

of time in a state of torpor, can include stages in the life cycle of a shrub, an amoeba, and a hookworm, as well as a frog, a woodchuck, and a host of other plants and animals. Contrary to the implications of the term, hibernation is not restricted to the calendar winter. Many plants and animals start hibernating before the end of summer and continue in a state of torpor through part of spring. In the tropics and even in high latitudes, a long dry summer is characterized by a multitude of hibernating or, as it would be called in this case, aestivating plants and animals. Thus, the crucial part of hibernation is neither the time nor the place but the kind of suspended animation assumed by the organism.

In birds and mammals, complete suspension of vital activities means death. The definition of hibernation in the case of warm-blooded animals must be modified, therefore, to indicate a state of torpor acquired through a profound decrease of heat production accompanied by a lowering of body temperature to within a few degrees of environmental temperature. This physiological condition of hibernation, which must be reversible, rarely obtains in birds, the one authentic example being the poor-will, and is found in few species of mammals, none larger than the woodchuck. True mammal hibernators include some species of temperate-zone bats, the hedgehog and African tenrec, the ground squirrel, chipmunk, prairie dog, jumping mouse, pocket mouse, jerboa,

hamster, and dormouse. The spiny anteater of the Australian region is a true hibernator but whether or not its relative, the platypus or duckbill, of Australia and Tasmania can be so classified is not certainly known.

A number of carnivores, notably the bear, skunk, badger, and raccoon, are said to hibernate. These animals can pass through the preliminary hibernation stages of sluggishness, drowsiness, and dormancy as described for the woodchuck, but no farther. They can become completely passive but they never descend to true torpidity. With them there is no appreciable lowering of body temperature and they continue to produce enough heat to remain warm to the touch. All breed before or during the hibernation period and the female bear even produces and suckles her young during the winter. It seems then that compared with the woodchuck and other true hibernators, the bear, badger, skunk, and raccoon pass the winter in a state of relaxed, rather than partially suspended, animation.

Whether or not the woodchuck makes the traditional meteorological test on the second day of February, the devotees of Groundhog Day will not allow the fete to pass by unobserved. We suspect that while weather conditions at one end of the county may let the groundhog cast its shadow, the overcast at the other extreme might make for a different story, but still a story that has become a cherished part of American folklore.

BIRDS OF BALINSASAYO LAKES IN THE PHILIPPINES

By AUSTIN L. RAND
CURATOR OF BIRDS

THE COASTAL RANGE of eastern Negros is volcanic. On its jagged crest is a ragged, cup-shaped depression, little more than a couple of miles across, in which, side by side, lie the two Lakes Balinsasayo at an altitude of about 3,000 feet. Here Silliman University has a biology station, a lakeside house where I spent a week. From the crest I could look out to the islands of Cebu and Siquijor, the Straits of Cebu, and the Visayan Sea, and, dimly visible only on good days, Zamboanga far to the south. Inland the view was over rough, wooded slopes and peaks (that reach 4,500 feet) with some of the most magnificent forest trees I've seen anywhere.

The fading of daylight in the deep little mountain valley where the station stands comes suddenly and early. Our house was in evening shadow by 3 P.M., and it deepened to twilight while the sun was still shining on the slope opposite. I watched the evening happenings. First hornbills crossed high up, from valley wall to valley wall, on their way to some sleeping place; then spine-tailed swifts paid an evening visit and passed on. By 5:45 the first of the small bats appeared. Not until 6 P.M. when dusk had deepened did medium-sized fruit-bats come

to feed in their favorite tree near camp. Strangely they did not stop and feed but seemed to hover only a moment, snatching a bite here and there, on the wing. Later, about 7:30 of a moonlight night, I returned to see if they had settled down. But no, the medium-sized bats were still feeding in the same way. However, two big fruit-bats, real "flying foxes," had come into the trees and were feeding as I expected them to—resting in the trees, snarling, and sending down showers of fruit and seeds.

