WHALES, MOST REMARKABLE MAMMALS THAT EVER LIVED

By D. DWIGHT DAVIS
CURATOR OF VERTEBRATE ANATOMY

Whales are the most gigantic animals that ever lived on earth. A blue whale 100 feet long and weighing 150 tons is larger than the largest of the dinosaurs. Beside it a ten-ton elephant is a pigmy.

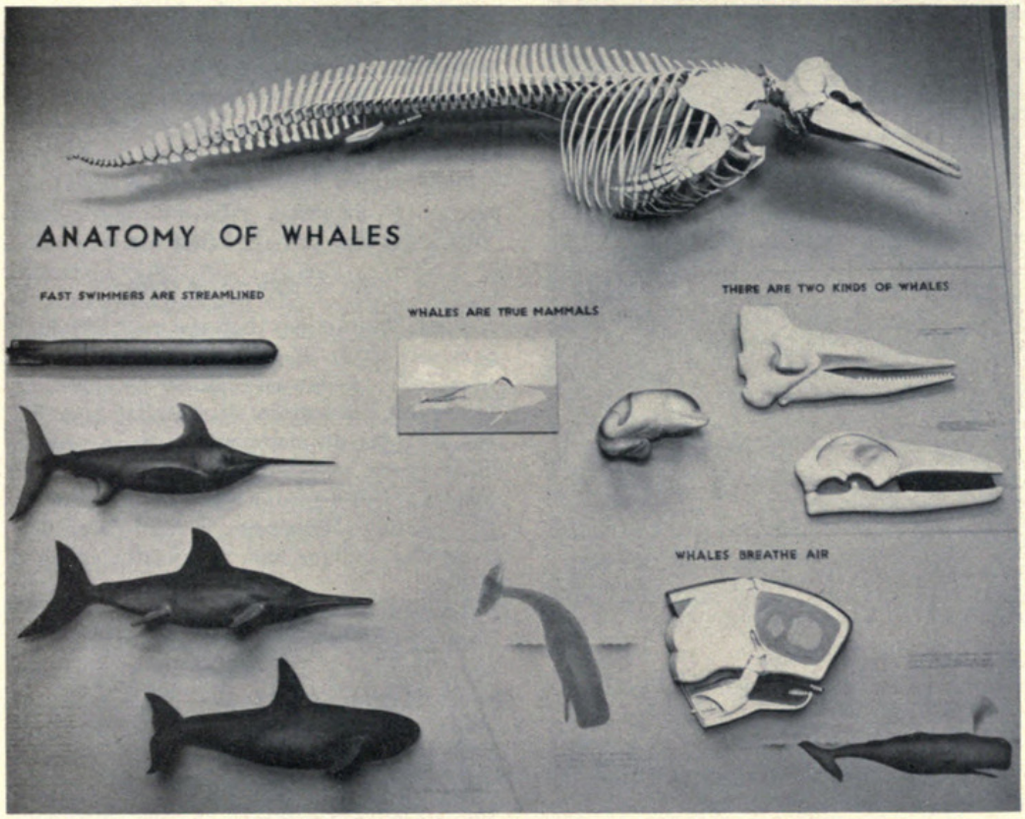
Partly because of their tremendous size, partly too because of the difficulties of observing them, and, finally, because man has long engaged in hunting them, whales have always attracted interest. In the vast expanse of the ocean even a whale is a tiny object, poorly seen because, like an iceberg, most of its bulk is hidden beneath the surface. Even today a beached whale causes a flurry of local excitement and is likely to be pictured in newspapers throughout the country.

The "beaching" of a whale is the key to the whole story. The largest whales can be as big as they are only because their enormous bulk is supported by water. A creature of such proportions would be helpless on land; the muscles required to move such weight would themselves be so great that the monster would have to be even larger, requiring still greater bones and muscles, and so on ad infinitum. Engineers have a simple formula to prove that it can't be done.

Whales are mammals, no matter how fishy they may look. Other mammals—seals, otters, or beavers, for example—spend a good deal of time in the water, but none is so completely tied to an aquatic life as are the whales. Only the manatees and dugongs approach the whales in their dependence on water, but they never venture beyond the shallow coastal waters and are less specialized.

