

SOME UNUSUAL MIXED EXHIBITS AT POZNAN ZOO'S NOCTURNAL HOUSE

**BY RADOSLAW RATAJSZCZAK AND EWA
TRZESOWSKA**

Since the opening of the nocturnal house in our zoo in 1994, we have experimented with a variety of mixed exhibits. Most of them worked quite well and have already been established for at least a couple of years. Four of the more noteworthy exhibits are described in this article.

Pygmy slow loris and Asian horned beetle

This is a rather unusual story, as we suspect this might be one of the first mixed exhibits with any invertebrate (apart from the usual Pharaoh ants or a variety of cockroaches) and a mammal. We had begun to breed *Xylotrupes gideon sumatrensis*, a rather large beetle from Asia, a couple of years ago with a single pair imported from Sumatra. Luckily, the number of beetles increased through subsequent generations, and finally in spring 2000 we had enough adults emerging from pupae to try them out in a mixed exhibit, without compromising further breeding potential.

It was observed that these beetles are much more active during the night than during the day. Flights were only observed when the lights were off. It was predicted that this species of beetle, with males reaching over 8 cm in length, would not be a likely prey for lorises. Additionally both sexes are very hard and tough. They make a squeaking noise when approached too closely, in order to scare a potential predator.

Our pygmy slow loris (*Nycticebus pygmaeus*) exhibit is about 4.6 square metres in area and 2.3 metres high. It is used for holding a pair of lorises and is furnished with a dense network of branches. The ground is covered with shredded bark. The temperature is in the range of 24°-26°C.

To prepare the exhibit for the beetles, water in a small pool inside the cage was replaced with a special mixture of dried leaves, mulch, coconut fibre and rotten wood. Initially only one male was placed in the exhibit. As nothing harmful happened to him, two females and another male were subsequently added. The lorises are fed above the ground on a hanging platform which prevents the beetles from eating their food. The beetles are fed on the ground and their food is partly buried in the soil, so it is inaccessible to the lorises. There were no losses among the beetles due to predation. In fact, for the first couple of days the lorises were interested in the beetles, following them along branches, watching them closely, and even trying to grab them. Such activities stimulated defensive behaviour in the beetles and forced the lorises to abandon hunting. The eggs buried by the beetles developed into a large number of grubs, and in another couple of months there will be another



An Asian horned beetle; this species is successfully kept in a mixed exhibit with pygmy slow lorises at Poznan Zoo. (Photo: Marian Butkiewicz)

generation of beetles in the cage. The grubs stay deeply buried in the substrate and will thus be inaccessible to the lorises. The beetles are really active and one can observe the males fighting on the branches, and sometimes even flying around the exhibit. The lorises are also more active than they were before.

In the past we also tried lorises with tokay geckos (*Gehko gecko*). This exhibit also worked well for some time, but was abandoned on the death of the only gecko we had available at the time. (The death was not connected to the fact that this was a mixed exhibit.)

Douroucoulis, hairy armadillo and lesser spear-nosed bat

Since the opening of the nocturnal house douroucoulis (*Aotus lemurinus griseimembra*) and hairy armadillos (*Chaetophractus villosus*) have been kept together. Both species bred successfully in this exhibit. The enclosure is rather large by nocturnal house standards, covering an area of 20 m² and 2.3 m high. To add a bit of movement we put a male lesser spear-nosed bat (*Phyllostomus discolor*) into the exhibit. After a month a female was added. There are plenty of hiding places in narrow holes or crevices in the bark. For almost a year everything has worked well, and the bats can quite often be seen flying around the cage. We have observed no hunting behaviour by the douroucoulis and armadillos, who seem to ignore the bats totally.

Beaver rat and fishes

The beaver rat (*Hydromys chrysogaster*) is of course a piscivore, occupying to some extent the same niche in Australia as otters do

elsewhere in the world. This species is, however, only capable of hunting rather small fish. The fishes we put into the pool in this exhibit, carp (*Cyprinus carpio*) and gibel or Prussian carp (*Carassius auratus gibelio*), were at least 30 cm long. Some were hunted, but a number of them have already been living there for a year or even longer. Sometimes the beaver rat still tries to catch them, but usually this is more a game than a real hunt. Polish tradition requires the eating of at least one carp during the Christmas holiday. Incidentally, our beaver rat usually kills one or two carp around Christmas time!

Vampire bat and blind cave tetra

It is pretty difficult to conceive of any mixed exhibit including vampire bats (*Desmodus rotundus*). Although they are known to inhabit common roosts with other bat species in the wild, our efforts to keep them with lesser spear-nosed bats failed. The latter were found with bites on their bodies, so they were removed immediately. Our exhibit simulating a natural, shallow cave is supplied with a water pool. This pool is constantly filtered, and we decided to put some blind cave tetras (*Astyanax mexicanus*) into it. This worked well for some time, but always ended in the premature death of the fish. This was not in any way connected with the bats' activity; rather, it served as a proof that it is difficult for mammal keepers to take proper care of other vertebrates. There were problems with the filter and the water chemistry, some of them perhaps due to drops of blood sprayed by the bats into the water. However, we will certainly try again when cave tetras become available.

There is also a variety of other mixed exhibits in our nocturnal house, but these are ones which have already been tried in other zoos. It seems that, given ample space, mixed exhibits may alleviate some of the commonest problems in nocturnal displays – poor visibility of animals and lack of general activity. The possibilities are almost unlimited, and we will certainly try more, once suitable animals become available.

Radosław Ratajszczak, Vice-Director, and Ewa Trzesowska, Curator of Mammals, Poznań Zoo, ul. Browarna 25, 61-063 Poznań, Poland.

Environmental enrichment conference

The Fifth International Conference on Environmental Enrichment will be held at Taronga Zoo, Australia. The conference theme will be 'making enrichment a 21st century priority'. Among topics to be covered are: 'enrichment for herps, birds and marsupials', 'conditioning and training as enrichment', and 'enrichment and the zoo visitor'. For more information, please check the Taronga Zoo website: www.zoo.nsw.gov.au, or contact Margaret Hawkins, Taronga Zoo, P.O. Box 20, Mosman, NSW 2088, Australia. (Tel.: +61 29978 4615; Fax: +61 29978 4613; E-mail: mhawkins@zoo.nsw.gov.au)