

Exhibited are three elephants, two Indian and one African, ranging in age from $1\frac{1}{2}$ to 3 years.

This paddock is about 450 sq. ft. in area – the two back walls converge at a 90° angle and the front viewing area forms an arc. Cedar logs, 4 to 8 in. in diameter, were placed side by side and imbedded in concrete footing to a depth of 30 in. The logs forming the two back walls and the house stand 7 ft. above the ground. Those along the viewing section stand 3 ft. above the sidewalk, and have $1\frac{1}{2}$ in. steel pipe guard rails inside and outside, extending 30 in. to the inside, and 12 in. to the outside. One-inch expanded metal is used between the outside guard rail and the fencing to prevent children from going under the rail.

The sleeping quarters are constructed with cedar logs lined with $\frac{3}{4}$ in. plywood, and have a log roof and concrete floor sloping to a drain. A 4 ft. \times 6 ft. section of the floors in each of the two rooms is electrically radiantly heated, and thermostatically controlled at about 65° . The rooms are approximately 8 ft. \times 12 ft. each, and 7 ft. high.

The elephants are chained at night to rings imbedded in the floor. There is also a ring in the centre of the enclosure. Four palm trees and a eucalyptus tree are growing within the enclosure.

The exhibit is viewed from a 4 ft. wide sidewalk standing 8 in. above the street, with a 3 ft. wide ramp sloping to the sidewalk.

THE PACHYDERM HOUSE AT CHESTER ZOO

by G. S. Mottershead

Director of Chester Zoo

IN most Zoological Gardens the largest animals of all have to be content with perhaps a smaller amount of room, in proportion to their size, than any other animal in the zoo. It was felt that the time had arrived when the pachyderms at Chester should be given accommodation comparable with their size and which would also provide them with amenities that would, in the long run, be of benefit to them.

The new Pachyderm House at Chester Zoo was started in 1959, and is largely being built by the zoo's own construction staff. This building is 220 ft. long with varying width, but in all, covers an area of approximately 20,000 sq. ft. The main structure of the elephant section, which is in the centre, is of reinforced concrete, with the exception of the back which is built of large sand-

stones. This section comprises two enclosures separated by a dry ditch. The largest enclosure contains a bathing pool where the animals can wander at will into the water for a bath, which they do regularly.

All along the front of the enclosure is a public passage way, well lit; the whole of this side of the building is built of armour-plated glass, with a border 4 ft. wide, planted with sub-tropical vegetation. Along the whole length of the top of the sandstone wall (14 ft. high) at the back of the enclosure is a border 4 ft. wide which is also planted with tropical vegetation. It is lit from above through glass, and underneath in the service passage are two large oil-fired air heaters, and the warm air is distributed through grilles set in the sandstone wall.

In addition to these heaters there is a very large capacity reserve water tank which is capable of refilling the elephants' bath in a matter of a few minutes. The main object of this storage of water is that not only can the change be made quickly, but also the temperature of the water is slightly higher than that which would be supplied direct from the mains, and this therefore obviates the risk of giving the animals a chill.

At one end of these service quarters is a supply tank for drinking water. This tank is filled from the mains and is controlled by a ball tap, and the water is fed through to a special drinking trough inside the Elephant House, so that as the animals drink the water it is automatically replaced from the warm chamber.

There are extensions at each end of the elephant section. At one end there is accommodation for the rhinos. This consists of two enclosures surrounded by sandstone walls on top of which is a profusion of tropical vegetation. At the other end of the house is accommodation for large hippopotamuses and here again vegetation is one of the dominant features of the building.

In addition, the hippos, rhinos and elephants enjoy large open-air enclosures, and throughout the construction no bars are used, the method of confining the animals being that of ditches and various elevations.

The height of this house at the apex is just over 30 ft., therefore there is plenty of air, and with the assistance of the oil heaters the air is well circulated. One of the main objects of planting this house so profusely with vegetation is that previous experience has taught us that this considerably assists in the reduction of smell.

In our Pigmy Hippo Houses which also accommodates crocodiles, humming birds and so forth, vegetation is again very profuse and one can smell the flowers almost constantly, so that the smell of the hippo is never noticed.