Adapting a hairy, four-footed, air-breathing mammal to a perpetual life on the high seas was something of an evolutionary problem, and the astonishing contrivances by which this was accomplished have excited the wonder of biologists from earliest times. Whales are the most highly modified of all known mammals, living or extinct.

Merely cataloguing some of the problems whales had to solve gives an idea of the adjustments that were required in their evolution. They are warm-blooded like other mammals. But water conducts heat 27 times as rapidly as air, and the thick layer of fatty blubber is the whales' answer to this insulation problem. Water is 227 times as dense as air, and an animal moving through water even at the relatively slow speed of a whale must be as well streamlined as the fastest jet plane. For the same reason, a man-made torpedo is well streamlined, although it travels through the water at a top speed of only 30 to 40 miles per hour. The hind legs are missing in all whales, but hip bones remain as a functionless vestige.



WHALE 'STREAMLINING' ILLUSTRATED IN NEW EXHIBIT

A model of a torpedo on the left shows how man has adopted nature's methods to decrease water resistance to a minimum.

Like other mammals, whales nourish their young with milk. To do this successfully they have developed a remarkable system of injecting milk into the mouth of the young. Even special physiological adjustments to drinking salt water were necessary in an animal that never comes into contact with fresh water.

Of course a whale has no gills and would drown promptly if deprived of air. The devices for insuring a constant supply of air—and for insuring that water cannot get into the lungs—are remarkable. In all whales there is only one nostril. Instead of being on the tip of the snout, where water could enter as the whale lies on the water surface, it opens on top of the head, as the so-called "blowhole." The larynx, or "voice box," is thrust directly into the back of the nose, so that it is impossible for a whale to get food or water into its "Sunday throat."

A series of models explaining some of these remarkable modifications was recently installed in the Whale Hall (Hall N-1). The models were prepared by Artist-Preparator Joseph B. Krstolich under the direction of the author. A companion exhibit covering the biology of whales is in preparation.

BLUE MUSHROOMS

By JULIAN A. STEYERMARK
ASSOCIATE CURATOR OF THE HERBARIUM

Sometimes the experiences that befall a botanist are amusing as well as interesting and scientifically profitable. For instance, during the summer of 1949, while on a collecting trip in the southern part of Missouri, I was botanizing the slopes of a deep canyon known as Grand Gulch, when I spotted a dark blue object on the ground and discovered to my surprise that it was a mushroom.

Back in Chicago, I immediately turned the specimen over to Dr. Francis Drouet, Curator of the Cryptogamic Herbarium, with the request that he try to name it for me, assuring him that I had never observed a mushroom of such unusual color. He at once recognized it as a mushroom known botanically as *Lactarius indigo*, and showed me an illustration of it.

ONE FROM GUATEMALA

Then Dr. Drouet showed me to my great surprise and bewilderment the only specimen of this species in our herbarium, which I had collected in 1942 in Guatemala, Central America, on the volcano of Santa Clara. The label of this Guatemalan collection showed that I had recorded the bluish color of this specimen realizing its unusual character.

