

BIRD-OF-PARADISE FLOWER

By THEODOR JUST

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One of the most conspicuous flowers often seen in greenhouses or in florists' shops is a native of the coastal region of South Africa, variously known as queen's bird-of-paradise flower, bird's-tongue flower, queen-plant, crane flower, or as geel pisang in the Boer language. Introduced in 1773 at Kew in England by Sir Joseph Banks, this plant was named *Strelitzia reginae* in honor of Queen Charlotte Sophia, wife of England's King George III and daughter of the Prince of



MEMBER OF BANANA FAMILY

The bird-of-paradise flower (*Strelitzia reginae*) is a native of South Africa. The Museum exhibit pictured above was reproduced from nature by Curator of Exhibits Emil Sella from specimens presented by Garfield Park Conservatory.

Mecklenburg-Strelitz. It is justly regarded as one of the most beautiful members of the banana family (Musaceae).

This plant is on display in Martin A. and Carrie Ryerson Hall (Plant Life—Hall 29) in the case showing members of the banana family. The Museum exhibit was modeled by Curator of Exhibits Emil Sella after a living specimen received from Garfield Park Conservatory.

The striking irregular flowers and large banana-like leaves give this trunkless plant its exotic appearance. The flowers are borne near the top of the flower-stalk, which normally is as long as the petiole and about 3 feet high. At first completely surrounded by the green, boat-shaped bract, the flowers emerge one by one as older flowers die off. Their orange-yellow sepals are lance-shaped, 3 to 4 inches long, and stand in marked contrast to the three dark-blue petals. The latter are unequal; the median (odd) one is shorter, dome-shaped, and covers the entrance to the honey, while the paired ones are so closely placed that they overlap and appear to be halves of a single arrowhead-like organ (the "tongue"). The stamens lie in the groove formed by these petals, whereas the deeply cleft style usually projects in front of them. The "tongue," stamens, and stigma are composed of slightly hardened tissues and are rather stiff.

Like its nearest relatives, the banana

and the traveler's tree, *Strelitzia* is bird-pollinated. Certain sun-birds (*Nectarinia afra*), the African equivalents of the American hummingbirds, have breasts colored like *Strelitzia* flowers. When visiting these flowers the birds first touch the exposed stigma, then come to rest on the "tongue" (functioning as a "landing platform"), and, by walking on its flanges, separate them and thereby release the stamens. As a result, their breasts are dusted with pollen as they bend down to reach the honey buried under the dome-shaped petal. Apparently a single visit is sufficient to effect pollination. Although bees and other insects frequently suck the gummy juice exuding from the bract, they are more likely to be eaten by birds than to bring about pollination in *Strelitzia*, but they may do so in the banana. The peculiar floral structure, the presence in its flowers of complementary colors, which are supposedly best suited to bird vision, the large amount of honey present, and the fact that one visit by a bird ensures pollination substantiate the claim that *Strelitzia* possesses the most advanced type of pollination by birds.

BIRD MIGRATION—

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listing the average dates of arrival and departure in the Chicago area of one hundred common migratory birds.

TRAVEL HAS HAZARDS

Some of the mystery formerly associated with bird migration has been swept away by the work of competent observers stationed throughout the world. From their reports we now know that migration occurs at night as well as by day, although many species prefer one period or the other. Civilization has considerably increased the normal hazards encountered by night migrants. Tall buildings, factory chimneys, and particularly lighthouses take a heavy toll of low-flying birds annually, a circumstance that was widely publicized last autumn when hundreds of small song birds flew to their death against the skyscrapers of Rockefeller Center in New York. Similarly, as many as seven hundred migratory birds have been destroyed by striking the Statue of Liberty in a single month and, in former years, a single night's mortality caused by the Washington Monument sometimes exceeded one hundred birds.

Contrary to popular opinion, birds are unable to foretell adverse weather. Migrants not infrequently continue northward or delay their departure for more clement areas regardless of conditions that may lead to their destruction. Occasionally a species is so decimated by catastrophic weather conditions encountered during migration that its status over a large area may be affected for several years thereafter. In March, 1907, approximately 750,000 Lapland long-

STAFF NOTES

Mr. Karl P. Schmidt, Chief Curator of Zoology, has been elected a corresponding member of the Zoological Society of London. ... For "unusual and outstanding work in the field of botany and conservation," Dr. Julian A. Steyermark, Associate Curator of the Herbarium, has been elected to honorary membership in the Friends of Our Native Landscape.

spurs lay dead on the ice of two small Minnesota lakes, the victims of unexpected inclement weather. At the same time, lesser concentrations of frozen birds were reported over an area covering 1,500 square miles. In October of the previous year a sudden drop of temperature destroyed countless thousands of small migrants on Lake Huron, as many as 5,000 bodies to the mile being found along the shoreline. Similar catastrophes periodically have befallen migratory woodcocks, bluebirds, purple martins, and many others.

FLIGHT SPEEDS

The altitude above sea level at which birds migrate and their speed of flight have long been subjects of controversy. In recent years much has been learned about both by the use of telescopes and theodolites and from observations made by aviators. Birds have been recorded at 29,000 feet above sea level, but it is now known that the vast majority migrate well below altitudes of 5,000 feet. Migratory speed generally is moderate, being considerably below the rate that may be achieved by the species for short distances. Small birds average only 23 miles a day initially in passing up the Mississippi Valley in spring, but may travel 200 miles a day during the latter part of their journey. On the other hand, many large birds normally fly several hundred miles each day during migration.

Much less is known with certainty of the origin and evolution of bird migration. Various theories have been propounded, some naively simple and others very involved, but even today there is no general agreement among those who seek an absolute answer. It seems certain, however, that a phenomenon of such complexity had no single origin but developed through the interactions of numerous factors.

The new case was designed by the Division of Birds and prepared by Miss Norma Lockwood, Staff Illustrator, and Mr. Kenneth Woehlek, Assistant Taxidermist.

Visiting Hours Change March 1

Beginning March 1, spring visiting hours, 9 A.M. to 5 P.M., will replace the winter schedule of 9 to 4. The new hours will continue in effect until April 30.



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