

The Thirteenth Symposium of the European Association for Aquatic Mammals—Duisburg, West Germany, March 1985

The 13th Annual Symposium of the European Association for Aquatic Mammals was held for the second time in the history of the Association at Duisburg in March 1985. It was attended by 101 participants and by 12 accompanying spouses. Fourteen countries, from Australia and Israel to the USA, including Hawaii, and from Sweden to Italy were represented. Once again, two specialist sessions were held, the first under the chairmanship of Dr Margaret Klinowska from the University of Cambridge as a European station sightings workshop, and the second, an innovation this year, consisted entirely of papers from students working in the field of Marine Mammals. Outside these two sessions 24 papers were presented, covering pathology, medicine, sound reproduction, behaviour in the wild, behaviour in captivity and one paper attempting to answer the intriguing question as to why dolphins have such large brains. There follows below a list of the speakers with short summaries of the papers. Longer extracts may be obtained from Dr van Foreest at van Lennepweg 7, 6862 BK Oosterbeek, The Netherlands, on payment of 10 guilders, or of course authors may be contacted direct. A number of these papers, as is our normal practice, will be published in full in succeeding numbers of 'Aquatic Mammals'.

Dr Klinowska, introducing the Cetacean Sightings Workshop*, referred to individual members who reported from the areas of the world in which they were most concerned. They were as follows: Dr W. M. A. De Smet on Belgian sightings, a report from Dr Duguay on French sightings, a report from Dr J. Maigret on the Mediterranean area, a brief report was given by Dr Klinowska on the Dutch situation and a report received on the Portuguese area. Dr Carolina Sanpera referred to Spanish sightings on the South Coast, whereas the Northern Spanish area was summarized by the Chairman. Mr B. Farkin reported on the Swedish situation including areas of Norway, and Dr Peter Evans covered British and Irish waters. Following the reports the workshop session covered 6 different areas under

*Postal delays prevented the publication of the full report in this number, but it will be printed in the Autumn number.

the respective Chairmen. Firstly, the purposes, methods and limitations of recordings by Dr Klinowska, secondly the recruitment, education and support of observers by Mr D. A. McBrearty, thirdly the storage, analysis and exchange of data by Dr Evans, fourthly, the disturbance of animals and consequent publicity by Mrs Christine Lockyer. Fifthly, future plans were outlined by Dr Klinowska who then concluded the session, reminding her audience of the United Nations Global plan of action for marine mammals. Fuller details of these reports may be obtained from the rapporteur, Mrs Christine Lockyer at the Sea Mammals Research Unit, British Antarctic Survey, Madingley Road, Cambridge, GB.

After lunch the President of the European Association for Aquatic Mammals, Dr Andries van Foreest, took the chair for the session of student papers.

Miss P. Roosje, a final year veterinary student, reviewed the course of infection with *Erysipelothrix rhusiopathiae* in dolphins, discussing methods of transmission and also the results of different types of vaccination with the resulting antibody levels.

Miss P. J. Roosje
J. van Effenstraat 15 A, Utrecht, The Netherlands.

Mr T. Kuiken from Utrecht compared the relationship between two groups of Harbour seals (*Phoca vitulina*) fed separately on flat fish and on mackerel. Animals from both groups were fed separately and the blood chemistry of the two groups discussed. He commented that the PCB levels were higher in the flat fish group than in those fed on mackerel.

Mr T. Kuiken
*Plompstorengracht 25, 3512 CB Utrecht,
The Netherlands.*

Miss M. Winnubst, a student trainer, reported on reproduction in the group of 1.2 Fur seals (*Arctophalax philippii*) kept in Dolfirado Stein. The animals were imported as a group in 1976, and have been kept in a pool with an area of land 4 × 4.5 m

square. She discussed management, nutrition, and gave details of their growth rates of the two young which didn't vary despite the death of the first animal.

Miss M. Winnubst
Dolfirado, Vloedstraat 30, 6361 XH Nuth,
The Netherlands.

Hans Gelens, a final year veterinary student, discussed the stresses normally concomitant with the handling of dolphins, and described in detail a very simple biopsy punch method of taking skin samples in the water. Healing took place within one week, the diameter of the punch producing a small biopsy sample causing little trauma and only taking a few minutes to carry out.

Mr H. C. J. Gelens
Sweelinckstraat 14, 3581 RV Utrecht,
The Netherlands.

Mr van Wezel reported on 26 skulls of *Sotalia fluviatilis* which he obtained through the courtesy of Mr van Bree all of which were found in known areas. He had looked at those from fresh and coastal water situations and measured 16 characters of the skull. By using these measurements he felt able to distinguish between the two clusters of the population.

Mr J. van Wezel
c/o C. Kamminga, Information Theory Group,
Delft University of Technology, The Netherlands.

The afternoon's session continued under the chairmanship of **Dr Gewalt** who introduced his own paper on further experiences in observing, catching and acclimatizing Jacobitas (*Cephalorhynchus commersoni*) which he did by using many fascinating and educational slides. These illustrated every aspect of the capture of these animals and showed how much great care had been taken both in the capture and in their transport to Germany, which was in boxes on foam rubber. He commented that animals caught in 1978 and 1980 were still living in Duisburg Zoo.

Dr W. Gewalt
Duisburg 200, Mülheimer Strasse 273,
4100 Duisburg, West Germany.

Mrs C. Lockyer presented a paper on Commerson's Dolphins (*C. commersoni*) from Tierra del Fuego

which she had written in conjunction with Natalie Goodyear who had obtained most of the carcasses and some of the information. She reported that the highest survival of these species was in adults, and that 23% of the incidental takes by fishermen of this species were yearlings and neonates, which she felt to be a significant proportion. The carcass of the oldest animal she had come across was 19 years of age. She concluded by saying that if it is assumed that the probability of incidental capture is similar for all age classes then the major component of mortality is natural causes.