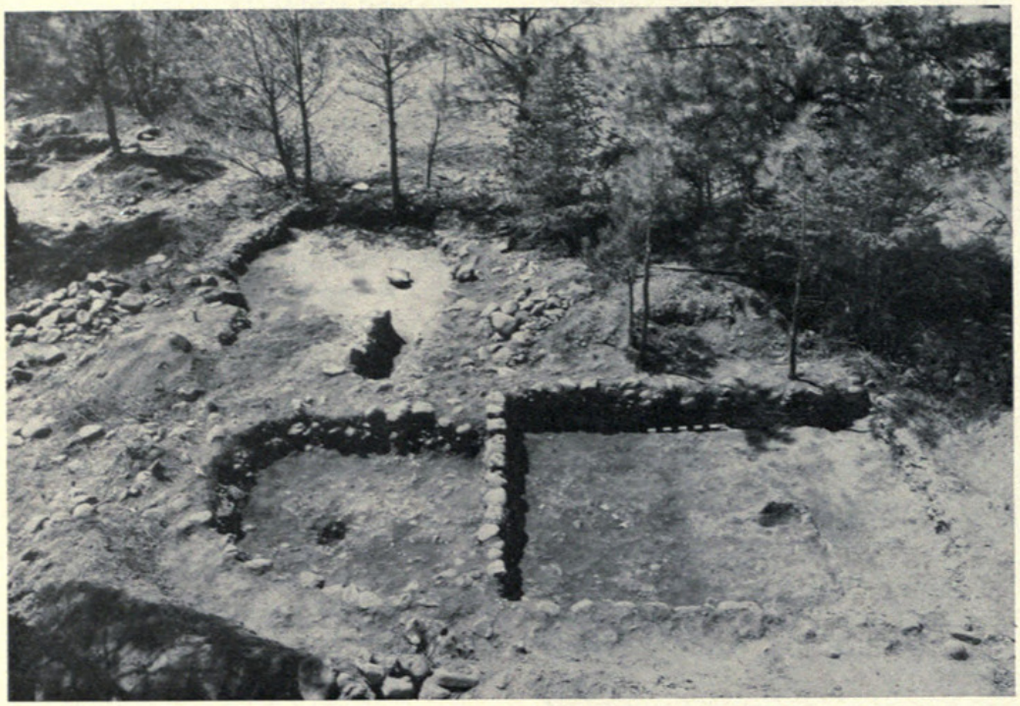
This brought up the question of how common blue is as a color in mushrooms and other fungi. Talking with Dr. Drouet

(*Continued on page 7, column 3*)

RESURRECTING A PREHISTORIC INDIAN VILLAGE

By PAUL S. MARTIN
CHIEF CURATOR, DEPARTMENT OF ANTHROPOLOGY

WE MADE some startling archaeological discoveries—Rinaldo* and I—during the summer of 1949 in remote Pine Lawn Valley in the Apache National Forest of western New Mexico, where we were conducting the 15th Archaeological Expedition to the Southwest of Chicago Natural History Museum. We are studying there a culture called Mogollon, which differs greatly from the better-known Pueblo "cliff house" culture.



NEW MEXICO HOUSING DEVELOPMENT, A.D. 1000
An example of earliest surface house with stone masonry walls—South Leggett Pueblo, excavated by the Museum's Archaeological Expedition to the Southwest.

Our objectives in the 1949 season were to hunt for the houses in which Early Man lived (by "early" we mean about 4,500 years ago) and to find and to excavate some ruins that, on the basis of superficial studies, might date at about A.D. 1000.

In previous seasons we had excavated ruins that are dated by estimate at A.D. 500, 600, 700, and 900, respectively. These ruins consisted entirely of separate pit houses scattered here and there in the forest. A pit house is a kind of cellar-house, with the floor three or four feet below ground level and a roof made of logs and dirt.

UP OUT OF THE CELLAR

But the excavations of 1949 brought forth information of quite a different character. The houses built by the Indians of about A.D. 1000 were completely unlike those of the preceding eras. These houses were built on top of the ground, with masonry walls. And, because it was made up of many contiguous rooms, each house was really a hamlet or small town. Such a village-house probably resembled a one-story apartment house and was occupied by several families.

What architectural innovations! Here we have for the first time in that area (1) stone walls or masonry, (2) rooms on top of the ground, (3) contiguous rooms, and (4) a special type of doorway. And, in addition, new and better tools and different kinds of pottery were found. Where all these new ideas came from is not certain, but we do feel sure they were borrowed and not invented on the spot.

Now, if you were to look at the crude and disintegrated walls we uncovered, you would certainly wonder what all this shouting is about.

Let me explain.

Let us turn the magic lens of the archaeologist on these ruins and then see what we can see.

OPENS SOCIOLOGICAL VISTAS

First off, by studying the architecture of these "villages," we find that there is more to the problem than just stones, mortar, and method of construction. The study of these early surface houses provides us with extensive knowledge of the way these Indians lived. We find that much is revealed about the customs, the era, and the profound changes in social patterns.

"How can that be?" you may ask.

The answer is that the ruins that we excavated and studied constitute a kind of book, which, with the proper "key," can be read. By reading, I mean that we can make inferences. But we are careful to shield our inferences from the stigma of "science fiction" that one reads in some newspaper supplements or pulp magazines.

