

## New elephant enclosure at Crandon Park Zoo, Miami

JAMES H. AMON

*Zoo Information Officer, Crandon Park Zoo, Key Biscayne, Miami, Florida, USA*

Crandon Park Zoo opened its new elephant enclosure in 1969. This barless, open-air enclosure has a total area of one acre with one half this space being allotted to the elephants. A water filled moat surrounds 95% of the enclosure.

The elephant house is only used at night and is situated 42.6 m (140 ft) from the public area. At the rear of the building a drive has been constructed to allow easy access for maintenance vehicles. Tropical landscaping, including several species of palms, acacias and tall grasses, has been designed so that it almost hides the house from the visitors, so that they have the feeling of seeing the elephants roaming in a spacious plains-like habitat.

The moat has a total length of 268 m (880 ft) and a width of 9.1 m (30 ft). Its front portion is 48 m (160 ft) long and has been made into a swimming area for the elephants. A ramp, 12 m (40 ft) wide, allows them easy access into this pool, which is isolated from the rest of the moat at each end by several cement pillars linked by electrified wires. The public sees the elephants from the opposite side of the pool where a cement retaining wall has been built. This viewing area is raised 1.4 m (4½ ft) above the level of the en-

closure, giving the public the impression of viewing the elephants from a hillside.

Elsewhere than in front of the pool there is no steep retaining wall and it would be possible for the elephants to walk out of their enclosure through the moat. To prevent this, a 2.1 m (7 ft) wide band of sharp pointed granite rocks, imbedded in concrete has been placed along the edge of the moat in these areas. In addition, an electrically charged wire is suspended 60 cm (2 ft) above the centre of the pieces of granite. This rock and electric wire barrier has also been placed around the landscaping to prevent its destruction.

The elephant house is a rectangular structure measuring 9.75 × 12.2 m (32 × 40 ft). It is constructed of 12 vertical columns each 35.6 cm (14 in) square which support the roof. It is capable of housing six adult elephants and has six holding stalls each measuring 3.04 × 4.6 m (10 × 15 ft). The single maternity stall measures 3.04 × 6.08 m (10 × 20 ft). The stalls are formed of a total of 94 vertical columns, each of which is a 10 cm (4 in) square concrete filled steel tube. These are placed 60 cm (2 ft) apart. Vertically placed steel plates 6.35 mm (¼ in) thick enclose portions of the stalls.

## Africanum—a new exhibit for African steppe wildlife at Duisburg Zoo

WOLFGANG GEWALT

*Director, Zoo Duisburg AG, Germany*

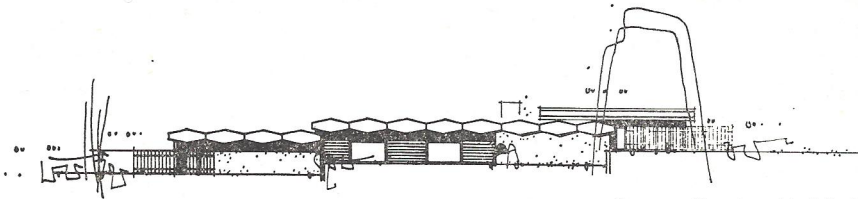
The new Africanum situated in the centre of a moated area of more than 8,000 m<sup>2</sup> (86,111 ft<sup>2</sup>) is one of the largest and most impressive projects constructed so far at the Duisburg Zoo. It was completed in the spring of 1971 and replaces some old and smaller air enclosures and simple

wooden stables for Ankole cattle, zebras and antelopes which previously occupied this area. The complex is dominated by a large and massive, heated building, with a floor area of 50 × 40 m (164 × 131 ft), which in its flat construction suggests the African open plains. In cross-section

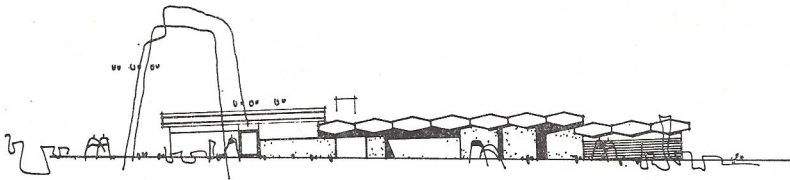
its roof is the shape of a chain of rhombuses and is the only decoration of this building built of concrete and dark wood-work.

Inside the central public area a huge metal relief on the wall showing the 'dark' continent refers to the name of the building. Entering the public hall the visitor faces a barless paddock for

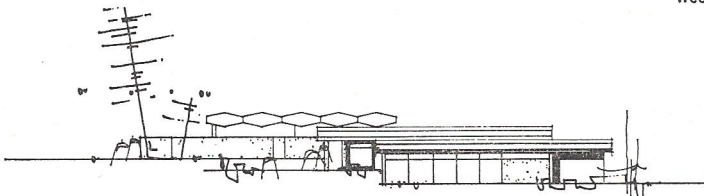
adjacent barless enclosure is larger in size and includes the keepers' staff room, food storage room and a barn. The dens in this part of the building house a herd of about 20 Steppe zebras *Equus burchelli antiquorum*, a nice group of the Jackson's hartebeests *Alcelaphus buselaphus jacksoni* seldom represented in zoos, impalas *Aepyceros*