The whole of the area occupied by the Pachyderm House and its enclosures covers an area of approximately $1\frac{1}{4}$ acres. The animals can be transferred from one enclosure to another through doorways which are divided by heavy doors on roller bearings, which are controlled from outside the enclosure. One of the

main reasons why we have adopted this control of the animals is that we have two male African Elephants, which are now adult. Although at present our keepers are able to go in with these animals, we have made provisions so that they can be attended to without the necessity of anyone going in with them, if they should become bad tempered.

THE PROJECTED PACHYDERM HOUSE AT PRAGUE ZOO

by Ing. Ant. Turek

THE plans for the new Pachyderm House in the Prague Zoological Gardens have just been completed. The building will be finished in three years. It is the fourth big building for animals in our zoo and was planned as follows:

- 1,1 African Elephants (*Loxodonta africana*)
- 1,1 African forest Elephants (*Loxodonta cyclotis*)
- 1,2 Indian Elephants (*Elephas maximus*)
- 1,1 Indian Rhinoceros (*Rhinoceros unicornis*)
- 1,1 African Black Rhinoceros (*Diceros bicornis*)
- 1,1 Sumatran Rhinoceros (*Didermocerus sumatraensis*)
- 1,1 African White Rhinoceros (*Ceratotherium simum*)
- 1,2 Hippopotamus (*Hippopotamus amphibius*)
- 1,2 Pigmy Hippopotamus (*Choeropsis liberiensis*)
- 1,2 American Tapirs (*Tapirus terrestris*)
- 1,1 Malayan Tapirs (*Tapirus indicus*)
- 1,2 Manatees (*Trichechus*)
- 5,15 Hyrax (*Procavia syriaca*)

The building is situated in the lower part of the garden and is surrounded on the north-east by higher terrain. The elephants' enclosure will be surrounded from three sides by a raised path for visitors so that they will have the best possible view of these most attractive animals.

The plan of the house was not made according to the usual regular pattern, but very divided. By these means we gain a very effective division of the exterior and interior enclosures and the differences of the terrain allow the best possible movement of the animals in their enclosures.

The house is divided into three parts:

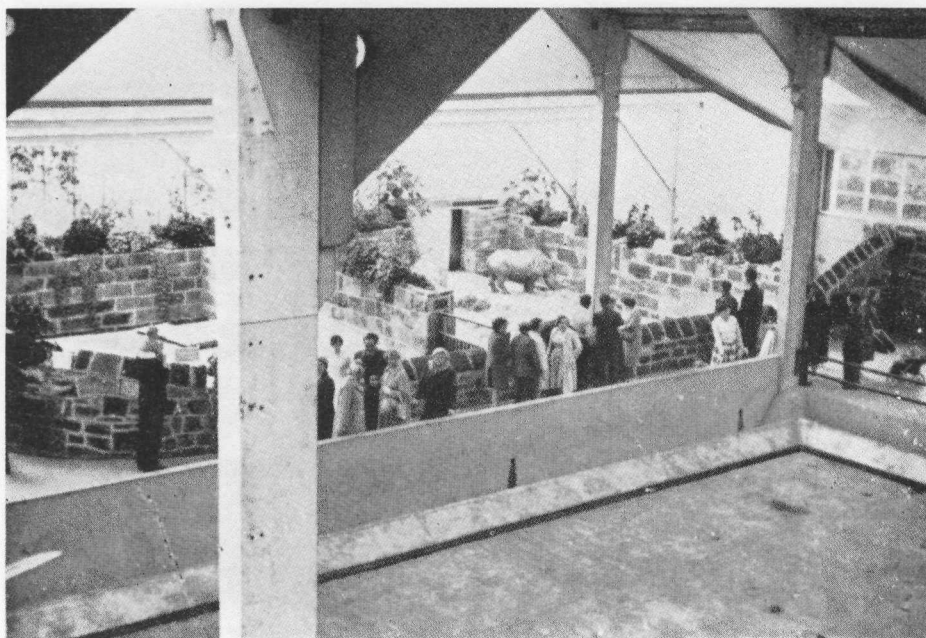


Plate V

View from the gardeners' service passage showing the indoor accommodation for rhinos at Chester Zoo's new Pachyderm House. (See pp. 3-5.)



Plate VI

Enclosures for Malayan Tapir and Black Rhino at Chester Zoo's new Pachyderm House. (See pp. 3-5.)