Let me give an example of the kind of inference we may safely make. If we find bone needles in our excavations, we may infer that sewing was done, that perhaps skins were sewed together for various uses, including possibly clothing. If we find a small ash-filled hole in the floor of a house, we may assume that fire was known and that it may have been used for lighting or cooking or both. This is what I mean by "reading" the "book" or making inferences from the data obtained by excavations.

Now, under the "magic lens" what do our crude masonry walls and our ruined village-house become? What can we see?

ERA OF ISOLATION ENDS

First, we can see that the centuries-long isolation of the Mogollon Indians has been breached. Isolation, caused by dwelling in sheltered mountain villages, had retarded the cultural development of these people. They were outside the main stream of history. But now, for reasons yet unknown to us, new influences washed over the Mogollon Indians and profoundly changed them.

Instead of living in small one-family houses scattered here and there in the forest, they began to live together in one-story apartment surface houses with walls of stone. These conglomerations of rooms in effect constituted compact small villages, and such village life entailed changes in the social organization of the Mogollon Indians.

One of these changes would be the need for some governmental mechanism, such as a chief or a council or both. No longer could each man go his own way; others' feelings and wishes would have to be considered. Forms of social control would be needed with which to co-ordinate effort and reduce friction in this larger and more compact community. Habits of co-operation would develop. Building a multi-roomed unit to house five or ten families would require the pooling of skills and of efforts. Farming would probably be done communally. This might produce a greater food supply, and this in turn would create more stability and a somewhat greater density of population. A greater population would increase the chances of producing more inventors.

Because all the time of all the population would now not be needed to fill bellies, more leisure would be created and some energies could be devoted to the development of specialists—such as potters, weavers, basket-makers, architects, artisans and artists, priests, shamans, and politicians. Thus all

*Dr. John B. Rinaldo, Assistant in Archaeology.

patterns of conduct were probably modified —slowly but surely. Although these small towns were distinctly rural, yet the people had started along the rocky and arduous road toward urbanism, specialization, different roles (ruler and ruled, priests, etc.), and co-ordination of human efforts.

DAWN OF A CIVILIZATION

Thus, in these humble ruins, one can observe the very first stumbling steps that man took on his way toward civilization. These excavations, then, take on tremendous significance, for here we can observe in miniature the same processes of development through which our own ancestors went about 3,000 or 4,000 years ago.

The inferences seem conservative and logical in that they follow the general patterns of human conduct and breathe life into the rooms from which we cleared the debris of centuries. These inferences—resulting from the painstaking sifting of evidence, measuring, and mapping—make our summer's work worth while. We are not interested in details per se but for what information we can squeeze out of them. We found the "bones" of a village and, in a manner of speaking, we have articulated them and clothed them with flesh and blood, so that once more these villages are occupied and throb with human activities.

FEBRUARY LECTURE TOURS DAILY EXCEPT SUNDAYS

Tours of exhibits, under the guidance of staff lecturers, are conducted every afternoon at 2 o'clock, except Sundays and certain holidays. On Mondays, Tuesdays, Thursdays, and Saturdays, general tours are given covering all departments. Special subjects are offered on Wednesdays and Fridays; a schedule of these follows:

Wed., Feb. 1—Animals of Illinois (*Jane Sharpe*).

Fri., Feb. 3—Unusual Pets. Illustrated introduction in Meeting Room (*June Buchwald*).

Wed., Feb. 8—Exotic and Unusual Flowers (*Marie Svoboda*).

Fri., Feb. 10—Trees in Winter. Illustrated introduction in Meeting Room (*Miriam Wood*).

Wed., Feb. 15—Animals of the Orient (*Lorain Farmer*).

Fri., Feb. 17—Your Trip to Florida—Indians, Animals, and Plants. Illustrated introduction in Meeting Room (*Jane Sharpe*).