EXCLUSIVE TREE CAFETERIAS

Fruiting trees of many sorts bearing various-sized fruit are common here. They provide food for a great many birds as well as the bats. We found seven species of fruit-eating pigeons, a hornbill, and two flowerpeckers that depend on fruit, as well as many others that do so occasionally, but strangely there are no favorite trees to which great numbers of species and individuals come. Perhaps it's the very abundance of such trees here that makes the concentration about one tree, so striking a feature of the lowlands, unnecessary in these mountains. Another point is that certain fruit trees are used by only one or two species. For example, the fruit trees fed in by fruit-bats at night were not frequented by any birds

in the daytime. Another, a small-fruited tree, was frequented only by bulbuls while I watched. Does the abundance of fruiting trees allow each species to choose its own kind of tree, too?

There was only one flower-feeder, a sunbird, at this camp. This reflects a general condition of the Philippines, compared with New Guinea, for example. In the Philippines fruit-eaters are common, but flower-feeders few; while in New Guinea flower-feeders (including a species-rich family of honey-eaters, many brush-tongued lorries, and a couple of sunbirds) are as plentiful as fruit-eaters. Is there a difference in Philippine flowers that has discouraged flower-feeding specialization, or is it a zoogeographical accident?

In my experience, tropical flowerpeckers (tiny, short-billed, mostly brilliantly colored birds) have little to do with flowers, despite their name, and are mostly fruit-eaters. I spent some time watching an orange-breasted species. It was always a stolid, inactive bird, even when feeding in a fruit tree. Then, one day I got a surprise when I saw one of these birds moving actively about the twigs and leaves of a tall forest tree, as sprightly as any leaf warbler.

This brought to mind the two very different aspects of the diet of these birds and of corresponding modification of the digestive system. They eat fruit and also insects and spiders. The spiders pass down the gullet, into the stomach, and then into the intestine, as is normal for birds. With fruit it is otherwise. Berries are swallowed whole. These pass down the gullet, bypass the small stomach entirely, and go directly into the intestine. Apparently no stomach action is necessary for the intestines to extract the nourishment from the fruit, and the stomach has been modified accordingly. I wonder if the two types of activity, the lethargic and the sprightly, are also correlated?

PROTECTIVE FACTORS

Time after time as I've looked up into the forest trees my eyes have been captivated by the yellow belly of the elegant titmouse, the orange-yellow underparts of a flowerpecker, and the rich yellow venter of the canary flycatcher. They're certainly advertising colors. Hugh Cott, British biologist, showed that, in general, bright-colored birds are poorer in flavor than those whose colors are concealing in effect, and it is reasoned that this is a protection against predators that otherwise might be attracted by the bright colors. Cott worked mostly with north-temperate forms. I wonder if the same is true of birds of the tropical forests? Or, as is perhaps also true of coral reef fishes, is it that the protection of their habitat, the dense masses of foliage (as of coral) with many hiding places, have allowed

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COLOR PICTURES IN 3-D OF MUSEUM EXHIBITS

Three-dimensional color pictures on slides that preserve vividly the reality of the Museum habitat groups will be available for purchase in the Museum Book Shop about the middle of February. A viewer that brings out the full depth and color of the slides will also be available. The first group of slides, now completed, is called "Animal Adventures." In this group there are ten series of slides, each series containing six different views of animals in places such as Africa, India, and southeast Asia. There are plans for filming future series on birds, American Indians, and other subjects of interest to those who want to build a slide library that encompasses the world. The slides are particularly desirable because it is too difficult for the Museum visitor to make his own photographs without special equipment.

BALINSASAYO—

(Continued from page 4)

colors to run riot, uninfluenced by predator selection? Perhaps at my next stop, in Amio, I will have a chance for some observations along the lines of Cott's.

I've just had my first view of a monkey in a treetop. Hitherto, to me, monkeys in the wild have been voices, or confused, rapidly moving shapes in the treetops. But today traveling along the lake shore by canoe, I looked up to see a monkey sitting quietly on a big branch just above me. Through my binoculars I watched him tug thoughtfully at his beard (or it may have been her, for females wear beards, too) and scratch his back, before melting back into the leafy verdure. It had looked exactly as I'd expected a monkey in a treetop to look and, as realization so seldom accords with expectation, it's worth noting.

