

place for holding ceremonies. These "great kivas" were probably used for celebrating large communal ceremonies. The larger of these two great kivas measured 83 feet in diameter, and is the largest structure of this type yet found. The lesser great kiva measured 43 feet in diameter. Neither of these structures was roofed.

In all, the writer and associated archaeologists have spent eight summers in the excavation of Basket Maker sites in Colorado. About the first of June the ninth expedition, sponsored by Mr. Stanley Field, President of the Museum, will resume this work, but a new field will be entered this year. The 1939 operations will concentrate upon the excavation of some ruins near Glenwood, New Mexico. The new sites belong to what is known as the Mogollon culture, and investigations will be conducted to determine whether or not there was a cultural connection between the early Mogollon and Basket Maker cultures.

1939 IS YEAR FOR APPEARANCE OF THE 17-YEAR CICADA

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In many of the forest preserves in Cook County last month the ground under the trees was perforated with numerous openings or vertical burrows, some topped with capped mud chimneys. These burrows indicated that the compact brood XIII of the seventeen-year or periodical cicada—sometimes incorrectly called the "seventeen-year locust"—would again make its appearance in large numbers in woodland tracts of northern Illinois, eastern Missouri, southern Wisconsin and Michigan, and northern Indiana, during the spring of 1939.

A few inches below the burrow openings lay the waiting pupae that represent the third stage in the life-history of this cicada. For seventeen years (in the northern states) the young or larvae, which the pupae closely resemble, have lived in the ground, where they sucked the juices of roots and rootlets.

During some night, possibly in the latter part of May before this publication, or at least in the early part of June, the pupae were due to leave their burrows almost simultaneously and crawl up on some nearby object. When this occurs, a longitudinal slit appears in the skin of their backs, and therefrom emerge the flabby, white adults with little wrinkled wing pads. Within a few hours the soft wings expand, harden, and become nearly transparent, while at the same time the body hardens and assumes its characteristic color.

On the day following their emergence from the pupal stage the adults are ready to mate, and the females begin to lay their eggs in the terminal twigs and branches of trees by means of their sword-shaped ovipositor. As a result of this egg-laying habit the leaves of many terminal twigs soon turn yellow

and the twigs may also be blown to the ground by strong winds. While the females are fulfilling their mission in life, the males are busy producing their familiar, prolonged, buzzing sound. And in from four to six weeks their adult life is ended.

MAY FLIES TO APPEAR AGAIN

Within a month or more countless numbers of fragile insects known as May flies will also again make their appearance in the Chicago area and elsewhere on or near the shores of the Great Lakes. They will annoy housewives because of their fondness for artificial light. Every year swarms of them descend upon this city and its suburbs.

These four-winged creatures, with their two or three hair-like caudal appendages, are of interest on account of their brief adult life, which may last only a few hours—rarely more than two days. Unlike other insects they molt or shed their old skin after their wings are fully developed. The name "May fly" is not a misnomer, for some species appear during May in certain places.

Although the adult life of May flies is an

ephemeral one, which is the reason why the Greeks of Aristotle's day called them *Ephemeron*, they are in fact rather long-lived insects. Their development from the egg to the adult or winged stage actually requires from one to three years. But except for a few hours or days they live as wingless nymphs in lakes, ponds and streams, where they feed mainly on low forms of plant life. Many of the nymphs in turn are eaten by fish. In some waters it has been found that nearly a fifth of the food of fish consisted of May fly nymphs.

When the nymphs are full-grown, they come to the surface of the water, and from a slit or fissure that appears in their backs the winged adults emerge. After finding a convenient resting place like a wall, tree, or blade of grass, the adults shed their old skin, including that of the wings, the skins remaining attached to the objects upon which they were shed. Unable to eat anything during their short adult life, they nevertheless are now ready for mating. The females lay their eggs on or in the water—hundreds to several thousands of them.

DANISH AND NORWEGIAN ROYALTY VISIT FIELD MUSEUM

Twice recently Field Museum has been host to European royalty. On April 25, Their Royal Highnesses, Crown Prince Frederik and Princess Ingrid, of Denmark, were guests of the institution. On May 4, His Royal Highness, Crown Prince Olav, of Norway, was a visitor to the Museum.

Prince Frederik and Princess Ingrid were escorted to the Museum by Mr. Reimund

Baumann, the Danish Consul, and Prince Olav by Mr. Sigurd Maseng, Consul of Norway. Each of the royal parties was conducted on a tour of outstanding exhibits by the Museum Director, Mr. Clifford C. Gregg. All of the royal guests indicated especial interest in and appreciation of the Races of Mankind sculptures, by Malvina Hoffman, in Chauncey Keep Memorial Hall.



Photograph by courtesy of Chicago Daily Times

Royal Personages at Field Museum

Their Royal Highnesses, Crown Prince Frederik and Princess Ingrid, of Denmark, on tour of Chauncey Keep Memorial Hall during their visit to Chicago. They were extremely interested in the Races of Mankind sculptures by Malvina Hoffman. Left to right: the Princess, Mr. Clifford C. Gregg, Director of the Museum, and the Prince.



Gerhard, William Josiah. 1939. "1939 is Year for Appearance of the 17-year Cicada." *Field Museum news* 10(6), 2-2.

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