

Hippo Shifting- A Dhaka Zoo First Case Study

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Introduction:

While hippopotamus herd size in Dhaka zoo reached up to thirteen in numbers resulting in serious space constraints and vigorous fighting among dominant males.

Propagation was not controlled by using contraceptives or even by keeping bachelor herd apart, thus management became difficult. Dhaka zoo authorities became concerned and decided to give away some animals. Chemical immobilization was avoided fearing lower recovery rate but we were prepared with veterinary protocols to face any contingency.

Three consecutive shifting took place on three different occasions that took 31 days in all. All 31 days of capturing and shifting actions were recorded almost round the clock. (First shifting attempt took twenty days, second shifting attempts took six days and third shifting attempts took five days – that ended on 19.12.04, 26.12.04 and 06.02.06 respectively). During shifting the following data were recorded: approximate weight of heavy duty crates and hippos, working pattern of crane, trapping device, psychology involved and enforced, imposition activities, behaviours, attitude, aggressiveness, feeds and feeding alterations, sleeping pattern, time of each action, controlling of devices both in day and night hours preparedness during emergency, looking into journey activities and releasing and post release (5 days) behaviour. With these primary data, some secondary data from respective sections of Dhaka Zoo, Dulahazara Safari Park and Rangpur Zoo were also collected and used to summarize the report.

Observations:

After a number of discussions, thoughts and rough planning comprising both sides (Donor and Receiver) to capture and shift the hippo, the date (30 Nov. 2004), crate designing and size (12'L×6'W×7'H), crate wt.(up to 1400 kg limit) materials to be used for crate making were finalized. Eye estimations, selection and marking of first Hippo was done and the animal was

Year/Date	No. Births	(M)	(F)	Total No.	Comments
1983	-	1	-	1	Collected from Kenya
1986	-	1	1	2	Collected from Kenya
07/07/1992	1 (F)	1	2	3	-
11/10/1993	1 (M)	2	2	4	-
09/08/1994	1 (M)	3	2	5	-
07/08/1995	1 (M)	4	2	6	-
17/08/1996	1 (F)	4	3	7	-
27/07/1997	1 (F)	4	4	8	-
06/06/1998	1 (F)	4	4	8	1 F died on 3 days Old
05/08/2000	1 (M) Rangpur	5	4	9	-
15/01/2004	1 (M)	3	3	6	1 M died on 20 days old (26/09/2002) 1 M died on Mature Age (11/11/2004) 1 M & 1 F donated Dulahazra. (19/12/2004 & 26/12/2004)
05/07/2005	1 (M)	4	3	7	-
06/07/2006	1 (M)	4	3	7	Donated Rangpur Zoo 6.2.06

isolated on 10.11.04. Body wt of hippo was approximately 2600 kg. Food intake was observed to be normal, and no organ defect and abnormality on gesture and posture were found in the male other than innumerable scar marks and injuries over the oily hairless skin almost all over the body. The crate was kept fit with its vertical door to the outlet of isolation marking the trapping device with rope bound from 60' away. At the same time heavy duty weight lifter (Crane like), carrying truck, labour and veterinary protocols were stationed near the area to face any emergency and to carry out the capture and shifting job. A trial run of the truck to the location was done earlier. From the beginning, feeds of the isolated hippo were supplied inside the crate through the other side (Second free door) and no feeds were supplied from the isolation side. For three days the animal made no attempts to enter the crate. From day four to day nine, the isolated animal made several attempts to take food by entering into the crate and attempts of trapping was tried but the hippo got back so promptly. Laceration, sloughing and scratches of different degrees to the skin on cervical and lumber regions occurred. As a consequence it was off feed about 48 hrs. By this time all the fallen tree leaves were eaten by the hippo inside the isolation area. In the mean time we were advised by Dr. P. Martelli, formerly vet at Singapore zoo to change our strategy. Next eight days