TRICKY OUTRIGGERS

There must have been on our lake, a dozen "bankas," as the little dugout canoes with an outrigger on each side are called. Some were small, barely 10 feet long. No one walks anywhere; even tiny children paddle. From the perspective of our camp these little craft with their outriggers, scurrying about the lake, called to mind the long-legged water insects known as water striders. These bankas are easy to manage really, with the typical steering twist at the end of the paddle stroke. They're difficult to upset but not foolproof, as I found when I tried to launch myself in one not big enough for my weight and found myself standing waist deep in water, with the banka on the bottom under my feet.

Mudfish have been introduced into these lakes and thrive in the algae-filled water. They're taken in set lines, tied to sticks 3

to 6 feet long that lean over the water. These set lines completely rim both lakes at 10-to-15-foot intervals, and in landing a banka anywhere one has to watch not to hit them. They're all the property of the caretaker of the station, and he says the fish get as long as your arm. To my own knowledge they get to be 14 inches long, for I caught several of that length.

Though we didn't feel it here in the Philippines, we could tell it was wintertime farther north, from the migrant birds we saw. In numbers either of species or of individuals they didn't compare with the great numbers of winter migrants that go from North America to Central America in comparable latitudes. But here on our lake some were conspicuous. Most noticeable was the swallow, the Old World representative of our barn swallow, that comes here from Asia. They feed over the water, and perch, 40 to 60 strong, on the branches of a dead treetop that has fallen into the lake near camp. Gray wagtails were the next most conspicuous. They're slim, elegant birds of gray, yellow, and white that haunt the water's edge catching insects. When agitated, they move not only the tail but the whole hind part of the body up and down, a trait that has given them not only the English name wagtail but also the scientific one of *Motacilla*. Among the other migrants should be especially mentioned the kingfisher of Eurasia, little larger than a sparrow and with a vivid blue back. It perched on the fish poles of the set lines and, when disturbed by me, made little moves not of its tail like the wagtail but of its head in an up-and-down bobbing motion. A sandpiper, like our spotted sandpiper but without the spots, a brown shrike, a tree pipit, and a grass warbler completed the list of migrants seen here.

REFUELING IN FLIGHT

The ecological segregation of the swallow and the cave swiftlets that feed in much the same way, catching insects in the air while the birds are in full flight, is interesting. The swallows feed chiefly low over the lake; the swiftlets feed about the tops of the forest trees. Obviously each could find ample food in either place, but would it be of the same kind? Or is the difference psychological—do they simply "like" different kinds of places?

On one little arm of the bay I found a place where the remains of many small moths had accumulated. It was a band of floating moth-wings on the water's edge. The band littered with these wings was about 12 feet across and several yards long, blown in by the wind. In one eight-inch circle there were about 50 individual wings. Evidently a great variety of species was represented, as their colors varied: pink, tan, brown, yellow, blue, gray, or green, all

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NATURE PHOTO EXHIBIT AT MUSEUM FEB. 1-28

AN EVENT to which thousands of persons look forward each year is the Annual Chicago International Exhibition of Nature Photography. This year's show, ninth in the series, will be held as usual at Chicago Natural History Museum from February 1 to 28. The work of photographers of nature has, of course, a direct correlation with the objectives of the Museum and, because of this shared interest in



"SKUNK CABBAGE"

Entered in Plant-Life Division of Nature Photography Exhibit by Grant M. Haist of Rochester, N. Y.

recording and illustrating the things that make up this world and its various forms of life, the contest and the resulting exhibit have become a joint annual undertaking of the Museum and the Chicago Nature Camera Club.

The show is the largest anywhere in the world that is devoted exclusively to nature photographs, and it ranks among the largest photographic exhibits even without respect to the limits of its field. It includes photographs by both amateurs and professionals in the United States, Canada, Latin America, Europe, the Orient, Africa, Australia, and New Zealand, and entries for the contest are received for months preceding the show.

THOUSANDS OF ENTRIES

Approximately 3,600 pictures were submitted, a number exceeding any past year. From these about 200 prints and 800 color-transparencies have been selected for exhibition. Those to be displayed are the choices of a panel of judges: Roland Eisenbeis, Senior Park Naturalist of Cook County Forest Preserve District, Rachel M. Osgood and Jack Remde, well-known photographers, and two members of the Museum staff—Robert F. Inger, Curator of Amphibians

and Reptiles, and Rupert L. Wenzel, Curator of Insects.

