

ANTWERP, MARCH 1982

THE TENTH SYMPOSIUM OF THE EUROPEAN ASSOCIATION FOR AQUATIC MAMMALS.

Mr Dineley, discussing operant conditioning as a tool in training dolphins, first defined the statement then explained the use of the technique, referring to both Skinner's and Pavlov's work. He detailed the trainer's normal procedure and suggested that this should be used both for treatment of animals and for their performance.

J. Dineley, Welsh Mountain Zoo, Colwyn Bay, N.W. LL28, U.K.

Dr Gewalt talked about his experiences with the only Toninas (*Inia geoffrensis*) in captivity. These had been caught in 1975 and originally included an albino animal. He referred to Pilleri's work and suggested that the animals feed by eyesight on live fish which is trout. At Nuremberg they are fed dead fish. The Toninas are very impressive as players and perhaps in the wild never see another of the same species so are very interested when together in captivity.

W. Gewalt, Zoo Duisburg, Mülheimerstr. 273, Duisburg, BRD.

Mr Bössenecker, reviewing his procedures over five years of dolphin catching, listed the animals that he had caught for Europe. (24 *Sotalia*, 18 *Tursiops gilli*, 6 Commerson's dolphins, 20 *Tursiops truncatus*). He detailed many problems, especially lately the necessity for a multiplicity of permits. His present policy was now to catch only for orders and to use only charter flights.

P. Bössenecker, Soc. Biologique des Caraïbes, Esdoornlaan 4, Rhenen, The Netherlands.

The Open Trainer Session, where the panel consisted of Mr Pieter de Block, Dr W.H. Dudok van Heel and Mr Reginald Bloom dealt with many questions from the floor.

Dr Gambell from IWC said that the Bow-head whale of which there were only about 2,500 specimens in the wild, was the only species of Baleen whale in danger from commercial exploitation.

R. Gambell, I.W.C., The Red House, Station Road, Histon, Cambridge CB4 4NP, England.

Dr Bowen's and Dr Roff's paper was read by Dr Bowen, who gave a general review of population statistics in relation to minimum safe yield and variations therefrom.

W.D. Bowen and D. Roff, Memorial University of Newfoundland, St. John's, Newfoundland, Canada.

Mr Boyd read *Mrs McConnel's* paper on normal blood values in wild and captive common and grey seals and compared the levels together with those from human bloods. He felt that exercise prior to blood sampling affected these values and that both iron and vitamin additives should be fed to all captive specimens.

Mrs L. McConnel, Sea Mammal Research Unit, Madingley Rd., Cambridge CB3 0ET, England.

Mr Andersen gave his usual very careful paper this time on methods of measuring body surface area in *Phocoena*, and discussed methodology, comparing different methods which he felt were within 1 - 2% variation and this was especially important today in relation to the new concept relating drug dosage levels to the body surface area rather than to the weight of an animal.

S.H. Andersen, Inst. of Physiology, Dept. of marine mammals, 55 Campusvej, DK 5230 Odense M, Denmark.

Mr Taylor summarised in detail illness in a killer whale which failed to respond to normal treatments and eventually yielded a positive Rose bengal test and 1/320 serum agglutination test to *Brucella*. It seemed thereafter to respond to antibiotic treatment and returned to clinical normality. He discussed the problems of identification of *Brucella melitensis* and abortus in this particular case.

D.C. Taylor, 2 Whity Close, Lightwater, Surrey, England.

Dr de Meurichy in his paper, entitled Recurrent diarrhoea and fatal muscular degeneration in *Tursiops*, listed the background and the attempted methods of treatment. He felt in retrospect that there was an acute muscular dystrophy related to a vitamin E/selenium imbalance or deficiency and this was related to the rancidity of the mackerel being fed at that time. He commented on how important peroxidase levels were to all of those feeding aquatic mammals.

W. de Meurichy, Kon. Maatschappij voor Dierkunde, Koningin Astridplein 26, 2000 Antwerpen, Belgium.

Dr Gauckler reviewed his previous paper on *Nasitrema* and stomach and liver flukes and showed evidence that the drug "Dronsit" at 2 mg/kg was much more effective than at his previous recommended level of 1 mg/kg. He had not found flukes in Florida animals but in Mexican animals nasal, stomach and liver flukes were found. In Texan and Columbian animals, nasal flukes only.

A. Gauckler, Zoo Nürnberg, Am Tiergarten 30, D-8500 Nürnberg, BRD.

Mr van Foreest summarised his *Erysipelas* returns. He went into the diagnosis, vaccinal type and frequency of vaccination and the possibility of reactions that survey revealed and requested more serum samples for survey including those from wild caught animals to see if antibodies occurred there.