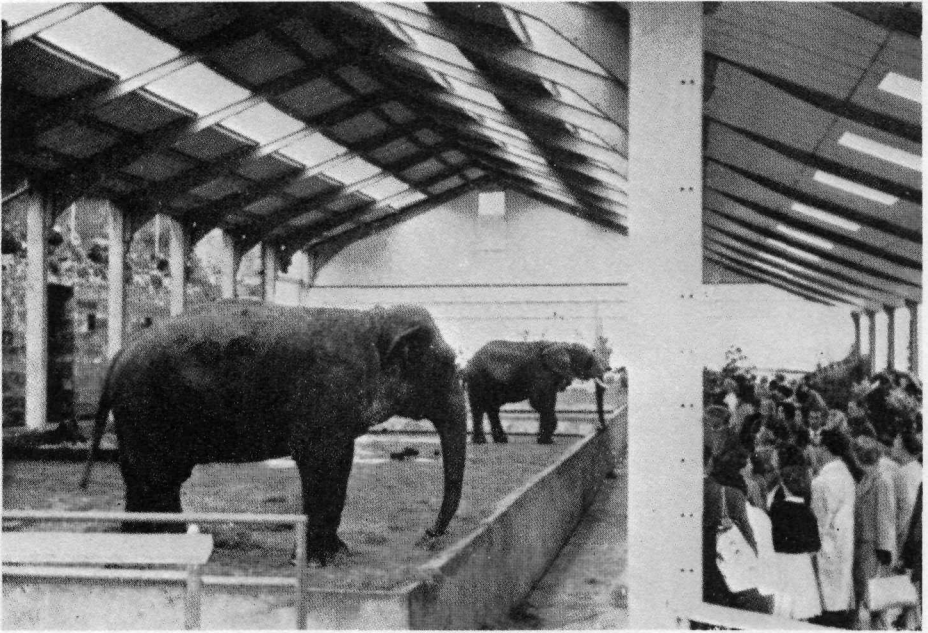


Plate VII

Elephant Section at Chester Zoo's new Pachyderm House. (See pp. 3-5.)

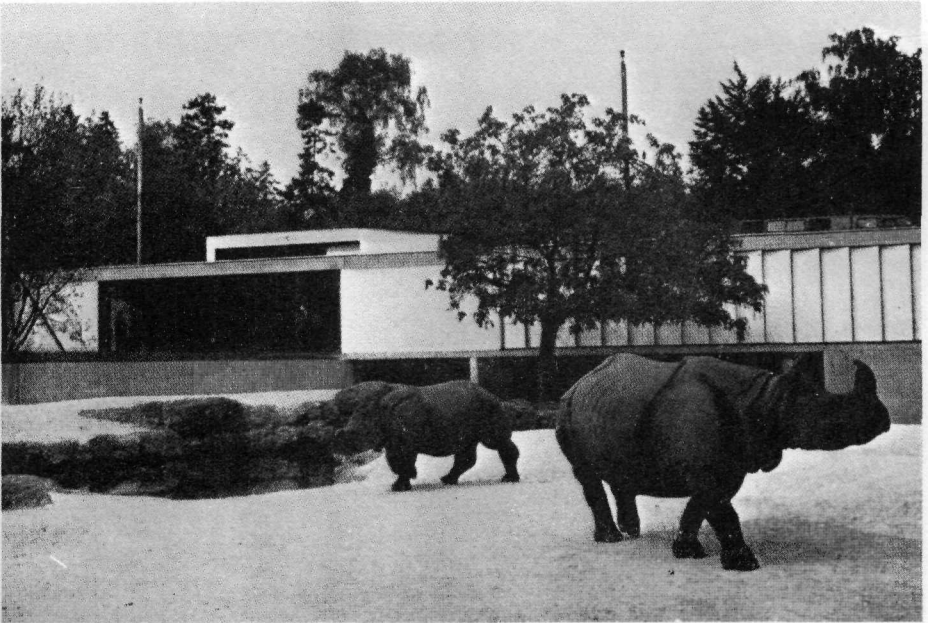


Plate VIII

Outdoor Enclosure for Great Indian Rhinos at Basle Zoo. The new Rhino House can be seen in the background. (See pp. 15-17.)

Paul Steinemann, Basle Zoo