The prints and the miniature color-slides



'BETATAKIN' (NORTHEAST ARIZONA)

Photograph of a Pueblo Indian archaeological site entered for the Nature Photography Exhibit by H. R. Haines of Visalia, California. Because this Bulletin went to press before the judges made their decisions, publication of any of the photographs in this issue does not necessarily signify acceptance of the pictures for the exhibit.

Lectures, Movies Begin March 7 . . .

SATURDAY PROGRAMS SET FOR ADULTS, CHILDREN

Captain Jacques-Yves Cousteau, famed undersea explorer-photographer and author of the best-selling book, *The Silent World*, opens the spring season of the Edward E. Ayer Lecture Foundation's Saturday afternoon lectures with the first midwest presentation of his color motion-picture, "Menfish of the Deep" on March 6 at 2:30 P.M. Captain Cousteau is co-inventor of the Aqualung that revolutionized undersea exploration by enabling its wearer to swim freely without any lines to the surface. With the aid of the most advanced undersea motion-picture camera, Captain Cousteau brings to his audience the wonder of the "silent world" where he and his "menfish" companions live like fish 300 feet under the sea. His movie is a record of man's newest progress in probing the "incredible realms of nature."

No tickets are necessary for admission to this and the eight subsequent illustrated lectures on Saturdays in March and April. A section of the James Simpson Theatre where the programs are presented is reserved for Members of the Museum, each of whom is entitled to two reserved seats. Requests for these seats should be made in advance by telephone (Wabash 2-9410) or in writing.

are grouped in separate divisions because different exhibition techniques must be used for each. The prints will be on public view daily in Stanley Field Hall during the period of the show. The color transparencies will be shown only on the afternoons of two Sundays, February 14 and 21, at 3 o'clock, when they will be projected in mural size on the screen in the James Simpson Theatre. Music will accompany the showings. Admission to the Theatre is free, and the general public, as well as members of camera clubs, and others interested in photography, are invited to attend.

There are three classifications for both prints and transparencies: animal life, plant life, and general (which includes geological formations, scenery, clouds, etc.). Silver medals and ribbons denoting honorable mention have been awarded by the Chicago Nature Camera Club to the photographers whose work has been judged the best in each classification. In addition there are two special medals awarded by the Nature Division of the Photographic Society of America. Winners of medals receive permanent recognition also by having their names inscribed on a bronze plaque at the Museum. This plaque is a contribution of Mrs. Myrtle Walgreen, a member of the Chicago Nature Camera Club and in her own right an enthusiastic photographer.

Seats will be held in the Member's name until 2:25 o'clock on the lecture day.

The children's series given by the Raymond Foundation features in its opening program, "Life in a Pond," a movie on plants and animals that inhabit water. The movies begin on March 6 and continue on each of the nine Saturdays at 10:30 A.M. through March and April.

DALLWIG TO PROBE ORIGINS OF LIFE

"Life—What Is It?" is the subject of the dramatized narrative to be presented at the Museum each Sunday afternoon in February by Paul G. Dallwig, Layman Lecturer. Mr. Dallwig will attempt to answer this basic question with data regarded as most acceptable by scientists whose lives have been dedicated to research on this and allied subjects. Part of his lecture will be devoted to the reproductive processes in plants and animals, illustrated by the Museum exhibit showing the stages in the birth and pre-natal development of a human child. The same lecture will be given at 2 P.M. on each Sunday of the month—February 7, 14, 21, and 28.

Museum Members are admitted to these lectures upon presentation of their membership cards; others must make reservations in advance by mail or telephone (Wabash 2-9410). There is a half-hour intermission for refreshments in the Museum cafeteria

at 3. The programs begin in the Lecture Hall and progress into exhibition halls containing material that Mr. Dallwig uses to illustrate his dramatizations.

The Dallwig lectures, increasingly popular with Chicagoans for thirteen past years, opened in January with an attendance breaking all previous records. The subject was "A Trip to the Moon—Why Not?" Many of those present made reservations on the spot for future lectures on other subjects. On Sundays in March Mr. Dallwig's topic will be "Behind the Scenes in Our Museums."