A.W. van Foreest, van Lennepweg 7, Oosterbeek, The Netherlands.

Mr Greenwood, unable to present his usual clinical and pathological survey, suggested that it was time we repeated in Europe the census published by Dr Cornell in the International Zoo Yearbook, emphasizing how important it was for members to breed their own replacements, and to do this and to create a multiunit breeding policy it was essential to know which animals were kept where.

A.G. Greenwood, Hainsworth House, Damens Lane, Keighley, BD 22 7AR England.

Mr Klinckert related a problem to be found at Nuremberg on the ineffectiveness of backwashing of the filters which resulted in having to frequently change the sand. He chlorinated after every second backwashing, which occurred in 3/4 days, but in reply to his question, no-one in the audience experienced the same trouble.

H.J. Klinckert, Zoo Nürnberg, Am Tiergarten 30, D-8500 Nürnberg, BRD.

Dr van Nie summarised the position of the Bulbus aortae in the common seal and mentioned how important it was for every diving animal, the internal circumference and the elasticity being operational within 2 days after birth. He then went on to summarise the coronary arterial topography of 59 hearts in which he found 3 different types of drainage.

C.J. van Nie, Loevestein 15, Leiderdorp, The Netherlands.

Miss Collet in her joint paper with Professor Harrison gave a very detailed run down on the ovaries taken from 10 species of dolphins stranded on the atlantic coast of France. She described her post mortem procedure in detail and having found one female with 14 corpora albicantes in the ovary postulated that this could not have therefore been related in every case to a pregnancy.

Miss A. Collet, Centre d'Etude des Mammifères Marins, 28 Rue Albert 1^{er}, 17000 La Rochelle, France.

Mr Boyd, in his paper on foetal growth in Grey seals, described the relation between female size and foetal growth rates. In Phocids especially, large body size and therefore weight resulted in a large foetus and there were changes in growth rates occurring between early and late pregnancies.

J.L. Boyd, Sea Mammal Research Unit, Madingley Rd., Cambridge CB3 0ET, England.

Mr Vaughan related the escapade of a walrus which appeared in the United Kingdom local waters in 1981. He reviewed the known sightings. The particular animal of which he showed slides finished up 20 miles or so up the River Ouse at Downham Market and was a young 18 month old male.

R.W. Vaughan, Sea Mammal Research Unit, Madingley Rd., Cambridge CB3 0ET, England.

Dr de Smet, summarising the great abundance of bones (approximately 200 cubic metres) found in excavations under the city of Antwerp, noted that not only were many still to be identified but there were already 16 species of Pinniped (mainly Phocids), 28 species of Baleen whales (more than are present in the world today) and 22 species of Odontocetes.

W.M.A. de Smet, Hertendreef 12, Kalmthout, Belgium.

Mr Andersen described Commerson's dolphin both as an animal and the habitat in which they were found and he showed shapes and components of sounds which had been adapted through acoustic filters.

S.H. Andersen, Inst. of Physiology, Dept. of marine mammals, 55 Campusvej, DK 5230 Odense M, Denmark.

Mr Kamminga went on with a continuation of his work with detection by dolphins of both solid and hollow spheres, in which the animals had achieved 75% detection rate, although the discrimination between the first and primary echoes was down to 10 microseconds. On video tape he showed over 900 trails producing a 98% accuracy in the animals.

C. Kamminga, Lab. voor Informatietheorie, Mekelweg 4, Delft, The Netherlands.

Mr Wiersma displayed sonar recordings of Commerson's, *Inia*, *Phocoena* and *Sotalia*, discussing the ranges of frequency and the echoes. He pointed out that the *Sotalia* which showed two components was here for the first time. He also showed the high and the low parts of the *Phocoena* sound recordings with a very small break between the pulses.

H. Wiersma, Lab. voor Informatietheorie, Mekelweg 4, Delft, The Netherlands.

Dr Asselberg in his paper on some differences in the skull dimensions of *Tursiops*, listed many variants between the United States, European and Japanese animals and came to the conclusion that none of the differences were significant although the greatest differences occurred in the widths of the brain case.

R. Asselberg, Kon. Belgisch Instituut voor Natuurwetenschappen, Vautierstr. 29, B-1040 Brussel, Belgium.

Dr Gauckler, reporting the birth and hand rearing of a Manatee, noted mating had taken place on May 5th 1980. The birth took place on 17 July 1981 and the female was mated again 3 months later. He showed the composition of the milk, which like many Pinnipeds had no lactose, and the artificial formula of the milk used.

