

things; but unfortunately in our modern metropolitan centers we are too often many miles removed from the merest semblance of a natural environment in the biological sense of the word. It is an important function of institutions such as the Academy to present for the education and enjoyment of young and old alike, selected examples of the plant and animal life native to our own and to more distant parts of the world, represented as nearly as possible in their natural state.

This type of visual education is but one of the aims of the California Academy of Sciences. Many students, through an initial interest in the public exhibits in the Museum, are stimulated further to seek familiarity with our laboratories and research collections, and on becoming acquainted with the purposes and methods of research, are motivated to carry their studies into the fields of higher education.

Not long ago we had two visitors who brought us that warm glow of satisfaction alleged to come from doing good in the world. One was a young man just appointed to an instructorship in a major university, who spoke feelingly of the encouragement of his early interest in science given by the Academy's curatorial staff a dozen years ago. The other was a gray-haired professor, full of years and honors, who sat down to tell us of his boyhood visits to the Academy's museum on California Street in the 1880's.

But we started out to talk about that sixth grade class from the Whittier School in Berkeley. We seem to be getting off the subject—or are we?



WINTER CLOSING HOURS

BEGINNING December 1 and continuing through January, the Museum and the Steinhart Aquarium will close at 4:00 P.M., except on Saturdays, Sundays and holidays, when they will be open till 5:00 P.M. as usual.

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ACTION IN ART
(See page 3)

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December Announcement

THE REGULAR DECEMBER MEETING of the California Academy of Sciences will be held in the Auditorium of the Pacific Gas and Electric Company, 245 Market Street, San Francisco, on Wednesday evening, December 4, 1940, at eight o'clock. The business meeting will be brief and will be followed by the last of the fall series of lectures on the Beauties of Nature, on the Walter B. Scaife Foundation.



TERRITORIAL BEHAVIOR IN BIRDS

THE SPEAKER of the evening will be Dr. Alden H. Miller, Director of the Museum of Vertebrate Zoölogy at the University of California, whose subject will be "Territorial Behavior in Birds."

It has been known to naturalists for many decades that certain species of birds develop a possessive instinct during the nesting season and will vigorously defend the vicinity of their nest against intrusion by other individuals of the same species. It is only within relatively recent years, however, that detailed studies of particular birds have been made with a view to learning the manner in which this type of behavior has developed in certain groups or degenerated in others, and to determine what rôle it plays in the life of a bird. Some of our most common birds, such as the song sparrow, have developed the greatest territorial instinct. In other species, such as the cow bird and certain members of the cuckoo family, the territorial instinct is lacking to such an extent that the birds go so far as to covertly deposit their eggs in the nests of other species.

Dr. Miller has been carrying on research pertaining to the classification and natural history of certain species of North American birds, notably the loggerhead shrike or butcher bird and the junco or snow bird, for a number of years and is well qualified to speak as an authority on avian behavior. To all those interested in natural history, particularly as it relates to bird life, this lecture will indeed prove most entertaining.

The public is cordially invited.



APPLICATIONS FOR MEMBERSHIP

NOTICE is hereby given to all Corporate Members that the Council at its meeting November 15, 1940, approved the applications of Dr. LeRoy H. Briggs, Mr. James R. Dorrance, and Mr. Henry F. Swift for MEMBERSHIP in the California Academy of Sciences. If no objection to the election of these

applicants be received at the office of the Academy within two weeks after November 28, 1940, they will be considered elected.



AFTERNOON IN AFRICA

NO DOUBT the curiosity of our readers has been aroused by the illustration on the front page of this issue of the NEWS LETTER. It represents a bright impression of the Dark Continent by Jeanne Davis, one of a group of sixth grade pupils from Whittier University Elementary School in Berkeley who recently visited the Simson African Hall. Each member of the class sent a drawing, accompanied by a letter expressing his gratitude and mentioning certain items of natural history he had learned, to Mr. Raymond Smith who acted as the Academy's official guide during the visit.

Having selected Jeanne's drawing for reproduction we have room for one intriguing letter from another pupil with a distinctly masculine approach to natural history:

Dear Mr. Smith
I want to thank
you for showing us African Hall. I
don't think you know me but I was the
one who asked you so much about the
leopard and which would run away if
there was a fight the lion or leopard
Then I asked which would run the
panther or the leopard and you told
me that the panther was a black
leopard. Thank you again.

[Come, come Mr. Smith, let's not get away from the point.
Which would run? EDITOR.]

Each year thousands of students, ranging from grade school pupils to college men and women, visit the California Academy of Sciences, accompanied by their teachers or professors. Many of these journey from localities outside of San Francisco, and some classes come from distances as great as one hundred miles.

We may inquire what advantage, aside from pleasure, these annual or semi-annual trips on the part of science classes serve. It must be remembered that most biology classes, whether in the lower or higher realms of education, are conducted in laboratories or classrooms where the wonders of nature are learned from a book or a pickled specimen. The great out-of-doors is nature's laboratory where the student may learn of the complex interrelation of living