GIFTS TO THE MUSEUM

Following is a list of the principal gifts received during the past month:

Department of Anthropology:

From: Adm. Royal E. Ingersoll, Washington, D.C.—weapons from China, Japan, and Africa; Louis W. Jacobs, Merrimac, Wis.—7 pieces of blue-and-white ceramic "export ware," Philippine Islands; Benjamin Samuels, Chicago—gold-embroidered gown, China; Robert Trier, Chicago—15 archaeological and 2 ethnological specimens, Chicago

Department of Botany:

From: Dr. H. C. Bold, Nashville, Tenn.—32 algae, Tennessee; Dr. V. J. Chapman, Auckland, New Zealand—4 algae, New Zealand; William A. Daily, Indianapolis, Ind.—59 algae, Indiana; Dr. E. Y. Dawson, Los Angeles, Calif.—23 algae, French Indo-China; Dr. V. M. Diller, Cincinnati, Ohio—44 algae, Ohio; Dr. Maxwell S. Doty, Honolulu, Hawaii—75 algae, Pacific Islands; Dr. W. T. Edmondson, Seattle, Wash.—9 algae, Washington; Dr. L. H. Flint, Baton Rouge, La.—11 algae, Louisiana; Dr. H. Silva Forest, Williamsburg, Va.—493 algae, Tennessee, Virginia, South Carolina, and Louisiana

Department of Geology:

From: Dan Kreutzer, Chicago—specimen of *Flexicalymene meeki*, Ordovician of Ohio; George Langford, Jr., Hinsdale, Ill.—fossil insect, Illinois Pennsylvanian

Department of Zoology:

From: Pfc. Charles P. Deem, San Francisco—2 species of fresh-water fishes, Korea; Henry S. Dybas, Homewood, Ill.—104 insects, Illinois; Dr. Henry Field, Coconut Grove, Fla.—collection of Florida tree snails, southern Florida; F. E. Holley, Lombard, Ill.—19 insects, New York and Illinois; Dr. Edwin V. Komarek, Thomasville, Ga.—14 bats, Georgia; Dr. Donald C. Lowrie, Moscow, Ida.—130 insects and allies, United States and Mexico; Dr. Jeanne S. Schwengel, Scarsdale, N.Y.—collection of inland shells, worldwide; Universitetets Zoologiske Museum, Copenhagen, Denmark—2 mammals; Dr. Petr Wygodzinsky, Tucumán, Argentina—320 beetles, Argentina; Chicago Zoological Society, Chicago—5 birds, captive; William L. Culbertson, Madison, Wis.—2 Pleistocene fresh-water shells, Manitowoc County, Wisconsin; Dr. Ernest P. Du Bois, Urbana, Ill.—2 mammal skulls reptile skeleton, amphibian skull, fish skull

PROGRAM OF EXPEDITIONS FOR 1954 ANNOUNCED

Although its program of expeditions and field work for 1954 will be somewhat restricted by stringency of available funds and most operations will be on a small scale, Chicago Natural History Museum will have members of its scientific staff and other collectors at work in far-flung areas. Among places where collecting and research will be carried on are Angola (Portuguese West Africa), Nepal in India, the Philippines, El Salvador, Peru, Mexico, and Europe as well as many parts of the United States.

The Department of Anthropology will concentrate all of its efforts upon one expedition, but in number of personnel involved, equipment required, and physical immensity of the tasks to be performed, it will be the largest-scale operation of the year. This will be the 20th Archaeological Expedition to the Southwest (eleventh season in New Mexico—in the earlier years excavations were made in southwestern Colorado). Dr. Paul S. Martin, Chief Curator of Anthropology, will, as in past seasons, direct the work. His principal associate will again be Dr. John B. Rinaldo, Assistant Curator of Archaeology. From the remains of villages of prehistoric Indians who have been given the name of Mogollones by the archaeologists, Chief Curator Martin and his diggers each year bring to light additional ancient objects that enable them to re-create the culture and history of the extinct tribe. Some of the sites excavated have been buried as long as 4,000 years. In the 1954 season, Martin expects to approach the end of work in New Mexico and plans in succeeding years to follow traces of the movements of these people into areas of Arizona and elsewhere.