no attempts of trapping and capturing was made while it was taking food and sleeping inside the crates (now and then it took food by keeping hind limbs outside the crate and it was very alert). Human movements were also controlled during that time. On 20th day we prepared again to capture and shift. Accordingly, the event staged went as planned and while the Hippo was in deep sleep, the shutter was shut down by the distant controlled device. The inner side of the crate was padded with jute bag and straw on all sides. It took four hrs to lift it on to the truck with the help of lift, chains, and ropes. Crate materials were of heavy duty angles and flat bars, nuts and bolts, wooden flats and trusses, nails and batons, shutter (vertical) door (wt.: 250kg approximately). Truck capacity and size: 10 tons, Lifter Capacity: 5-6 tons. Distance of Dulahazara Safari park from Dhaka Zoo: 350 km. Pouring water from reservoir drum by mug; feeds and water during the journey: No feed and water were supplied during 8 hrs. of journey with no stops.

After being successful in the first mission (From 30 Nov. 04 to 19 Dec. 04), Dr. Ahasan and Rahaman visited Dulahazara Safari Park five days post

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release. We checked the recorded data on feeding behaviours and found everything going normal because it was released in a nice enclosure having sufficient water body (No concrete), grass land and resting shed. Total area of the enclosure is 11 acres with 5 acres water body. 4.5 ft heavy brick wall around the enclosure with a man height 5' width drain inside adjacent to the wall. A major deficit was found in not having shade giving trees inside the enclosure.

Second shifting of female (1700 Kgs. approx.) was done on 26/12/2004 starting from 21/12/2004 by same crate, same devices and same procedure to ensure pairing in Dulahazara Safari Park.

Third shifting of a male hippo (1500 Kgs. approx.) was made with a crate (11'L×5'W×6'H) weighing 1100 Kg by same lift and same sized truck from 01/02/2006 to 06/02/2006 for Rangpur Zoo (Distance from Dhaka to Rangpur zoo is 335 km). Before making this endeavor, Drs. Ahasan and Banik, Dy. Curator, Dhaka Zoo made a visit to inspect the enclosure made at Rangpur Zoo. It is a very small enclosure of 0.5 acres with a tiny water body. It can hold a single hippo but not enough for a pair. Dr. Waliur Rahaman, Zoo Officer made the post release visit. The animal did not eat for 3 days following release. It has been suggested that it should get its partner. A considerable figure of financial involvement (about \$3,000 per animal) was incurred.

It can be asserted here that Dr. Marteli approved this pattern of capturing and shifting (he got bitter experience of chemical sedation or tranquilizing). We couldn't compare our study, owing to absence of such efforts in Bangladesh.

Comments:

1. Animal exchange/donation, should be carried out for the welfare of the animals.

2. Male-Female ratio should be maintained.
3. Enclosure extension should be up to the mark.
4. Making naturalistic enclosure having grasslands, reasonable sloping of surroundings and water body is a must.
7. Ensuring deep water body
8. Water replacement activity on a regular basis.
9. Ensuring comfortable visitor walkway.
10. Tag marking (or transponding or other else) should carried out for record keeping.

References

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Acknowledgement:

Md. Mafizur Rahaman, ex-curator and Dr. N C Banik, Deputy Curator, Dhaka Zoo extended their support and inspiration to conduct this study. Almost all the office executives of Zoo Outreach Organization including Madam Sally R Walker provoked to study and write some of Dhaka zoo activities. So, a heartfelt thanks to all of them.

All the Dhaka Zoo colleagues, and other staffs, especially Dr. Ahmed Ziaur Rahaman, ex-scientific Officer and finally Kazi Fazlul Haque, curator, Dhaka Zoo inspired us to complete the write up from the study records conducted by Dr. Ahasan. They all deserve thanks and gratitude.

Mst. Mahbuba Sultana (Student of MBA dissertation on HRM practices in Dhaka Zoo referred by the Vice Chancellor of IBAIS University), wife of Dr. Ahasan allocated family time to finish this study and writings. We are indebted to her.

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