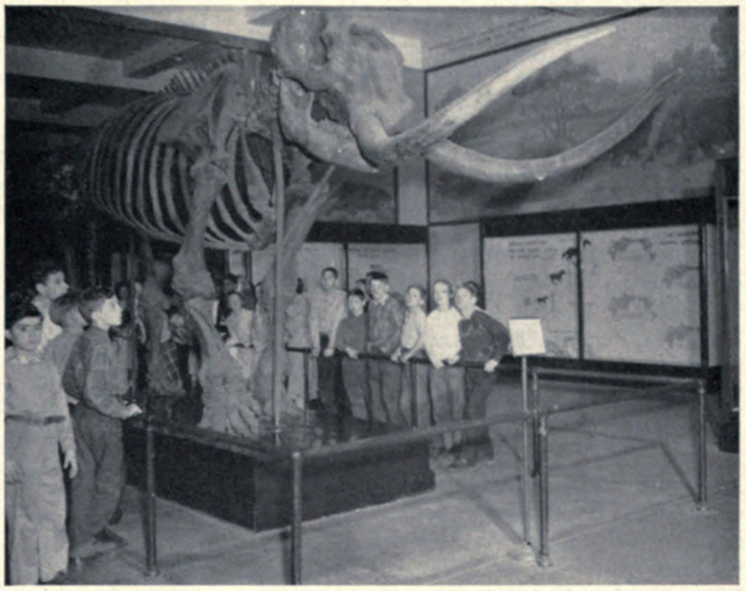
Wed., Feb. 22—Watermarks—The Work of Surface and Subsurface Water (*Anne Stromquist*).

Fri., Feb. 24—Getting Along with Winter—How People and Animals Adjust to the Cold. Illustrated introduction in Meeting Room (*Harriet Smith*).

SCHOOL TEACHERS LEARN HOW TO USE THE MUSEUM

BY MIRIAM WOOD
CHIEF, RAYMOND FOUNDATION

Did you ever stop to watch a teacher or Museum guide take a group of school children through the Museum halls? Many visitors are seen watching this never-ending and always-different drama in the Museum. They often interrupt their own browsing to watch in astonishment. Sometimes they smile, possibly as they think of their own school days. A few of these visitors get so interested in the school children that they follow along with them to listen to their comments and questions and to hear the answers and explanations given by the teacher or guide as the story of the natural history of the world unfolds in exhibit after exhibit.



SCHOOL CHILDREN STUDYING MASTODON SKELETON

Eventually the visitor begins to comment and ask questions: "How wonderful that children today can learn so easily by seeing!" and "How did that teacher learn to handle all those children so expertly?" or "How can she remain so patient with all the questions?"

It isn't possible to answer all these questions quickly or simply. But if this visitor happened along at a time when another kind of class was studying in the Museum halls he would hear some of the answers, because this other type of class is composed of students from colleges and universities who are studying and training to be teachers.

These classes of teachers-in-training come to the Museum to learn how to make use of a museum as well as other educational resources in a community. Under the direction of a Raymond Foundation staff member the teacher-students can observe other school classes studying in the Museum. They learn what to do and what not to do in bringing a class to a museum. They learn how to plan a trip and to make the important preparations for it in the classroom with their students. They learn what this Museum can do to assist them and what facilities there are here for their use. They discover, usually to their great amazement, that this Museum can be compared to a library where you cannot possibly absorb all the information or use all the material in one visit and that it is much better to use only certain parts as needed. Therefore the teachers-to-be learn what material is available and will know where to go and how to go about using it when needed.

Thus the visitor could readily understand that it is only through study, training, and experience that a teacher learns how to plan a class visit in the Museum and carry it out successfully. It is only necessary to watch an unprepared group struggling through a poorly planned educational trip to see the difference between their confused learning and the good time enjoyed by a class seeing and learning easily under expert direction.

The Museum staff is happy to have a part in helping teachers plan and prepare for better use of the Museum exhibits.

COMING: ADULT LECTURES AND CHILDREN'S MOVIES

On March 4 the Museum will begin both the spring course of illustrated lectures on science and travel for adults on Saturday afternoons, and the Raymond Foundation free motion picture programs for children on Saturday mornings.

The first of the adult lectures will be "Banana Country," by Dr. Arthur C. Twomey, of the Carnegie Institute, Pittsburgh. The lecture will be given in the James Simpson Theatre of the Museum at 2:30 P.M. Reserved seats are available to members upon application in advance.