Cross section viewed from East



West elevation



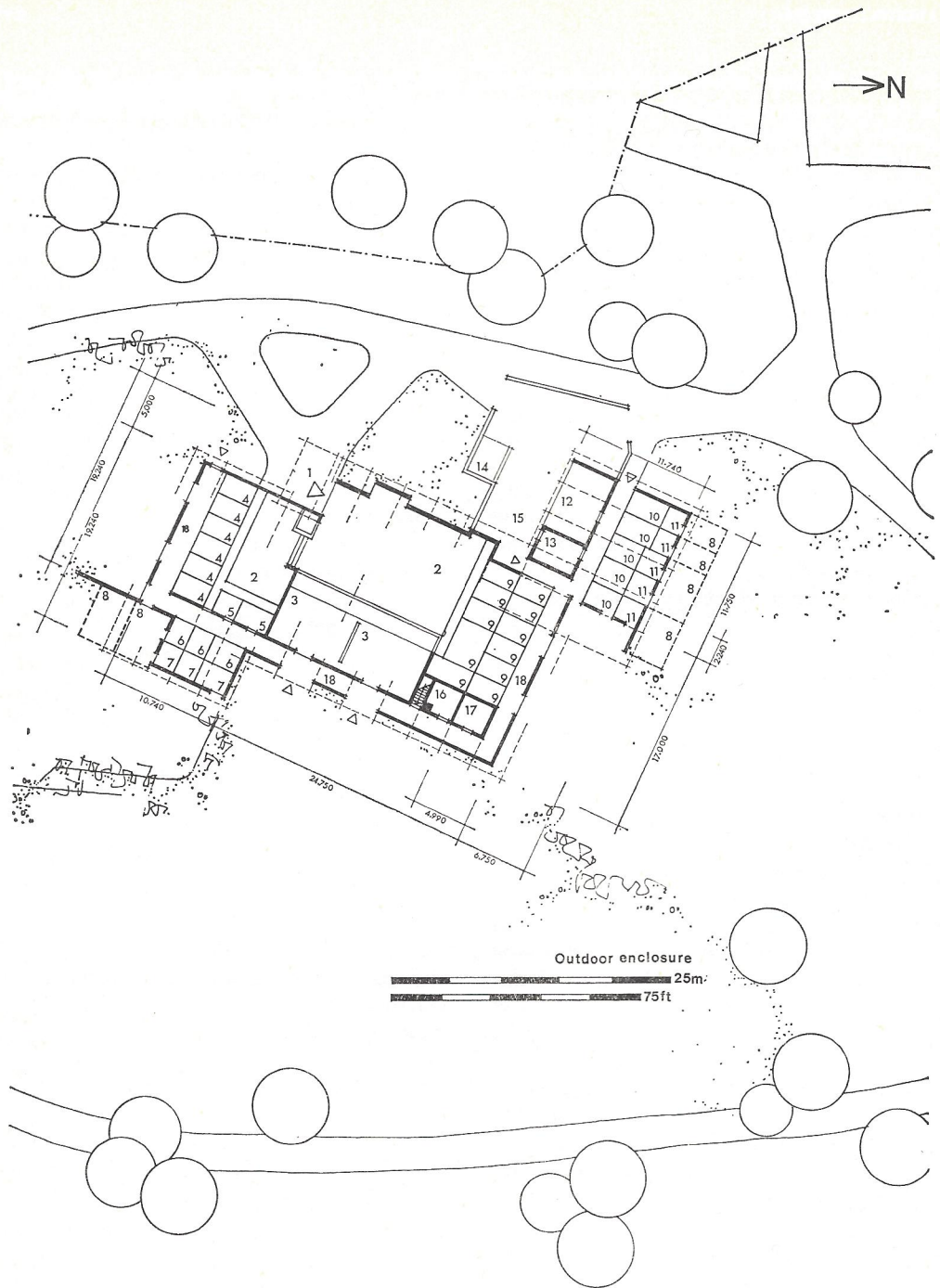
South elevation

our pair of White rhinoceroses *Ceratotherium simum* which, if required, can be separated into two sections, one for the male Hluti and the other for the female Nongoma. Passing by a cage for African parrots or small mammals, a few steps lead down to the smaller section of the Africanum. Here there are a number of individual dens or larger paddocks for African domestic animals, such as Ankole cattle, Black-headed sheep, goats and a flock of Crowned cranes *Balearica pavonina* and African waterfowl. These dens are separated from the large outdoor enclosure on the south side by the service corridor. Outside, the dry moat boundary is interrupted by a pool which provides drinking water for the mammals and gives ample space for splashing and play for Spur-winged geese *Plectropterus gambensis*, ducks and so on.

The northern part of the building with its

*melampus*, Dorcas gazelles *Gazella dorcas* and ostriches *Struthio camelus*. Outside natural rocks, simulated termite hills, and Acacia trees provide shade and places to hide and rest for White-backed vultures *Gyps africanus*, White-headed vultures *Trigonoceps occipitalis*, Egyptian vultures *Neophron percnopterus* and some Bat-eared foxes *Otocyon megalotis* bred at the zoo, and complete a true African scenery.

The whole exhibit can be seen by the public from a refreshment station, but they will not be disturbed by the work of the keepers which will be carried out behind the walls of a separate working- and dung-yard. All the floors in the paddocks and dens are made from Stallit tiles, an insulating material especially developed for stables. The Africanum was designed by our zoo architect, E. Haberkorn.



**Figure 1. Ground plan (above) and cross-section and elevations (previous page) of Africanum – the new African steppe wildlife exhibit at Duisburg Zoo.**

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|--------------------|----------------------------|------------------|----------------------|
| 1. Public entrance | 6. Goats                   | 11. Antelopes    | 16. Food store       |
| 2. Public area     | 7. Sheep                   | 12. Storage      | 17. Keepers' room    |
| 3. Rhinoceroses    | 8. Acclimatisation section | 13. Ostriches    | 18. Service corridor |
| 4. Ankole cattle   | 9. Zebras                  | 14. Dung yard    |                      |
| 5. Cranes          | 10. Antelopes              | 15. Working yard |                      |