Field Museum News

Published Monthly by Field Museum of Natural History, Chicago

Vol. 6 JANUARY, 1935 No. 1

NEW TAXIDERMY METHOD APPLIED TO CASSOWARY PRESERVES LIFE COLORS

By Karl P. Schmidt
Assistant Curator of Reptiles

A new specimen of the large flightless bird called the cassowary was recently placed on exhibition in the systematic collection of birds in Hall 21. It is of especial interest because of the use of the so-called "celluloid" method in its preparation which renders its highly colored naked parts in verisimilitude to life.

Cassowaries differ conspicuously from the other large flightless birds by the development of a horny casque on the head, and by the presence of brightly colored wattles and extensive areas of brilliantly colored bare skin on the neck, as well as in various other anatomical characters. Their nearest relatives are the emus of the Australian plains; and they are more distantly related to the African ostriches and South American rheas. The cassowaries are forest inhabitants, and share with other forest birds the tendency (especially exemplified by the birds of the New Guinean region) to brilliant coloration. The specimen now placed on exhibition belongs to a species confined to the island of Jobi, off the coast of northwestern New Guinea.

Other specimens of cassowaries in Field Museum were collected by the Cornelius Crane Pacific Expedition in 1929, and some are preserved in the reference collection. One of these was a half-grown bird, obtained at Madang, New Guinea. Its flesh was eaten by the party and crew on Mr. Crane's yacht, *Illyria*, and it proved to be of extremely good flavor, somewhat intermediate in character between fowl and beef.

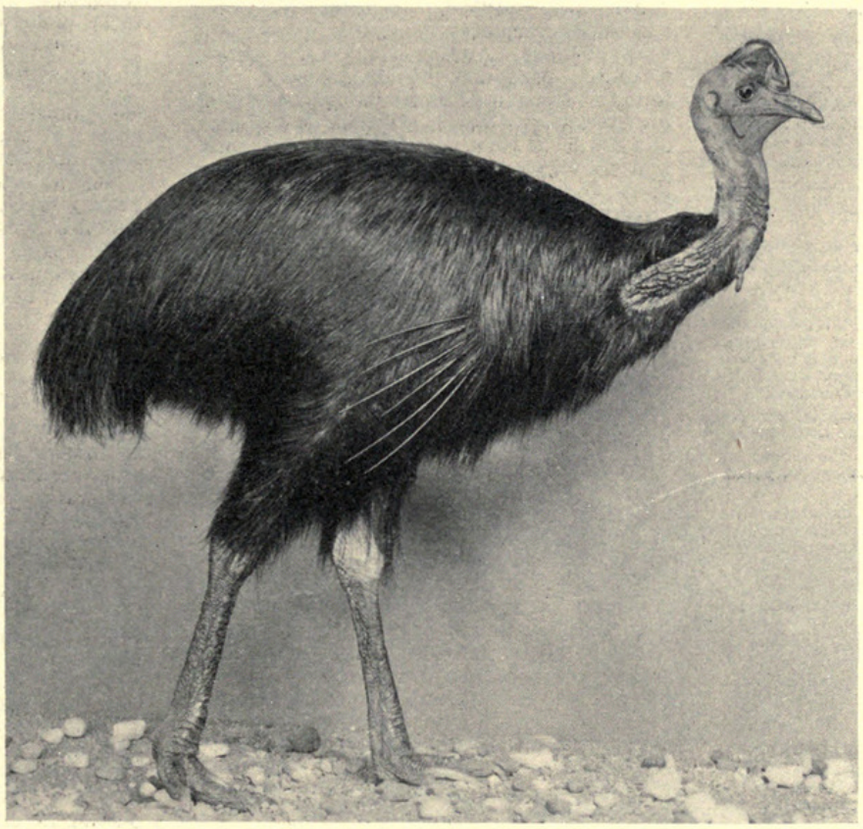
These birds are much hunted by the native Papuans for food, and there is even a word for cassowary, "mooruk," in their "pidgin English," all other birds being known simply as "pigeons." A full-grown specimen obtained from native hunters by the Museum party at Marienberg, on the Sepik River, was skinned and preserved. The brightly colored fleshy wattles on the neck, and the horny casque filled with spongy bony tissue, were especially difficult to preserve in the humid tropical climate. In the dried skin now in the collection, these structures have lost every vestige of their brilliant coloration and the horny layers of the casque have split so as to lose their natural translucence.

It was such difficulties that made the acquisition of a fresh full-grown specimen in the flesh by the Museum an especially notable event in bird taxidermy, since such a specimen could be converted by the application of the unique celluloid process invented by Leon L. Walters of Field Museum's taxidermy staff, into an exhibit which really presents the natural appearance of one of these extraordinary birds. The Walters process consists in an exact reproduction in cellulose-acetate of the outer layers of skin or horn in question, and this is made in a mold from the original animal. By the admixture of the proper pigments in the dissolved cellulose-acetate, the coloration is exactly reproduced, and as the pigment is distributed in a translucent medium, the degree of translucence can be controlled to represent exactly the condition of the living original. Since, furthermore, the colored cellulose-acetate cast is finished when it is taken from the mold, and requires no additional painting, the surface detail of the original is retained without loss.

In the case of the cassowary in question, molds were made of the head and neck and of the legs and feet, and the cellulose-acetate replicas of these parts were assembled with the original skin of the body. The feathers on parts of the head and neck were transferred to the new cellulose-acetate "skin" by the simple but extremely ingenious process of embedding them in the wax mold until their bases were held in the newly applied cellulose-acetate layer which constitutes the cast. Subsequently the wax was removed. This transfers each feather to the new material in exactly its original position.

The application of celluloid-like materials in museum preparation was developed by Mr. Walters to meet the problem of making life-like models of reptiles and amphibians. It has proved equally satisfactory in the production of exhibition specimens of hairless and thin-haired mammals, and is now applied for the first time to a large bird.

Field Museum is indebted to Floyd S. Young, Superintendent of the Lincoln Park Zoological Gardens, for the gift of the cassowary, which had been in captivity in the park for several years.



The Cassowary

Strange flightless bird of the New Guinean region, exhibited in Hall 21. The head and the legs are reproduced in cellulose-acetate, representing the first use on a bird of this new taxidermy method developed in recent years for work on reptiles and hairless mammals. Staff Taxidermist Leon L. Walters, originator of the process, and Edgar G. Laybourne, prepared the specimen.

CHINESE DINNER SERVICE

A recent addition to the Chinese ethnological exhibits in Hall 32 consists of a complete dinner set for eight persons, which includes one hundred and fifty pieces. The exhibit shows all the utensils used by the Chinese in taking their meals at home or giving a formal dinner party. Each person is provided with a teacup, a rice bowl, a soup bowl, and a small dish of condiments. The heavy courses are served in various large bowls, four or five of which are placed on the table at a time, and from which each guest helps himself by dipping from them with his chopsticks.

It is a noteworthy fact that most nations of Asia still eat with their fingers, and the Chinese were the first who introduced good table manners by the invention and use of chopsticks.

A wide variety of chopsticks is displayed, made of various materials such as ivory, bone, bamboo, wood plain or lacquered, horn, and silver. Scabbards to hold these, and knives, used by travelers, are also exhibited. A special silver pair of chopsticks, connected by a chain, are symbolical, being used by a bride and groom on their wedding day.

Albino birds and mammals of many species constitute a special exhibit in the Department of Zoology.