

## Gorilla Changes Nest Each Night

Dr. H. C. Bingham, of Yale, Reports on Behavior of Primates in Belgian Congo Where Animals are Protected in 500,000 Acre Sanctuary

Less Than 1,000 Are Left

New Haven, Conn., Sept. 1.—Under the auspices of Yale University and the Carnegie Institution of Washington, Dr. Harold C. Bingham, research associate in the Institute of Human Relations at Yale, and Mrs. Bingham departed for "Parc National Albert" in Africa to study the habits of the gorilla in the wild animal sanctuary which has been created there. Dr. and Mrs. Bingham have returned, and an account was made public, describing the purposes which Dr. Bingham had in mind in making the study, and the observations on the behavior of these animals.

Gorillas are now to be found in only two regions of Africa. Though far apart from each other, both regions are at the equator. One species, commonly called the coast gorilla, occupies a mountainous region at a considerable distance inland from the Atlantic. The other species, the mountain gorilla, the subject of Dr. and Mrs. Bingham's study, is to be found on the slopes of the volcanic peaks of the Kivu region at an altitude of from 8,000 to 12,000 feet. The two regions are widely separated by the forested area of the Upper Congo basin.

LESS THAN 1,000 LEFT

Ever since Paul du Chailu penetrated the forests of Africa and brought back thrilling stories of encounters with gorillas, these great apes have been the prey of the big game hunters of the world. Because they propagate slowly and because many have been shot, authorities have estimated the gorilla population of this area to be fewer than 1,000.

In 1921, the American Museum of Natural History in New York sent an expedition to the region, headed by Carl Akeley. It was he who, upon his return to America, directed the attention of the scientific world to the beauty and magnificence of the area, the richness of its plant and animal life, and to the danger of extermination which threatened the gorillas.

Enlisting the efforts of scientists, a movement was launched which led to the promulgation of a decree by Albert, King of the Belgians, (1925), that the area should be made a perpetual sanctuary for the gorillas and for all other animals inhabiting it.

The reservation is situated in the northeastern part of the Belgian Congo between Lake Kivu and Uganda and includes three volcanoes—Mount Mikeno, Mount Karisimbi and Mount Visoke. In honor of King Albert, to whose interest the reservation is due, it has been designated, "Parc National Albert."

INCLUDES 500,000 ACRES  
Last year the protected area was greatly enlarged and now includes approximately 500,000 acres grouped in four reserves lying in the Kivu district, in proximity to one another. In addition to protecting all forms of plant and animal life in these four reserves, the royal decree expressly forbids "the destruction, capture or pursuit of the gorilla, as well as all forms of hunting this animal."

The expedition was undertaken not only to obtain authoritative information about the behavior of free-living gorillas but to investigate the feasibility of co-ordinating such observations with lines of anthropoid research already established at Yale, and the programs contemplated for the anthropoid station to be established in Florida.

Dr. and Mrs. Bingham sailed from New York on June 7 and landed at Dar es Salaam on the African coast, July 25. From this point they proceeded by train, boat and automobile to Lake Kivu and three days distant from Akeley Camp, their objective in the Parc. At Rutshuru they were received by Parc officials, who provided them with comfortable living quarters.

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and helped... In place it is... for one... cutting... work.

Dr. Bingham said: "Motor service from Uvira to Costermansville (formerly Bukuru) is surprisingly modern. Most of the road from Lake Tanganyika to Lake Kivu is paved. Between 1920 and 1925, 3,000 natives were employed in repairing the road and building in repair. Such are the industrial changes in a decade that we went from lake to lake in four hours; the Akeley-Bukuru expedition covered the distance in record time, but required eight days for winter safari."

"At Costermansville we stayed a week at a comfortable hotel managed by a capable English family. This was the last hotel we saw for three months. We put on our hobnails and bush jackets, employed our first native boy and began to prepare for our work in the mountains that was soon to follow."

From Costermansville we went to Kisenyi on freight boats and barges. This was perhaps the hardest part of the journey. The small barges were loaded with various kinds of freight and swarmed with native workers. There were no sleeping accommodations and there was little protection from the sun. No meals were served. Freight service over Lake Kivu does not yet permit a fixed schedule. The captain calls at those ports where freight is to be received or delivered and lands in the evening for the convenience of the passengers.

WINDS DELAY BOAT

"The first night, Aug. 6, we landed at Kisenyi to sleep and eat. An unexpected heavy wind, delayed our arrival at Kisenyi until the following day. This illustrates the uncertainty of travel over Lake Kivu at the present time. There is a passenger and mail boat, but unfortunately it carries no heavy baggage. We could have chartered this little boat and proceeded quite comfortably to Kisenyi if we had been equipped with sleeping and eating accommodations. Already we had learned from experience to take no chances of being separated from our baggage and food."

