Phoenicopterus ruber (Caribbean Flamingo)

Family: Phoenicopteridae (Flamingos)
Order: Phoenicopteriformes (Flamingos)
Class: Aves (Birds)

Fig. 1. Caribbean flamingo, *Phoenicopterus ruber*.

[http://smilingsunflower.blogspot.com/2008/05/caribbean-flamingo-in-greater-vancouver.html, downloaded 6 December 2012]

TRAITS. The Caribbean flamingo is considered to be monogamous although it is also a highly social species; it is often called the American flamingo outside of the Caribbean. Not to be confused with the scarlet ibis, which is sometimes called flamingo locally because of its colour. The average height of both the males and female is about 120-145 cm with difference being seen in the weight, the males 2.8 kg and the females 2.2 kg. Flamingos are waders (long-legged birds that wade in water in search of food) and have webbed feet; they are tall and have necks and legs that are long in relative to their body size (San Diego Zoo, 2003). Their plumage (the layer of feathers covering the bird) colour ranges from deep pink to red or orange with black primary and secondary wing feathers. They have a thick beak which curves downward and is black at the tip, pink/orange in the middle, and pale yellow near the eye. Rows of lamellae (plates) covered with tiny hairs are found on the inner surface of the beak. The legs are pink, with knees that are a darker shade of pink (San Diego Zoo, 2003).

ECOLOGY. Found from the Bahamas and Greater Antilles to northern South America, but only an occasional visitor to Trinidad; also in the Galapagos Islands and the Yucatan Peninsula, in alkaline/saline lakes, mudflats and lagoons with little to no vegetation. Flamingos feed mainly on invertebrates hence the reason they avoid lakes with fishes so that they can avoid competition (SeaWorld, 2012). The live in relatively large colonies with up to thousands of individuals and they are extremely social (Wikipedia, 2012). Although usually non-migratory, depending on the climate and environment they may change their location to fit. Most of this movement takes place at night when it is cloudless but when it does occur during the day time they fly at high altitudes to avoid predation from eagles (SeaWorld, 2012).

SOCIAL ORGANIZATION. Flamingos are very social birds and are seen in colonies of up to tens of thousands, which provides them security, with an average flock size from 2-340 (San Diego Zoo, 2003). Due to the constant shift in resources flamingos have a somewhat nomadic lifestyle and move between breeding and non-breeding sites between summer and winter. Flamingos are not very aggressive birds and as such do not defend their nest or habitat very aggressively. They display only 4 types of aggressive behaviour (Rooth 1965). Bill fighting, where they try to bite each other's head or beak. Chasing, where one bird pecks at the tail of the other and the bird that being chased stretches out its neck. Threatening, where they sometimes growl at each other with their mouths open and their necks outstretched. Lastly mate protection, where the male becomes aggressive when in contact with another pair (San Diego Zoo, 2003).

ACTIVITY. Preening, feeding, resting and bathing is what takes up most of a flamingo's day, a slight difference when the birds are breeding. Birds that are breeding feed both during the day and at night whereas those that are not breeding feed only at night and spent that day involved in other activities like sleeping and preening (SeaWorld, 2012). Preening, which is the distribution of oil from oil glands to the feathers, plays a role in waterproofing; these oil glands are located near the base of the tail. Preening consumes from 15-30% of a flamingo's time and is preformed via their bill. When bathing they may submerge their entire body in water (SeaWorld, 2012).

FORAGING BEHAVIOUR. Flamingos' diet consists of small crustaceans, molluscs, some worms, widgeon grass seeds and algae. They are also know to consume mud from which they are able to get microorganisms and obtain nutrients (SeaWorld, 2012). They obtain these foods by placing their head upside down in shallow water and moving it from side to side, using their tongue they pump water and the backward curving spines direct food to the throat. The lamellae are used to remove food particles found in the water, the top bill is also used to help in this filtration process and sometimes they simply pick up prey with their beak and swallow it. Their feeding behaviour patterns can fall into 5 categories (Rooth 1965). Skimming, where the beak is placed on the surface of the water and moved back and forth, usually in search of plankton. Grubbing, where they stand on their long legs and then feed along the bottom of water that is approximately 1m in depth (San Diego Zoo, 2003). Stamping, where they lift their feet up and down on the mud in order to stamp out prey, this is done either in one spot or in a circle. Running, where they run along the banks and they use their feet to stab the prey. Walking, where they use their beaks to skim the waters while walking to obtaining microorganisms from the mud.

