

had a normal respiratory frequency and suckling rate until then. At that time, it was thought that one did not need to vaccinate calves before the age of approximately one year, because the main source of infection for *Erysipelas* was believed to be fish. Following that case, a general study on *Erysipelas* vaccination in dolphins was started in 1992 at the University of Gent in Belgium. For this study, it was empirically decided that the calves would be vaccinated for the first time before the age of six months, preferably between 3 and 4 months. We show preliminary results on eight calves vaccinated that way and the results from a general survey on the occurrence of *Erysipelas* in the last ten years.

THE HUSBANDRY OF PREGNANT BOTTLENOSE DOLPHINS. A BEHAVIOURAL APPROACH. V. Pastore, Università degli Studi De Milano, Milano, Italy, A. Bortolotto, Zonomia, Riccione, Italy, and B. Mercera, Parc Asterix, Plailly, France.

The aim of this presentation was to suggest the use of behavioural observations during pregnancy to help determining the date of delivery, to follow the calf's development, and to monitor incidental modifications of the social relationship within the group after the birth of a calf. The importance of the cooperation among trainers, biologists, and veterinarians was stressed. Three female bottlenose dolphins (*Tursiops truncatus*) were monitored at Parc Asterix, Plailly (France) in 1996 and 1999, respectively. During pregnancy, six hours of observations were carried out to monitor flexion behavior from 0000 to 0600 hr every day until three days after delivery. Furthermore, the mother/calf spatial relationships and the calf's suckling attempts were followed 6 hrs/day for the calf's first two months of life. Generally, the flexion behavior increased one or two days before delivery. At the same time, the food intake decreased and the female showed a few behaviours typically related to late pregnancy (i.e., side breaching and downstroke). This study clearly showed that it is easy to predict the delivery date by means of unintrusive behavioural observations. Additionally, the overlap of the information coming from behavioural observations carried out both by trainers and biologists can result in a better understanding of the social relationship within the group and of their modifications due to the calf's presence.

THE REPRODUCTION PROGRAMME FOR BOTTLENOSE DOLPHINS AT MUNDOMAR. Kees de Groot, Mundomar, Benidorm, Spain.

A video presentation featured the births of two bottlenose dolphins (*Tursiops truncatus*) on October 12 and 13, 1999 at Mundomar. A review of birth preparations, planning, and handling of the public and media were given. Other aspects related to the birth of a dolphin and the combining of dolphin births with the day to day routine in a dolphin show pool were addressed. The planning, however, suddenly changed into panic when the first baby presented its head instead of the tail at birth, and the second pregnant females had her calf one month before expected.

ULTRASOUND IN MARINE MAMMALS AND DEVELOPMENT OF GROWTH CURVES FOR FETAL *TURSIOPS*. Géraldine Lacave, Marine Mammals Veterinary Services, Brugge, Belgium.

The use of ultrasound has spread over the last fifteen years for the medical check-up of marine mammals. It is a wonderful non-invasive diagnostic tool primarily used for monitoring fetal development, but also is helpful for viewing internal organs like liver, kidneys, etc. Ultrasound devices have the advantage of being a light and portable machine that can be used with the voluntary participation of a dolphin. Nowadays, most facilities hosting marine mammals have well-developed husbandry and medical care programs, including desensitization of dolphins to the ultrasound probe. In the facilities at which I consult, ultrasound is part of the monthly check-up and is performed more frequently on females during the summer months or during gestation. Following 16 gestations in those facilities allowed us to develop growth curves based on thoracic and skull diameters from known age fetuses.