The first of the children's programs, to be given also on Saturday, March 4, will be "Summer in Idaho." Dr. Twomey will appear on this program also and tell the story of salmon and trout fishing, western rodeos, and flowers and birds of Idaho and the famous Sun Valley. The children's program will begin at 10:30 A.M.

A complete schedule of programs of both adult and children's series will appear in the March issue of the BULLETIN.

'Spoiled' Youngsters . . .

CONDITIONING IN BIRDS

By AUSTIN L. RAND
CURATOR OF BIRDS

TO CONDITION, in psychological terminology, according to my unabridged dictionary, is to attach a subject to a new stimulus or response; it may also mean to produce a new attachment of stimulus and response in a subject. The classical experiments in conditioning and reflexes are those of Pavlov in the last century. The one best known consisted of sounding a bell each time food was given to a dog. Finally the salivary response resulted when the bell was rung even without the food being given to the dog. The dog was *conditioned* to the bell. First it had responded to the food, then to the food and the bell, and finally to the bell alone, by a flow of saliva. The beauty of this experiment is its simplicity, dealing as it does with a single reflex.

Though much behavior is more complex, experiments have been worked out to show how environment, in a broad sense, can influence inherited behavior. An illuminating example of this is one dealing with young loggerhead shrikes and the duration of their infantile behavior. Young shrikes, while in the nest, as with young passerine birds in general, are fed directly by their parents placing food in their mouths. One of the earliest behavior patterns these young birds acquire is to stretch up with widely opened mouth, fluttering wings, and buzzing calls, in anticipation of being fed. This we call begging. Though typically infantile behavior, it may reappear in courtship, but this latter we shall not consider here.

Ordinarily this infantile begging behavior is discontinued shortly after the young birds leave the nest and become able to feed themselves. In a state of nature, observations indicate that this change is probably hastened in part by the young birds themselves, who come to avoid having food thrust down their gullets and prefer to pick up the food for themselves, and in part by the waning interest of the parents in the young, which confers an advantage on those young who early become self-supporting.

CASE OF RETARDED DEVELOPMENT

Certain observations made from time to time have indicated that, though the age at which young birds change from infantile begging for food to self-supporting independence is fixed by instinct, certain external factors, notably the amount of care the young have received, can affect the age at which this change occurs. Indeed, there is a record of a young cedar waxwing raised by hand, who never learned to feed himself.

When I secured a brood of four young loggerhead shrikes, or butcher birds, the material was available to conduct a controlled experiment. The young birds were raised together by hand to the stage at which they were ready to begin to pick up things, to feed themselves, and to begin to abandon their infantile behavior of begging for food. This was when they were 21 days old. They were then divided into two lots and housed separately. One couple had a supply of food kept in front of them, and hand feeding was gradually discontinued and stopped as soon as possible. At the age of 28 days they fed themselves well,

though they still begged freely when I approached. By the time they were 39 days old they begged rarely, and after 45 days they were not seen to beg.

The other two birds had no free food available at any time and were fed completely by hand, the food being placed in their mouths. At the age of 28 days they had made no effort to feed themselves. By the time they were 53 days old they made efforts to feed themselves by trying to peck the food from the fingers instead of having it thrust into their mouths. They evidently would have changed quickly to independent self-feeding and abandoned their infantile begging behavior, but hand-feeding was continued. At the age of seven and one-half months, when the experiment was discontinued, though these birds were capable of feeding themselves, as was seen when food was dropped accidentally on the floor of their cage, they still begged for food from their human foster-parent.

OBJECT LESSON FOR PARENTS

The four birds used in this experiment were nest-mates, with similar hereditary and early environment. The birds in the lot that received only enough care to insure proper development became self-feeding and independent and lost their infantile begging behavior when they were about a month and a half old. The birds of the other lot, which received an excessive amount of care and were hand-fed without being allowed to develop the behavior that would have made them independent, retained the infantile behavior pattern of begging until the end of the experiment. They were then seven and one-half months old, and their nest-mates, under a different set of conditions, had lost their infantile behavior six months earlier.

Thus in some birds it appears that excessive care can be a conditioning factor. It can delay the loss of infantile behavior and the acquiring of normal independence. Though the young shrikes instinctively tried to develop their independent behavior, when this was not possible they continued their dependent conditioned behavior.