As flamingos don't have access to freshwater they have an organ about the eye that excretes salt to aid in the drinking saltwater, they also drink rainwater whenever it is available.

COMMUNICATION. A variety of breeding displays are preformed so as to communicate and harmonize reproduction in a colony. "Wing salute" is simply the spreading of wings, the neck is stretched and the tail flipped up (San Diego Zoo, 2003). "Wing-leg stretch" is where a leg and wing on the same side are stretched at the same time. "Twist preening" is where there is a quick change between stretching the next forward and twisting it backward to touch the shoulder. "Head flagging" is where the neck is stretched and the head upright and the head moves from left to right in a rhythmic fashion. "Head shaking" is similar to head flagging but the neck is bent. "Marching" is where groups walk collectively in the same direction then change and walk in the opposite direction. Lastly, "bowing" is where the wings are a third open and the neck is stretched out and bent down facing the water (Espino-Barros & Baldassarre, 1989).

Vocal communication is used mainly to keep the flock together, the "honking" sound used during flight and on the ground resembles that heard in geese. To signal feeding a low gabbling noise is heard, whereas a growl or grunt is heard when breeding or during displays of aggression (San Diego Zoo, 2003).

SEXUAL BEHAVIOUR. Breeding in flamingos is considered very erratic and take place between the ages of 3-6 years, only fully coloured birds are seen to participate. Depending on the population and the amount of rainfall in the breeding season (San Diego Zoo, 2003). Although a variety of behaviour is used to synchronize breeding within the colony the pair does not actually copulate until they are away from the group. Before courting begins a lot of stretching and preening is seen to take place and groups of males run with their necks straight and the bills to the sky. Pairs made are monogamous for the most part as they last for multiple breeding seasons however they are sometimes seen to mate with more than one partner. Interestingly enough females are the ones that instigate copulation and this is done by simple walking away from the group thus allowing a male to follow (SeaWorld, 2012). Upon stopping she lowers her head and spreads her wings signalling to the male that he can mount, upon jumping on her back the male then puts his feet on her wing joint completing the mating process which all takes place in the water. After mating the male jumps off her back. Another unique trait is that both sexes help build the nest which is made with mud and using their jaws. These nests are built high, up to 30 cm tall, and are often close together. When mud isn't available twigs and roots are often used (San Diego Zoo, 2003).

JUVENILE BEHAVIOUR. In the first couple of months young flamingos are fed "crop milk" from the bill of either of their parent into their mouth. The pigment canthaxanthin is responsible for the red colour in milk and is what is seen in the feathers of adults (San Diego Zoo, 2003). These parents recognise their young in these large groups called "crèches" by both sight and unique vocalizations and they feed only their own chick. Parents watch and protect their chicks from a distance while they explore nearby for 4-7 days. Chicks are able to swim from young and they also imitate feeding patterns of their parents while standing in the shallows (SeaWorld, 2012). At 11 weeks chicks are able to feed themselves as their bill begins

to curve, there is also growth of their flight feathers. After 2-3 years their grey/white feathers are lost and their pink/red feathers begin to show.

REFERENCES

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Fig. 2. Flamingos sleeping.

[http://fr.wikipedia.org/wiki/Fichier:Caribbean_Flamingo1_(Phoenicopterus_ruber)_(0421)_-_Relic38.jpg, downloaded 6 December 2012]

Fig. 3. Flamingo preening itself to aid in waterproofing.

[http://www.theanimalfiles.com/birds/flamingos/caribbean_flamingo.html, downloaded 11 November 2012]

Fig. 4. Flamingo watching at a close distance as its young explores its surroundings.

[http://www.seaworld.org/animal-info/info-books/flamingo/hatching-&-care.htm, downloaded 10 November 2012]