

THE CONDITIONING OF CAPTIVE LEOPARD SEALS (*Hydrurga leptonyx*) FOR INVESTIGATIONS OF DIVING AND ACOUSTIC BEHAVIOUR

Andrew Irvine and Clair Holland*
Taronga Zoo, New South Wales , Australia

Pack ice seals remain one of the least known groups, particularly with respect to behavior and basic ecological parameters such as movements. This is by virtue of the fact that the seals have a dispersed distribution throughout dense pack ice, which requires an ice-strengthened ship to obtain access to them. Taronga Zoo has held leopard seals since 1953. In January 1990, conditioning for blood taking from a six-year-old female leopard seal and a two-year-old male leopard seal began. Blood samples were taken at fortnightly intervals between June 1990 and June 1992. The seals were trained to lie in a prone position while 20ml of blood was taken from an extradural intravertebral sinus in the lumbar region. Serum hormonal concentrations were used to determine the reproductive state of each leopard seal. This study showed that female leopard seals sing while in estrus, presumably to advertise their breeding receptivity (*Rogers et. al. in press*). In 1992, the female leopard seal was conditioned for an electrocardiogram (ECG) examination to determine heart rate. The seal was first conditioned to an elastic girth strap fastened with Velcro. This girth strap secured the ECG cable to the leopard seal. Then three patches of skin on the thoracic region were shaved, for the attachment of three electrodes which were glued into place. Once the conditioning was complete, the animal would be left in a shallow pool connected to the ECG machine for one or two hours. The heart rate and the degree of terrestrial apnea was used to estimate the diving ability of leopard seals. The duration of terrestrial apnea was shorter in the leopard seals than in captive harbour seal (*Phoca vitulina richardsi*) and southern elephant seals (*Mirounga leonina*). It is proposed that leopard seals have an inferior diving ability to these other two species of seal (Williams & Bryden 1993).

A NEWBORN FUR SEAL WITH A BROKEN JAW - IS THERE ANYTHING WE CAN DO?

Rosana de Souza*, A. Leonardo, G. Lacave, K. Massei,
N. Machado, Y. Pires, M. Rodrigues, E. Fonseca
Zoomarine, Portugal

In May 1995, Zoomarine's first South African fur seal baby (*Arctocephalus pusillus pusillus*) was born to Paquita, a nine-year-old first time mother. Although some arrangements had been made, the birth was unattended by the staff. The calf was found a few minutes after the birth, being severely bitten by the mother, the only animal in confinement. The mother was very reluctant to allow the trainers to enter the enclosure and remove the calf for examination and treatment. The baby, a female, died less than 12 hours later, due to the severe injuries. This year, on Mothers' Day, May 5, Paquita gave birth to her second baby, a male. Immediately after birth she was seen biting the pup over and over again, on three different occasions. This time, the animal care staff decided to allow the mother some more time with the baby, before removing the pup, to see her behavior. After careful examination, the baby revealed a broken jaw. The only option left was to remove the pup periodically from the mother, clean the wounds, and administrate a special feeding formula. The different procedures to feed the animal and to fix the baby's jaw will be shown.