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LOCATION

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KEY WORDS: Enrichment

ANIMALS

Family: Elephantidae

Species: *Elephas maximus*

Common Name: Asian Elephant

Capacity: 4,0,0

DESCRIPTION

The outdoor part of the exhibit was rebuilt in 2006 and is four times as large as the former outdoor space. The elephant house was built in 2010 with the arrival of the juvenile bulls and is inspired by a glade next to an Asian river. This first juvenile-bulls-only-group in Germany is intended to advance the breeding of Asian elephants in Europe.

The elephant house offers a lot of space and four stalls that are not visible for the visitors. In order to prevent a build-up of moisture, a standard concrete building foundation has been omitted, and natural soil is used underneath the sand in the elephant hall and stalls. The roof from polycarbonate sheets allows daylight into the indoor enclosure. The roof also has integrated ventilation and sprinklers that can simulate rain and maintain a high humidity in the building.

SIZE

The elephant exhibit covers about 5000 m² including the visitor area. The former outdoor exhibit was enlarged to a total of 2000 m²; 1600 m² of which are accessible to the animals. In addition to that there are 800 m² of



Pool inside the elephant house ©Zoo Heidelberg, 2011



Outdoor exhibit ©Linn, 2011

vegetation and about 60 m² of marsh area.

The elephant house includes 500 m² accessible for the animals plus four separable stalls of 60 m², 30 m² and twice 40 m². The visitor area has 60 m² and the remaining 90 m² are intended for the keepers' area.

COSTS:

€ 4,650,000

About 3,75 Million Euro were spend on the planning and construction of the new elephant house. Roughly 15% of these expenses were covered by donations. The costs for the reconstruction of the outdoor exhibit added up to 900.000 Euro.



Naturalism ©Monika Fiby, 2011

The machine is remotely controlled and has a timer, so that the elephants can also be fed at night. Automatically refilled water basins provide fresh water inside the four stalls.

The outdoor enclosure is a diversified environment with parts of natural ground and sand, tree trunks and boulders. These offer opportunities for skin care and other activities. The animals also have a large outdoor pool which is also accessible from two sides. Instead of a regular moat at the perimeter of the exhibit, the ground is sloped downwards from the enclosure side and ends in a vertical wall on the visitors' side to minimize the risk of injuries to the elephants and increase their effective area. Shrubs and trees planted around the exhibit provide shadow and more privacy.

The elephants are able to access stalls, indoor and outdoor enclosures during most of the day and night by choice any time.

FEATURES DEDICATED TO KEEPERS

The four separable stalls in the elephant house can be used to confine single animals from each other or from the group. Two stalls have rubber floor instead of sand which helps for example to keep foot injuries clean. Between stalls and outdoor space, there is an area dedicated to training and medical treatment with a mobile scale and mobile walls. The latter allow the keepers and veterinarians protected contact with the animals.

A service yard is right next to the elephant house and is accessible for transportation vehicles.

FEATURES DEDICATED TO VISITORS

The elephant house is inconspicuous for the visitors because of its artificial rock cladding. Inside and outside, visitors have the chance to approach the animals within a few meters. An elevated viewing platform in the elephant house gives an overview of the whole inside enclosure.

INTERPRETATION

Inside the elephant house, signs and interactive objects inform the visitors about the physiology of elephants.

A model of an elephant heart allows the visitors to hear, feel and, thanks to a flashing light, even see the heartbeat of the animals. Models of mouse heart



Elephant heart ©Monika Fiby, 2011

OPENING DATE
08 July 2010

DESIGN
Beginning:
Planning: Architekturbüro Rasbach,
Dipl. Ing. Peter Rasbach

CONSTRUCTION
Beginning: 09 June 2009

PLANTS
The vegetation of the indoor exhibit is made up of tropical plants to simulate the elephants' natural habitat. The outdoor vegetation offers shade and hiding possibilities.

The plant list specifies the Latin names of the plants used for this exhibit.

FEATURES DEDICATED TO ANIMALS

Thanks to a sand layer of several meters on the ground of the hall and two of the four stalls, the elephants walk on soft ground. There is a large inside pool that the elephants can access from two sides. The deepest point of the pool is 1.80 m and it can hold around 50.000 liter of water. In addition to multiple enrichment devices, a 7m high, artificial tree with a feeding machine inside of it is placed in the middle of the inside enclosure.

and human heart are also provided for comparison with other different species.

The visitors can learn about the characteristics of an elephant tooth and about the second dentition of elephants by exploring a model of an elephant jaw and a multimedia presentation on a large panel. On the elevated viewing platform in the elephant house additional interactive panels inform visitors about the infrasound communication of elephants and allow them to feel infrasound through a special device.

Along the perimeter of the outdoor exhibit signs inform the visitors about enrichment, enclosure design and chances and dangers that arise from wildlife tourism in Africa and Asia.

Visitors can also use a large scale to compare their weight to that of an elephant.

MANAGEMENT

The elephants are managed under protected contact to keepers.

A diverse enrichment program is used to prevent boredom of the animals. Cleaning and training schedules are flexible by the keepers and thus avoid monotonous daily rhythms.

The pool is cleaned once a week and then refilled with rainwater from a cistern.

The elephants can use all enclosure parts and the four stalls during day and night.

RESEARCH

Research for a Bachelor Thesis focused on the activity pattern of the juvenile bulls and the social interactions within the group. The integration of the newly arrived fourth bull into the group and the social hierarchy within the group was studied in further thesis work.

CONSERVATION

By keeping a group of juvenile bulls, Zoo Heidelberg plays a leading role in the European Endangered Species Program (EEP) for the Asian Elephant.

The pool is filled with rainwater from a cistern. Due to the translucent roof of the elephant house, no artificial lighting is needed.

LOCAL RESOURCES

The majority of construction companies hired for building the new elephant house are regional.



Confinement Stall ©Monika Fiby, 2011



Automatic feeder ©Zoo Heidelberg, 2011



Indoor exhibit ©Monika Fiby, 2011