"Arriving at Kisenyi August 8 we established camp and began the selection of our personal boys, securing three during the week. Progress with the Swahili language became more rapid when we had to make our own language. None of them could understand French or English."

"On the 17th we reached Rutshuru, the headquarters of Parc officials, and, greatly to our surprise as well as delight, found a house surrounded by tropical gardens awaiting us. We were told that it was ours while we were there, and that we might take the key with us when working in the gorilla sanctuary, leaving behind supplies that we would not need in camp."

"Following the advice of the administrator of Rutshuru, and the conservation of the Parc, we made Lulunga the base of our field supplies. Meanwhile I had called on the White Fathers at Lulunga Mission in company with Mr. Hemmels, conservateur of the Parc, by whom we were received most cordially. The administrator, M. Druissart, had made official arrangements at Lulunga for our porters, storage of our supplies, supplies for the porters and for our personal accommodations in their guest house."

VISIT AKELEY CAMP.

"Many of the successes which we experienced are due to the generous aid of Fathers Provost and Van den Hout, of the mission. Through the latter especially our practical arrangements were completed for three separate porter safaris which started from Lulunga as a base."

On August 26, Dr. and Mrs. Bingham with native guides, gun bearers, personal boys and forty porters, left Lulunga for the three-day climb up the wooded slopes of Mount Mikeno to Kabara where they established their first field camp."

It was to this spot that Akeley returned in 1926 for the purpose of exploring the reserve and of obtaining accessories and background for the gorilla group which he was preparing for African Hall in the American Museum of Natural History of New York. It was with difficulty that he reached his old camp site, for he had contracted fever on the lower levels and was not well. He failed rapidly and in two or three days the end came. He was fittingly buried, as he wished, within the area that through his initial efforts has become a safe refuge for one of the two existing gorilla species.

CONTACT WITH GORILLAS.

The camp established by Dr. and Mrs. Bingham was set up within sight of Akeley's grave and here the expedition remained for the first month of work. During the period they were in frequent contact with various gorilla groups, following them as they fed their way along, carefully recording for future study, observations on the nests, the feeding habits, the social responses, the nomadic behavior, and the individual traits of the animals. They took moving and still pictures whenever conditions favored."

A belt of forest growth of varying width, in which the bamboo predominates, encircles the central mass of the three great volcanoes of the Kivu region—Mikeno, Karisimbi and Visoke—at an altitude of from about 7,500

and helped... In place it is... for one... cutting... work.

Wild celery is another favorite food of the gorilla apparently first appearing in this plant which contains a nightshade or eight-leaf plant. The stalks are thick and filled with water and the young shoots are tender, and crisp or break readily. The gorillas pull the stalks out of the ground and eat the succulent roots and inner and lower stalks.

That the gorilla, however, is not limited in his diet to bamboo shoots and wild celery, but that he feeds upon other plant varieties, is a conclusion which Dr. and Mrs. Bingham found much evidence to support. They gave particular attention to the growths upon which the gorilla feeds, and brought back a number of such plant specimens for examination and identification.

It seems to be evident that gorilla hands are continually moving, though in a leisurely manner. Apparently they have no abiding place, but constantly wander about as the lure of food impels them, though, of course, their movements are limited to the zone in which they find conditions to be the most suitable. Indications are that they sleep but once night in a given "nest," which is a very simple affair made by pulling and breaking down plants and vines which chance to be at hand.

OBSERVE ANIMAL BEHAVIOR

Some reports which reached Dr. and Mrs. Bingham indicated that these animals frequently built their nests in trees; other reports had it that the nests in the region were ever built off the ground. While, in general, it seems improbable that the great weight of the fully grown gorilla's body permits him to spend much time in trees, nevertheless, from the evidence obtained Dr. and Mrs. Bingham believe that the varying physical conditions in the area over which the gorillas range may lead to important differences in feeding and nesting habits. It is probable, too, they feel, that changes in climate, seasons and rainfall, may affect the behavior of these animals, resulting in significant environmental adaptations.

For nearly a month the observational work of the expedition was carried on in altitudes above the bamboo belt. A similar period was later devoted to exploration from three different field camps in and below the bamboo belt on the slopes of Mikeno. On these lower altitudes they found tree nests of the gorillas, sometimes as high as fifty feet above the ground; and, east and west of Berunga, also old nests made by chimpanzees.

