Order: Scientific Name	Ciconiiformes Leptoptilos cr			Family: Common Na	Ciconi I <b>me:</b> Maral	idae oou Storl	<		
AZA Manageme	<b>nt:</b> $\square$ Green	Х	Yellow		Red		None		
Photo (Male):  Photo (Female):									
NATURAL HISTO	PRY:								
Geographic Range:	Europe Africa	X	Asia Australia		orth America Other Click		Neotropical enter text.		
Habitat:	Forest Riverine		Desert Montane	□ □ c	Grassland Other Click	<b>X</b> there to (	Coastal enter text.		
Circadian Cycle:	Diurnal X	Crepuscula	ar 🗆	Nocturnal	□ Other	Click he	re to enter text.		
Cold Tolerance:	To 70° F To 30° F		To 60° F To 20° F	□ □ c	To 50° F Other Click	here to	To 40° F enter text.	Χ	
Heat Tolerance:	To 30° F To 110° F	□ X o	To 50° F ther Cli	☐ ck here to ente	To 70° F r text.		To 90° F		
Diet:	Frugivore Nectivore		arnivore mnivore		iscivore Folivore		Insectivore er (Add Below)		
Captive Dietary Needs: In the wild, Marabou storks will consume a wide variety of animal matter, including carrion, fish,									

should be increased whenever chicks are present or expected.

items.

insects, small rodents and reptiles. In captivity their diet should include a variety of items including a ground meat product (i.e. beef or horse), rodents and fish. Some individuals might show a preference for one item or another, so care should be taken to ensure that they receive the proper variety of

When chicks are present, Marabous will regurgitate items onto the nest for their chicks to consume, so some smaller items (pinkie mice, smaller mice and fish) should be offered as well. Overall diet

If hand-rearing is necessary, food items should be small and more easily digested to begin with. The size of the items can gradually be increased as the chick grows. For example:

### Day 1-14:

rat pinkies (heads removed)

Capelin smelt (no heads or tails), cut into small pieces with vitamin E/thiamin solution (1g per 1kg food eaten)

3:1 rodent to fish ratio, fed with Pedialyte and heated via hot water bath.

### Day 15-21:

"fuzzy" mice or whole skinned mice (head, feet and tail removed)

Capelin smelt (no heads or tails), cut into small pieces with vitamin E/thiamin solution (1g per 1kg food eaten)

3:1 rodent to fish ratio, fed with Pedialyte and heated via hot water bath.

### Day 22-30:

"fuzzy" mice or whole skinned mice, slowly introducing skin over this period for casting material Capelin smelt (no heads or tails), cut into pieces with vitamin E/thiamin solution (1g per 1kg food eaten)

3:1 rodent to fish ratio, fed with Pedialyte and heated via hot water bath.

### Day 31-39:

whole mice, unskinned

Capelin smelt (no heads or tails), cut into pieces with vitamin E/thiamin solution (1g per 1kg food eaten)

3:1 rodent to fish ratio, fed with Pedialyte heated via hot water bath.

### Day 40 and on:

begin offering whole pretty items, transitioning to adult diet.

Life Expectancy in the Wild:	Males:	unknown	Females:	unknown				
Life Expectancy in Captivity:	Males:	14.6 years	Females:	8.9 years				
BREEDING INFORMATION:								
·								
Age at Sexual Maturity:	Males: 3-	5	Females:	3-5				
Courtship Displays:	Males establish a territory, build the nest and then wait to be approached by other birds. When approached, they respond aggressively. Females will react submissively and, if a pair bond is to be established, the male will eventually accept her. There are a number of ritualized courtship displays which are described in detail by M.P. Kahl (1966, see references).							

**Nest Site Description:** Nests are a large structure of sticks. Wild birds nest in trees, or occasionally

on cliffs. In captivity, Marabous have nested in a variety of locations,

including on the ground, nest platforms and on top of deadfall.

**Clutch Size, Egg Description:** Clutch size is usually 1-3, but clutches as large as 5 are recorded in the

literature. The eggs are large and chalky white.

Incubation Period: 28 days Fledgling Period: 95-115 days

**Parental Care:** Once an egg is laid, both parents will incubate the eggs. After the 28 day incubation

period, both parents will feed the chick(s) by regurgitating food onto the nest and allowing the chick(s) to feed themselves. Marabous will defend their nest aggressively, especially when eggs and/or chicks are present. Institutions have had

success manipulating chicks on the nest (for supplemental feeding, weights or medical procedures) and parents have been tolerant of this activity.

**Chick Development:** Chicks are altricial, but their eyes are open and they should be very vocal from day

one. By the end of the first day, the chick should be able to pick at and consume food presented to it. By the third day, they should be "standing" on their hocks. By day 16, their bodies will be covered in white down. By day 25, the chick should be

starting to stand up.

### **CAPTIVE HABITAT INFORMATION:**

**Social Structure in the Wild:** Marabous will forage alone but are more often seen in groups. They will

congregate in large numbers at food sources (such as dumps, abattoirs and fishing villages) and will also congregate at roosting sites. Marabous nest in

colonies, usually of 20-60 pairs.

**Social Structure in Captivity:** Marabous have been kept in a variety of groupings, including singly, pairs,

all-male groups and large mixed-sex groups.

Minimum Group Size: 1 Maximum Group Size: Exhibit size dependent

Compatible in

Mixed Species Exhibits: Yes Comments:

Marabous have been kept with a variety of bird and mammal species. However, marabous can be aggressive to smaller species (such as waterfowl). Care should be taken when mixing this species with large hoofed stock. Some species (zebra, for example) can be very aggressive and injuries and death have resulted from hoofed stock aggression towards Marabou Storks. For this reason, housing Marabous with these species Is discouraged. When housed with hoofed stock, areas for the birds to safely escape and nest without interference should be provided.

Optimal Habitat Size: 1,200 sq feet (130 sq meters)

Management Challenges: Because of the inherently aggressive nature of Marabou courtship, female

mortality due to male aggression (especially during breeding season) is the major issue facing the population right now, leading to a sex ratio significantly skewed towards males. Institutions housing this species must carefully watch for mate aggression and should have space available to separate pairs if aggression begins to escalate. Great care must be taken during pair and group introductions as this can be a particularly stressful time and some level of aggression is to be expected while the newly introduced birds work out where they fit into the social hierarchy. Marabou breeding season is typically during the winter months, with more than 63% of hatches occurring during February, March, and April. Since marabou storks are also cold-sensitive and are often housed in barns during the winter months in northern institutions, they must be closely monitored for signs of aggression at these times.

#### **ADDITIONAL COMMENTS:**

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#### **REFERENCES:**

Kahl, M.B., 1966b, Comparitive Ethology of the Ciconiiae., Part 1. The Marabou Stork, Leptotilos crumeninerus (Lesson), Behaviour 27, 76-106

Hancock, Kushlan and Kahl (1992) Storks, Ibises and Spoonbills of the World. Academic Press, London.

Del Hoyo, J., Elliott, A. & Sargatal, J. eds (1992) Handbook of the Birds of the Birds of the World. Vol. 1. Lynx Editions, Barcelona.

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#### **COMPLETED BY:**

Name: Paul Schutz Date: 3/20/2014