STAFF NOTES

At the annual meeting of the Ecological Society of America in New York, Chief Curator of Zoology **Karl P. Schmidt** was elected to the editorial board of the Society's journal, *Ecology* . . . . **Rupert L. Wenzel,** Assistant Curator of Insects, recently studied insect collections in the principal eastern museums . . . . **Donald Collier,** Curator of South American Ethnology and Archaeology, gave an illustrated talk on Peru for the Jackson Park Camera Club . . . . **Paul G. Dallwig,** Layman Lecturer, has extended his leave until next November. He will then resume lectures for Sunday audiences in the Museum . . . .At the recent annual meeting of the Society for the Study of Evolution in New York, **Dr. Theodor Just,** Chief Curator of Botany, spoke on "Fossil Floras of the Southern Hemisphere and Their Bearing on Continental Drift." He was elected secretary of the Society for 1950–52. In New York Dr. Just also attended the annual meeting of the Botanical Society of America, where he made a report on the activities of the Committee on Paleobotanical Nomenclature, of which he is chairman . . . . Several other members of the Museum staff presented papers at the meeting of the Botanical Society. **Dr. Hugh C. Cutler,** Curator of Economic Botany, spoke on "The Phytogeography of Bolivia." **Dr. Julian A. Steyermark,** Associate Curator of the Herbarium, spoke on "The Phytogeography of Venezuela." He was elected secretary of the Systematic Section of the Botanical Society of America. **Dr. L. H. Tiffany,** Research Associate in Cryptogamic Botany, presided over meetings of the Phycological Society of America and presented several papers. **Dr. Francis Drouet,** Curator of Cryptogamic Botany, attended and conducted research at the New York Botanical Garden. **Donald Richards,** Research Associate in Cryptogamic Botany, attended meetings of the American Bryological Society. **Dr. José Cuatrecasas,** Curator of Colombian Botany, spoke on "The Phytogeography of Colombia." He was appointed a member of the organizing committee of the Third South American Botanical Congress to be held in Bogotá, Colombia, in 1953.

NATURE PHOTO EXHIBIT OPENS FEBRUARY 1

The Fifth Chicago International Nature Photography Exhibition will open in Stanley Field Hall of the Museum on February 1. It will continue through February 28. In the display are more than 200 prints and 500 color slides from all parts of the United States and foreign countries as well. These were selected as the best among many times that number submitted.

The Annual Nature Photography Exhibition, sponsored jointly by the Museum and the Nature Camera Club of Chicago, has become a regular feature of the Museum program each February. The increasing popularity of nature photography is evidenced by the fact that there are now eight photographic exhibitions in the United States that are either limited to nature material or else include a nature division. It is gratifying to note that the Chicago exhibition is not only the largest of its kind in the world but that, in spite of its restriction to a specialized field, it is larger than many of the pictorial exhibitions. The number of entries has increased from year to year, and this fifth exhibit bids fair to be still "bigger and better" than all previous ones. Entries were received last year from Argentina, Australia, South Africa, Bermuda, Costa Rica, Canada, England, France, Holland, India, Italy, Mexico, Portugal, Scotland, and Switzerland, and also from Alaska and Hawaii and most of the states.

The Chicago Nature Photography Exhibition is one of the very few shows that meets all of the exacting standards as to management, efficiency, etc., of the Color Division of the Photographic Society of America. As a consequence, this show is rated by the above organization as a "Class A" exhibit.

It has been the policy of the Nature Camera Club to use five judges (rather than three) because a jury of this size provides a better balance of interests and insures a more equitable consideration of each entry. The judges this year are: Emmet R. Blake, Associate Curator of Birds at the Museum; William Dennin, photographic exhibitor, teacher, and writer; Harry Langer, Fellow of the Royal Photographic Society and Associate of the Photographic Society of America; Dr. Julian A. Steyermark, Associate Curator of the Herbarium at the Museum; and Robert K. Wyant, Curator of Economic Geology at the Museum.

