Rowell is responsible for the dioramas, and Ceramic Restorer John Pletinckx made the manikins.

WORK OF ART STUDENTS IN SPECIAL EXHIBIT

Drawings of mammals, birds, and other subjects displayed in this Museum form a special exhibit by students in the Junior School of the Art Institute of Chicago that will be held in Stanley Field Hall from May 1 to 31, inclusive. The students represented are those whose classes meet periodically in this Museum for special work on nature in art and design. Two members of the Natural History Museum staff, Gustaf Dalstrom, Artist in the Department of Anthropology, and Douglas E. Tibbitts, Staff Illustrator, made the selections for the exhibit. Mrs. C. S. Howlett, Head of the Junior School, co-operated in judging the work. The exhibit includes productions both of the classes for students from 10 to 17 years of age and of the general drawing classes for first-year students from 18 to 40 years of age.

FIFTY YEARS AGO AT THE MUSEUM

Compiled by MARGARET J. BAUER

Working of the dinosaur quarries in Colorado, which were discovered and partially exploited in 1900, was continued during several months of the summer of 1901 by a party under the direction of Assistant Curator Elmer S. Riggs. The work involved considerable blasting, tunneling, and the construction of a temporary ferry.



Drilling to blast dinosaur quarry

The number of expeditions in the field in 1901 outnumbered those sent out in any previous year. Listed below are the men in charge and the places they visited:

Anthropology: W. A. Phillips, to southern Illinois; Stephen C. Simms, to Arizona and California; J. W. Hudson, to California; Charles L. Owen, to Arizona; George A. Dorsey, to Oklahoma and Arizona; Merton L. Miller, to Columbia River Basin; and C. F. Newcombe, to Queen Charlotte Islands, British Columbia.

Botany: Charles F. Millspaugh, to Jamaica. Geology: Elmer S. Riggs, to western Colorado.

Zoology: S. E. Meek and F. E. Lutz, to central Mexico.

Southwest Botanical Expedition

On May 20 the Museum's 1951 Southwest Botanical Field Trip, conducted by Dr. Hugh C. Cutler, Curator of Economic Botany, will leave for six weeks of field work in New Mexico and adjacent Arizona. Most of the time will be spent in west-central New Mexico studying the vegetation growing about sites such as Tularosa Cave, which was excavated by the Museum's 1950 Southwest Archaeological Expedition.



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