Both above and below the bamboos they observed gorillas and trailed various bands for distances varying from one to three days of gorilla travel. In the course of these studies they virtually girdled Mount Mikeno, and Karisimbi in part, at altitudes ranging from 6,000 to 12,000 feet.

TRAIL BUFFALO, ELEPHANTS

On October 11 the party struck camp returning to Rutshuru where a few days were spent in trailing buffalo and elephants in order to compare the activities of these animals at lower altitudes with their activities on the slopes of the volcanoes. On October 23, Dr. and Mrs. Bingham turned homeward.

Just as with all research workers, study of a problem always raises innumerable queries not before thought of, so with Dr. and Mrs. Bingham. While they obtained valuable information about the behavior of these great apes in their free and untrammelled habitat, they returned with many fresh questions relating to behavioristic adaptations, questions that cannot be answered with assurance without further study and observation.

In summarizing results, Dr. Bingham said: "After all, perhaps the greatest contribution of this expedition may be the devising of methods for future study of these varieties the social and adaptive behavior of which we found fascinating evidence."

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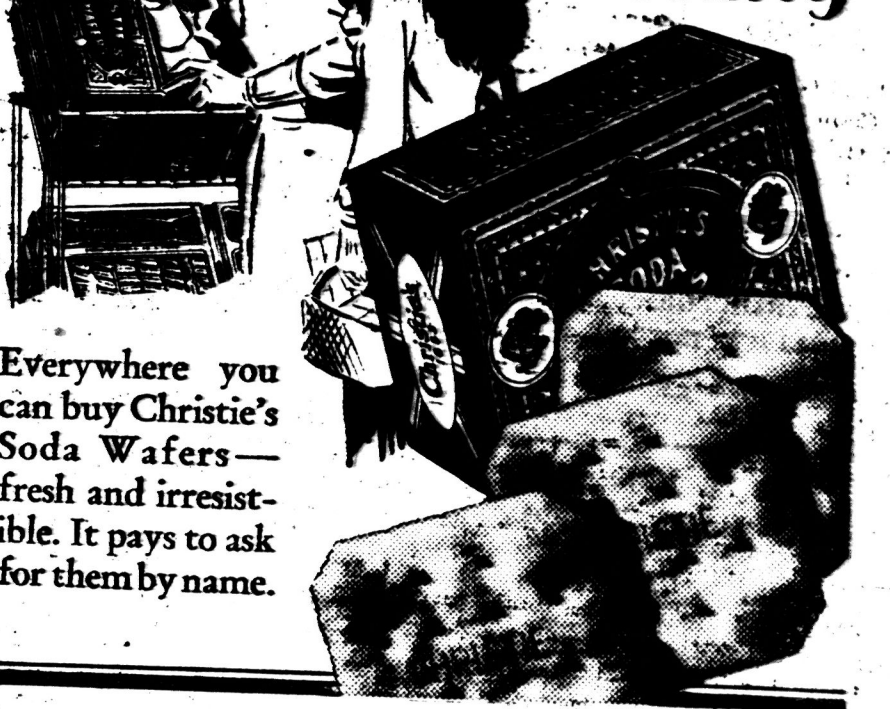
Embroidery Tip  
Talk incessantly. It's tiring even to have to listen to some women. Their tongues are never still and most of what they say is not worth hearing. Gossip and chatter weary those who listen, but the constant tongue-wagging is wearing to the woman herself, and is often the cause of that feeling of weariness that comes on at an evening.

Smile if you possibly can when things go wrong. Half the troubles about which you worry yourself into a headache are not worth thinking about. They pass away quickly, and if you have just met them with a smile you won't be a whit the worse. When you get a piece of material pleated at a shop it has tissue paper in every fold. Don't take it out until you have sewed the pleated part into its place. It keeps the pleats exact and is easily pulled out afterwards. A bit of embroidery worked on a dress gives it a bit of smartness. Lay the embroidery on a piece of double tissue paper and tack it before you begin to work. This is extra good for georgette or any thin stuff. Put away what you can of the paper when the work is finished, and rub the rest off with your hands as if you were washing. It won't spoil the material in the least, and every scrap of paper comes away.

The flying powers of the albatross are well known, but news of an almost incredible feat of endurance has just been reported by officers of a Pacific liner from the Far East. For six days and nights an albatross followed the vessel, which averaged seven knots, and it was only when a school of fish was sighted that the bird abandoned the chase in order to feast. It was estimated that the bird had flown 3,000 miles, and what is more remarkable, had apparently gone without food all the time.

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