COLLECTING IN AFRICA

Several zoological expeditions are under way or to be initiated in 1954. In January, Gerd Heinrich, a well-known zoological collector of Dryden, Maine, was on his way to Angola (Portuguese West Africa), accompanied by Mrs. Heinrich. They constitute the personnel of the Conover Expedition, financed with funds provided by the late Boardman Conover, a Trustee of the Museum, who died in 1950. The Zoological Expedition to Peru (1953–54) will continue its general collecting of birds, mammals, reptiles, and amphibians in the Peruvian highlands and valleys. This year Assistant Taxidermist Celestino Kalinowski hopes to reach several areas of special interest on the Pacific slopes of the Andes. Collecting directed primarily to birds will be continued in Nepal by Dr. Robert L. Fleming. He is superintendent of the Medical Mission to Nepal, and is assisted by his wife, Dr. Bethel Fleming.

Field Associate D. S. Rabor will continue his general zoological collecting in the

Philippine Islands. Dr. Austin L. Rand, Curator of Birds, after his attendance at the Eighth Pacific Science Congress in Manila late in 1953, has been associated with Dr. Rabor in field studies on Philippine birds. Next summer Dr. Rand will attend the Eleventh International Ornithological Congress in Basel, Switzerland.

TO MEXICO FOR FISHES

Loren P. Woods, Curator of Fishes, will lead an expedition to southwestern Mexico to collect marine fishes in tidepools of the Acapulco area. He will join at Salina Cruz with shrimp fishermen who always have a byproduct of more than usually interesting fishes from their shrimp-trawling operations. His collecting has the special purpose of adding information for revision of *The Marine Fishes of Panama*, one of the Museum's most important publications in this field.

Rupert L. Wenzel, Curator of Insects, will visit the Pacific states to study the beetles of the family Histeridae at the California Academy of Sciences and other entomological centers. He will supplement his museum work with field collecting for special groups of beetles and especially for the interesting array of forms that inhabit rodent burrows. Associate Curator of Insects Henry S. Dybas, who will continue his survey of the southeastern United States for the minute leaf-litter insects, will make trips to Georgia and to some of the Gulf states. Dr. Fritz Haas, Curator of Lower Invertebrates, is conducting the Palestine Zoological Expedition to collect mollusks in the western Mediterranean region (Israel and Cyprus).

Local field work will continue, particularly a survey of the fishes of the Chicago region. Miss Margaret G. Bradbury, Artist in the Department of Zoology, aids in this study. It has proved possible to join the last of commercial fishermen of the south end of Lake Michigan and to gain valuable data and collections by working with them. Miss Laura Brodie, Assistant, Department of Zoology, will continue study of the fall blue-racer aggregation in the Indiana Dunes. Miss Brodie joins actively with Miss Lillian Ross, Associate in the Division of Insects, in studies on the local spider fauna.

EL SALVADOR PROJECT

Dr. Sharat K. Roy, Chief Curator of Geology, will spend several months in El Salvador in continuation of volcanological research he began there on a previous expedition in 1951. Collecting fossil mammals in Texas will be continued by Bryan Patterson, Curator of Fossil Mammals, and Orville L. Gilpin, Chief Preparator of Fossils. Fossil collecting in England and Scotland will be undertaken by Dr. Robert H. Denison, Curator of Fossil Fishes, who began European investigations last year on a fellowship from the John Simon Guggenheim Founda-

MUSEUM RECEIVES GRANT FOR RESEARCH ON BATS

The Museum has received from the National Science Foundation (Division of Biological and Medical Science) a grant of \$10,000 toward the cost of a five-year research project to assemble material required for publication of a catalogue of the Microchiroptera (small bats). Colin C. Sanborn, Curator of Mammals, who has specialized in bat studies for many years, will be in charge of the undertaking. Part of his work on the current project will be conducted in London and in South Africa. The results will be published by Chicago Natural History Museum Press.

