

Storks

at Disney's Animal Kingdom

by Kris Becker
Disney's Animal Kingdom
Lake Buena Vista, Florida

Seven species of storks reside at Disney's Animal Kingdom. All are in the family Ciconiidae, but represent all three tribes within the family: Ciconiini ("typical" storks), Leptoptilini ("giant" storks), and Mycteriini (wood storks and openbills). The storks currently living here include Saddle-billed Stork (*Ephippiorhynchus senegalensis*), Marabou Stork (*Leptoptilos crumeniferus*), Painted Stork (*Mycteria cinerea*), Yellow-billed Stork (*Mycteria ibis*), Woolly-necked Stork (*Ciconia episcopus episcopus*), Abdim's Stork (*Ciconia abdimii*), and European White Stork (*Ciconia ciconia ciconia*).

General Information

Storks are medium-to-large water birds. They have long bills, necks, and legs. Their bills will show differences between species based on their method of feeding. For example, the genus *Ephippiorhynchus*, of which the Saddle-billed stork is representative, have long, pointed, slightly upturned bills. These are effective for jabbing at fish in shallow water. Birds in the genus *Mycteria* have long, tapered, slightly down-curved bills, which have sensitive tips that can detect fish and other prey in murky water conditions. They also have bare skin on the head to keep from getting feathers dirty.

Storks have long broad wings, which enable them to support their fairly bulky bodies. They are heavily dependent on the ability to soar, as they do not have the stamina to sustain flapping flight. They will use

updrafts and thermals to gain altitude and to fly for long distances.

Distribution

Storks can be found in all regions of the globe except the Arctic and Antarctic, though their greatest diversity occurs in the tropics. Their general habitat consists of a variety of wetlands, with some species living in grasslands or even forests.

The Saddle-billed, Yellow-billed and Marabou storks can be found in similar geographic regions. They range throughout tropical Africa, from south of the Sahara desert to South Africa. The Yellow-billed stork can also be found along the western edge of Madagascar.

The Abdim's stork is also found in Africa, but unlike the three mentioned above, their breeding and non-breeding ranges are separate. They breed north of the equator, but most birds spend the rest of the year in eastern and southern parts of Africa.

Of the three recognized subspecies of Woolly-necked storks, *C. e. episcopus* ranges from India to Indochina and the North Malay Peninsula. They can also be found in the Philippines. The Painted stork's range also extends throughout India and into eastern China, Thailand, Kampuchea, and Vietnam.

The European White stork has the most varied range of all the storks at Disney's Animal Kingdom. *C. c. ciconia* can be found in Europe, western Asia, and South Africa. They winter mostly in tropical and southern Africa.

Feeding

All stork species are carnivorous. Typical food includes small to medium fish, frogs, insects, and small rodents. They generally feed in shallow ponds with muddy, murky water. You will often see the birds moving their open bill from side to side either standing still or walking about in shallow water. They will sometimes stir up mud from the bottom with one of their feet. This makes the fish move about more, either due to alarm or being attracted to the movements. When the stork's bill comes into contact with prey, it snaps shut immediately.

The Woolly-neck and European White storks are opportunistic feeders, taking whatever is available. The Abdim's stork primarily eats insects, although it will consume other prey items as well. They often congregate in large numbers at grass fires and around swarms of locusts and armyworm caterpillars.

The Saddle-billed stork eats mostly medium to large fish, but will also consume frogs, reptiles, small rodents, insects, and occasionally small birds. They use a different feeding technique as opposed to the Painted, Yellow-billed, and other storks. The Saddle-billed storks will walk about in shallow water, repeatedly jabbing the water with their bills. This stirs up the fish, which are then quickly snapped up. After consuming their prey, these storks frequently take drinks of water.

The Marabou stork has the most unique food preference. These storks are largely carrion eaters, most often stealing scraps from vultures, hyenas, and wild dogs. They will also consume a variety of prey items, including flamingo chicks, eggs, and occasionally adults.

Breeding

Most, but not all, species breed and nest in trees. The European White stork, throughout most of its

range, nests regularly on the roofs of buildings. According to legend, it is a sign of fertility if a European White stork nests on your chimney top. The Abdim's stork, as well, nests on the roofs of native huts, where it benefits from protection provided by local superstition. These birds are considered harbingers of rain. This is largely because their migration pattern closely matches the seasonal rains in Africa. This species also can be found in large mixed colonies along ledges, cliffs, and boulders with Yellow-billed storks, Marabou storks and several species of herons, egrets, ibises and cormorants.