A. Gauckler, Zoo Nürnberg, Am Tiergarten 30, D-8500 Nürnberg, BRD.

Professor Harrison, talking on River dolphins, described his visit to China, was saddened by the pollution of lakes, and talked about 2 species, *Lipotes vexillifer*, of which only about 200 occurred in the wild, and *Neophocaena asiaorientalis* (which the Chinese refer to as the River Pig) of which there are 7-800. The slides of the first species were the first ever shown in the West.

R.J. Harrison, Dept. of Anatomy, University of Cambridge, Downing Street, Cambridge, England.

Mr Hopwood in his paper reviewing insurance, summarised the need for people to protect their investments and of course recommended good cover for this. His firm R.K. Harrison, demanded good conditions of husbandry and management. He recommended that insurance should be taken out for full replacement cost with separate cover for travel.

D. Hopwood, c/o R.K. Harrison, J.I. Jacobs Ltd. Europe House, London E19AA, England.

Dr Gewalt, reviewing his experiences with Commerson's dolphins, reminded us that unfortunately all three animals were males. He felt that these might be the last animals to be seen in the West as the Argentinians were banning catching. His film showed how enthusiastic they were at working and what a superb contrast they made to the slow moving Belugas in the same pool.

W. Gewalt, Zoo Duisburg, Mülheimerstr. 273, Duisburg, BRD.

Mr de Block prior to taking us round the marine mammal collection at Antwerp Zoo reviewed the history of the *Sotalia* and *Tursiops* which he had kept together for some time. He described the differences in training, and the anatomical differences of the animal and apparent mating behaviour.

P. de Block, Kon. Maatschappij voor Dierkunde, Koningin Astridplein 26, 2000 Antwerpen, Belgium.

Dr Sandra Barnett with some excellent slides and sound recordings reviewed the anatomy and behaviour, feeding patterns and location in captivity of the Leopard seal, which occurred in only 4 zoos worldwide. In Napier, New Zealand, the animals exhibited trained behaviour

and she felt the relationship between trainer and playing was very important. She mentioned many of the species that were mixed with them.

Mrs S. Barnett, c/o Goethe Institut, Garlopstrasse 2, 2120 Lünenburg, BRD.

Dr Reijnders, introducing his film on the birth of a Harbour seal at Texel, said that the animal was a 5 year old captive born animal which pupped 2 years ago and the film showed the total birth time.

P.J.H. Reijnders, Rijksinst. voor Natuurbeheer, 't Horntje, Texel, The Netherlands.

Dr Gauckler reviewed the problems he had had with a female *Tursiops truncatus* imported in 1979 which had in fact been mated in August 1980. Apparently pregnant it stopped feeding at the end of pregnancy producing a stillborn youngster and the mother died later with necrosis of blood sample sites. He gave full PM details of both animals.

A. Gauckler, Zoo Nürnberg, Am Tiergarten 30, D-8500 Nürnberg, BRD.

Mr Tougaard gave a very appealing enthusiastic paper on mother/pup relationship in the Harbour seal showing the similarity in growth curves of a number of animals in which the weaning weight related to the birth rate. He pointed out that the mother's weight loss during suckling was very similar to the curve of pups growth rate during suckling.

S. Tougaard, Fiskeri - og Søfartsmuseet, Esbjerg, Denmark.

Dr Reijnders showed graphs on the decline of the Waddensea population of Harbour seals and found that many animals lost flipper tags over three to four years, therefore reducing the possibility of studying released seals. Captive reared animals yielded more recoveries and therefore more deaths. However, both nursery reared returned animals appeared to survive as well as free ranging animals, and about a sixth of the wild population was nursery reared.

P.J.H. Reijnders, Rijksinst. voor Natuurbeheer, 't Horntje, Texel, The Netherlands.

Dr Röken showed slides of an interesting case at Kolmardens of a Polar bear who had lost her tongue. He showed slides not only of the excised tongue but of the base which he had sutured. After three weeks the animal was now feeding and drinking normally.

B.O. Röken, Kolmarden Djurpark, S 61023 Kolmården, Sweden.

Dr van Heel introduced the ATV-documentary "The Talking Whale", which illustrates the successful experiment in two-way communication in the killer whale by teaching the first steps (2 nouns and 2 verbs) of language to the Orca "Gudrun".

W.H. Dudok van Heel, Neth. Found. for Aq. Mam. Res., P.O.Box 452, 3840 AL Harderwijk, The Netherlands.

Ed/VJAM