MUSEUM VISITORS IN 1953 TOTALLED 1,204,855

The what, why, where, when, and how of the world we live in—its formation and the plants, animals, and peoples that inhabit it—were drawing-cards for 1,204,855 people who in 1953 visited Chicago Natural History Museum to get the answers from exhibits. Only 132,198 paid the nominal admission fee charged on certain days, while 1,072,657 or close to 90 per cent came on the free days—Thursdays, Saturdays, and Sundays. Although there was some decline from the attendance of the previous year, the attendance in 1953 remained well above the average level that has prevailed since it first exceeded a million in the middle 1920's.

INFLUENCE EXTENDED

In addition to those who actually visit the Museum, hundreds of thousands of others each year receive its educational benefits. Traveling exhibits reach hundreds of thousands of pupils in the Chicago schools every two weeks during the school terms and, likewise, thousands of others are reached by the extension lecturers sent out by the Raymond Foundation of the Museum. The press, radio, television, and other media carry information from the Museum to countless others.

Dr. Rainer Zangerl, Curator of Fossil Reptiles, and William D. Turnbull, Fossil Preparator, will seek fossil fishes and reptiles in a Pennsylvanian deposit of Indiana. Fossil-plant collecting in various parts of Illinois will be continued by George Langford, Curator of Fossil Plants. Robert K. Wyant, Curator of Economic Geology, will gather needed specimens of ores in the Lake Superior iron areas.

The Department of Botany has no expeditions scheduled for 1954, but in the summer Dr. Theodor Just, Chief Curator, will go to Paris as a delegate to the Eighth International Botanical Congress.

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(Continued from page 5)

in pastel shades and some patterned and variegated. I suppose with the sudden downdrafts that occur on these steep slopes the moths are carried from ordinary flight into the water where some predator (an insect?) eats the bodies, nipping off the wings.

To get anywhere over land in this area, one traverses steep slopes. Perspective sometimes goes curiously awry when descending, with the treetops ahead always just below your feet and then the lake, simulating the sky, appearing farther below. It's as if the land had been tilted, and correlates with the strange feeling I have had that the island of Siquijor was hanging in the sky, far above the horizon. It takes time for a plains-dweller to get used to mountain views.

FEW LEECHES BITE

In Talinas (Horns of Negros) the green-backed leeches crawled on one, but didn't bite (or suck blood). Here there's also another kind that does. Often, on grass or on the leaves, one can see them stretched out at their fullest extent waiting for something to seize. But the surprising thing, in view of their abundance, is how few actually do bite me. I've only had two or three bites in a week and have seen hundreds of leeches (of course if I'd been barefooted it would have been a different story!). Mosquitos aren't bad either—sometimes a few in the forest; but our house, day and night, seems clear of these.

The people here near the mountain top are on the frontier, carving into the original forest and carrying on such old-time practices as rubbing two sticks together to get fire. Yet they're only a half-day's walk from electric refrigerators and a public bus line. What food crops I've seen (sweet potato, taro, corn) grow poorly. The people are concentrating on abaca, the fiber of which they strip, carry to the coast, and sell. Presumably the popular slogan "Land for the landless" in not too many years will mean deforestation by cutting and burning of these trees—a few years of cultivation, and then the abandonment of these steep rocky slopes as hopeless for further agriculture, as has happened with the cogon grass slopes lower down that went through the same cycle earlier. Several men come up here for abaca culture, but only one family, that of the station caretaker, lives here, in a thatched hut overlooking the lake. In addition to other things, he runs a line of pig traps, the "balatics," of which I've been warned. I've seen several. They're fiendishly simple: just a bamboo-headed spear lashed to a bent sapling that is the spring. In addition there's a trigger arrangement and the trip string, which you pull to set it off.

Some birds are extremely elusive, like the tailorbird, a gray rufous-crowned warbler whose "sewn" nest gives it its name. The song of "teg-wa-tee" that the boys say is its song comes from everywhere: forest undergrowth and clearing. When you get close, you hear a few warning chirps and it is gone, a vaguely seen shape and a few shaking leaves, skulking away into the shrubbery. I've learned little of it, but at least I've seen it.