Painted storks are also communal breeders and can often be found in mixed colonies with Asian Openbill storks, Asian herons and egrets. In contrast to this, the Saddle-billed and Woolly-necked storks are almost exclusively solitary breeders.

In the colonial species, the male normally occupies and defends a nesting territory. Once the female arrives and the male accepts her, the pair becomes involved in varied ritual greetings. One fairly universal display is called the "Up-Down," which the pair uses as a greeting. They raise and lower their heads, often including bill-clattering or some form of vocalization. The most extreme version of this occurs in the White storks. They throw their head all the way back toward the tail and bill-clattering is prolonged and loud.

Solitary

breeders, such as the Saddle-billed and Woolly-neck storks, do not have the elaborate courtship rituals of the colonial breeders. This is in part because these species often stay together year-round. Colonial breeders often form new pairs and new nests every year.

Nests are made out of sticks, reeds, or vines, often with green leaves or grasses. The male collects most of the sticks, while the female arranges them. The Saddle-billed storks will often lay only one egg, whereas the average for most stork species is three to five eggs. Both parents share incubation duties, which last about 25 – 38 days. Both parents will feed the chicks by regurgitating food onto the floor of the nest.

Captive Housing and Management

At Disney's Animal Kingdom, the storks live in a variety of open, outdoor habitats. All of the species, with the exception of the Painted storks, inhabit mixed-species habitats with other birds or mammals. For instance, the European White stork pair shares an exhibit with West African Crowned Cranes, (*Balearica pavonina*), several

species of African and Asian ducks, Axis deer (*Cervus axis axis*), and Red Kangaroo (*Macropus rufus*). The cranes and the storks occasionally interact, but primarily they keep to themselves.

The Woolly-necked storks inhabit an island habitat with two male Ring-tailed lemurs (*Lemur catta*). Both of the lemurs are older individuals, and the two species have had very little interaction.

One female Saddle-billed stork resides with several Kenya crested guineafowl (*Guttera puccherani*). Another pair of Saddle-billed and two pair of Yellow-billed storks share a forest habitat with Bongo (*Tragelaphus euryceros*), Nyala (*Tragelaphus angasii*), and Pink-backed pelicans (*Pelecanus rufescens*).

Two pairs of Abdim's storks are housed with several species of ducks. An artificial tree, which is used to display a variety of psittacines (macaws or cockatoos), is also within the habitat boundaries. The primary interactions observed between the storks and the ducks have involved the ducks' theft of the storks' food.

Four pairs of Marabou storks are in an open grassy habitat. They occasionally share this area with Impala (*Aepyceros melampus*) overnight, but there have been no interactions observed.

Since all of these birds live in open exhibits, management and feeding can be a challenge. A constant problem is the poaching of their food items by native egrets, herons, vultures, and ibis. Because of this, several of the animal keepers at Disney's Animal Kingdom



Painted Storks

Photo by C. H. Kimble



Abdim's Stork



Photos by C. H. Kimble

Saddle-billed Stork

initiated a new feeding plan. Animal trainers hand-toss food to each of the species at Animal Kingdom in conjunction with training sessions.

Training for most of the storks primarily involves stationing them in one spot. The station area may or may not have a small square platform. For those species that are housed individually or in pairs, the training has progressed to teaching the birds to stand on the platform in order to be weighed. Currently, the European White storks and the single female Saddle-billed stork perform this behavior consistently.

The Yellow-billed and Saddle-billed stork pairs in the forest habitat are trained to follow keepers and to shift into holding enclosures. This allows for easier restraint for physical examinations and feather trimming. The Yellow-billed storks are fully flighted, so periodic feather maintenance is necessary.

The Marabous storks are also tossed food individually. The biggest poaching problem in this area comes from Black Vultures (*Coragyps atratus*). Stationing of the birds reduces aggression and ensures that each bird consumes a proper diet amount. Plans are also in place to begin scale training.

Status and Conservation

Stork populations are undergoing a general recession worldwide, with the possible exception of those in Africa. Six species are currently listed as vulnerable or endangered globally. Fifteen of the 19 stork species are considered regionally threatened. The general causes for the reduction in numbers are typical for most animal species, both bird and mammal. These include habitat loss, use of dangerous pesticides, disturbance of nesting colonies, and direct persecution by man.

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