

## USING AN OXYGEN TENT AT DUISBURG ZOO'S DOLPHINARIUM

*W. Gewalt, Director Zoo Duisburg, West-Germany.*

It is well known that an especially high percentage of dolphins' diseases are of the respiratory system, a fact confirmed by a census of GREENWOOD and TAYLOR (1979). In spite of the generally used methods of treatment with new types of antibiotics, to which expectorant drugs like Bisolvon etc. can be added, pneumonia in dolphins is still dangerous and often fatal.

Therefore we should like to explain a simple procedure that we have used several times and which is suitable as an effective support of antibiotic treatments. It is a construction approximately similar to the "oxygen tent" used in human hospitals in cases of very grave circulatory disturbance and respiratory disease, a principle especially simple to copy at those small pools available at most dolphinaria. A similar small canopy and the administration of oxygen was successfully employed to sustain a weak *Phocoena phocoena* on transport by Dudok van Heel in 1958 (DUDOK VAN HEEL, 1962). Simple plastic film is sufficient, just like that used for agricultural and painting purposes. It is suspended above the pool or spread over some posts. There is no problem to get a hermetical closing by immersing the ends of the foil into water or fastening them at the pool with adhesive tape, a procedure much simpler than that for facilities of terrestrial animals. This takes only a few minutes to make completely effective. After that, oxygen is directed into the hermetic space above the water. The oxygen need not be especially purified as for medical purposes, but only such as is used at locksmith's shops or motor workshops. The oxygen mixture above the water of the pool - of whatever concentration one chooses - may be improved by addition of ethereal oils (like Eucalyptus etc.). A further favourable effect is achieved by the increase of the atmospheric humidity in the tent, up to 80% and over, due to raising of water vapour at the same time. After this increase coughs and rattling sounds in breathing disappear very soon. It is an error to suppose that usually in roofed dolphinaria with a large water surface the conditions would be so favourable. For example, at Duisburg Zoo the atmospheric humidity in the main hall of the Delphinarium normally is about 40%.

### *References*

- DUDOK VAN HEEL, W.H., 1962: Sound and Cetacea. Neth. J. Sea Res. 1(4): 407-507.  
GREENWOOD, A.G. and D.C. TAYLOR, 1979: Clinical and pathological findings in dolphins in 1978. Aq. Mam. 7(3): 71-75.

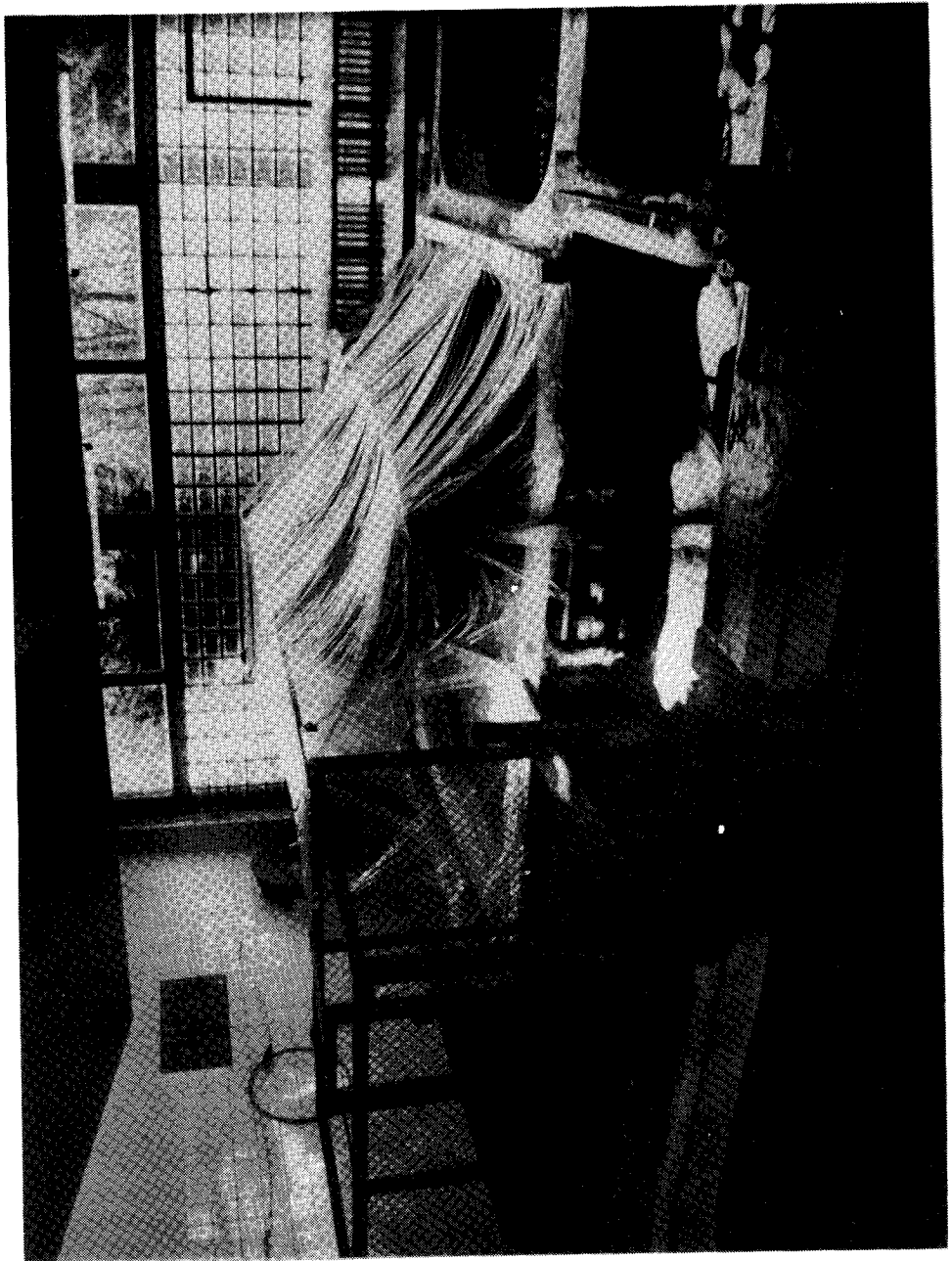


Fig. 1. Scenery photograph of plastic cover as an oxygen tent over a pool at Duisburg Zoo.  
Photo W. Gewalt.