When I leave a forest camp I wonder how many birds I've been unable to find, birds that were there but escaped me. Many, probably. But here there are two such species that call continually from the forest edge, as if to taunt us with the fact that we were unable to find them. One is a typical coucal call, "bub-bub-bu-bu-bu," and probably belongs to a forest coucal that at my approach creeps away through the shrubbery. The other is certainly the call of a brush cuckoo, for its song "piet-van-fleet" is one I know well from Malaysia. Instead of sneaking away, this bird sits up in some forest tree and by its immobility escapes detection.

Our horizon here is limited—not more than two miles across, I'd say, just the rim of our little crater valley. It means our weather can change quickly. Sometimes clouds wreath our peaks; sometimes they come from below, as one afternoon—the sun was shining when suddenly the wind drove up storm clouds from below. We didn't see them until they came over the lip of our little valley, with rain and thunder, and then the storm was gone as quickly. The forest was always sopping wet from clouds and rain, uncomfortable to live in when you can't get your clothes dry, but it's a forest filled with a host of interesting things and remarkable because it still exists as a forest in this heavily populated, mostly deforested part of the Philippines.

NEW MEMBERS

The following persons became Museum Members from December 16 to January 15:

Corporate Member

John T. Pirie, Jr.

Non-Resident Life Member

Hiram B. D. Blauvelt

Associate Members

Wesley M. Dixon, Jr., Mrs. Frank J. Dowd, Robert M. Eichler, Daniel Perlman, Robert B. Schnering, Daniel C. Searle, William L. Searle

Annual Members

George J. Biddle, Willmar A. Chulock, R. W. Ferguson, C. O. Futterer, G. L. Grawols, Ellsworth A. Handy, Bennet B. Harvey, Miss Jane Laird, Pierre F. Lavedan, Donald F. Lindberg, Mrs. Herbert I. Markham, William A. Marsteller, John G. Maynard, Walter J. Nickel, Lester N. Selig, A. J. Uttich, S. C. Waldman, Richard H. West, P. L. Yates

EXPEDITION TO STUDY NEAR-EAST ANIMALS

Certain aspects of Near-East animal life will be studied and specimens collected on an expedition for which Dr. Fritz Haas, Curator of Lower Invertebrates, will fly to Israel on February 1. Dr. Haas will spend several months in the field, primarily in observation of the adaptation of invertebrate animals to life under desert conditions. In addition to invertebrates, studies will be made of reptiles, fishes, and other animals. Dr. Haas is especially interested in the fresh-water life of isolated rivers in Israel, which will be his principal collecting field, but he may also make zoological explorations on the island of Cyprus. Before returning to Chicago, Dr. Haas will survey collections in important museums of Switzerland and Germany.

STAFF NOTES

D. Dwight Davis, Curator of Vertebrate Anatomy, left the Museum on January 15 for a six-month leave of absence to fulfill a term as a visiting professor at California Institute of Technology in Pasadena, where he will conduct a lecture course on comparative anatomy and its relationship to paleontology . . . **Dr. Julian Steyermark**, Curator of the Phanerogamic Herbarium, recently lectured before the Kennicott Club and the Barrington Natural History Society on his experiences in the "lost world" of Venezuela where he led a Museum expedition last year . . . **Dr. Paul S. Martin**, Chief Curator of Anthropology, recently spent ten days on a special research project at Arizona State Museum in Tucson. He worked in the famous sherd library on material relating to the Mogollon culture that his expeditions have been investigating for years and visited a number of sites where the tools of early man, from 6,000 to 11,000 years ago, have been found . . . **Miss Elaine Bluhm**, Assistant in Archaeology, recently studied sandals of various archaeological periods in the collections of Arizona State Museum.

Illinois Audubon Screen-Tour Features Hudson Bay

"Hudson Bay Adventures," a lecture by C. J. Albrecht, accompanied by color motion-pictures, will be presented in the James Simpson Theatre of the Museum on Sunday, February 28, at 2:30 P.M. under the auspices of the Illinois Audubon Society. The lecturer was formerly a member of the staff of the Department of Zoology at this Museum. Admission is free. Reserved seats are available to members of the Audubon Society or the Museum upon presentation of their membership cards before 2:25 P.M.



Rand, Austin Loomer. 1954. "Birds of Balinsasayo Lakes in the Philippines." *Bulletin* 25(2), 4-8.

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