In each of the two divisions of the exhibition (prints and color slides), there are three classifications, *Animal Life*, *Plant Life*, and *General*. Silver medals and ribbons will be awarded in the various print and slide classifications. The names of the prize winners will be inscribed on the Myrtle Walgreen plaque. The prints are displayed in fluorescent-lighted panels built especially for this purpose. The slides are displayed in rotation in a display cabinet. They will also be projected on the screen in the James Simpson Theatre on two Sunday afternoons, February 12 and 19, at 3 P.M.

An illustrated catalogue of the exhibit, available early in March, will be published by the Nature Camera Club. A list of the prize winners and reproductions of some of their entries will be featured in the March BULLETIN.

FIFTY YEARS AGO AT THE MUSEUM

Compiled by MARGARET J. BAUER

In the spring of 1900, the Field Columbian Museum added to its staff an osteologist by the name of Edmond N. Gueret to fill a post that had been vacant for more than a year. At the same time there came an enormous collection of skeletons that had been purchased from the renowned Ward's Natural Science Establishment where Mr. Gueret had been engaged in skeleton preparation since 1875. He assisted in installing this nucleus collection, and for forty years practically every skeleton exhibited in Hall 19 was mounted by Mr. Gueret,

The late Edmond N. Gueret

who thus left a notable monument to his skill and devotion to a chosen work. His knowledge of osteology, through sixty-five years of specialization, made Mr. Gueret an invaluable consultant for zoologists, paleontologists, and anthropologists. He died on November 30, 1940.

Horticultural Meeting

On January 18 the American Horticultural Council held a meeting in the Museum, with botanists and horticulturists representing various societies in attendance.

A cellulose-acetate model of a 350-pound Galapagos land turtle is on exhibition in Albert W. Harris Hall (Hall 18).

BLUE MUSHROOMS—

(*Continued from page 3*)

and Dr. V. E. Graham, noted mushroom authority of the Chicago region, I learned that blue is not confined to this species, which has been found in the Chicago area. Other mushrooms having a deep blue to purple color are *Leptonia euchroa*, *Nolanea caelestina* var. *violacea*, *Clitocybe cyanophaea*, *C. ochropurpurea*, *C. laccata* var. *amethystina*, *Cortinarius violaceus*, *C. caerulescens*, *C. caesius*, *C. alboviolaceus*, *C. purpurascens*, *C. iodes*, *C. lilacinus*, *C. michiganensis*, *Russula cyanoxantha*, *Tricholoma nudum*, *T. ionides*, and *T. personatum*, and one of the coral mushrooms, known as *Clavaria amethystina*.

EDIBLE THOUGH ALARMING

According to Dr. Graham, all of these mushrooms are edible, although many people would be loath to pick them at first sight, for the expression "turning blue at the gills" is suggestive of death or of a condition connoting illness or strangulation. One of the bracket fungi, *Polyporus pergamenus*, has a slight violet tinge. Other fungi having a purplish color are *Peziza violacea* and *Poria purpurea*. These three species are inedible.

In addition to the above fungi, Dr. Drouet called my attention to some other fungi that are definitely greenish-blue or bluish-green in color. For example, the common mold that attaches itself to spoiled citrus fruits, such as lemons, has a greenish-blue color and is a species of Penicillium, a relative of the famous *P. notatum*, source of penicillin. Finally, fungi of the family *Helotiaceae* belonging to the sac fungi (Ascomycetes) and known botanically as *Chlorosplenium aeruginascens* and *C. aeruginosum* are responsible for the blue-green or green color found in rotten wood.

All in all, blue is a comparatively rare color among higher fungi, which usually display other colors, including various shades of purple.

COLOMBIAN EXPEDITION MAMMALS RECEIVED

A collection of mammals from the states of Bolivar and Magdalena in northern Colombia has been received from Assistant Curator of Mammals Philip Hershkovitz, leader of the Colombian Zoological Expedition. Mr. Hershkovitz, who has been in the field since December, 1948, has made important collections at seven localities in northern Colombia. This is the first shipment received and contains 755 specimens representing practically all the known species from the region and some not before recorded from Colombia. Monkeys, kinkajous, tayras, sloths, rabbits, squirrels, spiny rats, and bats are well represented and about 65 skeletons of these are preserved.