Mrs C. Lockyer
Natural Environment Research Council,
Sea Mammal Research Unit, c/o British Antarctic
Survey, Madingley Road, High Cross,
Cambridge, CB3 0ET, Great Britain.

Dr B. Neurohr reported on clinical and pathological findings in Commerson's dolphins, reviewing the pathology of the carcasses he had examined. He emphasized the importance of lungworm in this species which appeared to cause great problems despite intensive medical care.

Dr B. Neurohr
c/o Zoo Duisburg, Mülheimerstrasse 273,
4100 Duisburg 1, West Germany.

Under the Chairmanship of Dr J. L. van Haaften, Dr Kinze reported on the distribution of porpoises in Danish waters, discussing the population variance around the coast, especially in the Baltic. He postulated that the Western coastal group were a separate population and discussed variations in behaviour between the Dutch and the Baltic coastal animals.

Dr C. Kinze
Zoology Museum, Copenhagen, Denmark.

Dan Dorschel introduced an excellent talk and slide show on Whales in Norway and Greenland which he presented in conjunction with M. Lindhard Schultz. There were many superb pictures here illustrating both the animals and the scenery on the West Norwegian coast right up to the Lofoten Islands. The introduction was of course in the usual well known fashion from this speaker.

Mr D. Dorschel
Universiteit Odense, Campusvej 55,
DK-5230 Odense M, Denmark.

A past president, **Mr Peter De Block** from Zoo Antwerp, who had recently retired, then gave a fascinating account covering 17 years of experience both with dolphins and of the difficulties of maintaining good water quality in the earlier years. He concluded that the contact through EAAM with other workers was much appreciated and was very important to all. He commended the Association to continue its good work, especially for its younger members just commencing their experiences.

Mr P. De Block
c/o Antwerp Zoo, Konigin Astridplein 26,
B-2018 Antwerp, Belgium.

Dr A. G. Greenwood then took the opportunity to present a paper which sought to show that the work of Professor Pilleri of Berne on Cetaceans in captivity was based on a number of misconceptions. He went through the paper very carefully and exposed the fallacies and misunderstandings on which quotes, including those from himself, were taken. He also pointed out some of the contradictions within the paper itself.

Dr A. G. Greenwood
Hainsworth House, Damems Lane, Keighley,
West Yorkshire, Great Britain.

Mr Paul Terry gave an interesting case study with a series of observations on aggression of dolphins in captivity, with particular reference to the behaviour between a number of animals of *Sotalia* and of *Tursiops* species. The aggression seem to vary depending on the number and species of animals mixed and he concluded by reminding the audience that there was a report of *Sotalia* attacking and killing *Inia* in the wild.

Mr R. P. Terry
Technische Hogeschool Delft, Afdeling der
Elektrotechniek, Makelweg 4, Delft,
The Netherlands.

Dr Klinowska in an interesting paper entitled 'Is this why dolphins have big brains?', related the size of the brain, as in the spiny anteater (the *Echidna*) to the possibility of using the large cerebral cortex to avoid overloading of the brain. This occurs in animals not undergoing rapid eye movement or paradoxical or dream sleep—which state is absent in both dolphins and *Echidna*.

Dr M. Klinowska
Department of Anatomy, University of Cambridge,
Downing Street, Cambridge, CB2 3DY,
Great Britain.

R. Paul Terry then discussed the captive behaviour and trainability of Tucuxi (*Sotalia fluviatilis*). He felt that overall *Sotalia* fell below *Tursiops* in their mean expression of behaviour and summarized by saying that most respondents agreed the trainable limits of this species have not yet been challenged.

Mr R. P. Terry
Technische Hogeschool Delft, Afdeling der
Electrotechniek, Makelweg 4, Delft,
The Netherlands.

Dr Kamminga then read a paper entitled 'What is going on in a sonar clicktrain?'. He commented that the impulses in a clicktrain are very variable both in time and also as between animals. He showed the similarities and differences of recorded trains from various individuals.

Dr C. Kamminga
Information Theory Group, Delft University of
Technology, The Netherlands.

Hank Wiersma in conjunction with **Ces Kamminga** then presented a paper on sonar waveform complexity, and expanded on his statement that dolphins' sonar signals are elementary simple and have a band width as small as possible to allow for a certain amount of acoustic energy to be admitted.

Mr H. Wiersma/Dr C. Kamminga
Lab. voor info theorie, Mekelweg 4, Delft,
The Netherlands.

Dr Paul Nachtigall, addressing himself to the question 'Do dolphins and Sealions have good taste?', gave a clear presentation of tests carried out between a Pacific Bottle Nosed dolphin (*Tursiops gilli*) and a Californian sealion (*Zalophus californianus*) indicating their reaction to the four primary tastes of sourness, salinity, bitterness and sweetness. The results presented indicated that the dolphin detected all four primary tastes while the sealion did not detect the sweet taste, although was able occasionally to taste the bitter element.

Dr P. E. Nachtigall
Naval Ocean Systems Center, PO Box 997, Kailua,
Hawaii.

Dr H. J. Knieriem reported on a case of acute cardiac death in an 18 year old Beluga whale. Having described lesions in detail and with slides, he commented that in humans such lesions were caused

by a cochsacki virus, especially in the summer, which was when the last illness of this animal had started.

Professor Dr Med H. J. Knieriem
*Chefarzt des Institutes für Pathologie,
 Evangelisches Krankenhaus Bethesda, Akademisches
 Lehrkrankenhaus der Universität Düsseldorf,
 West Germany.*

Dr C. J. van Nie continued his studies on the hearts of aquatic mammals by referring to the sinu-atrial and auriculo-ventricular nodes of aquatic mammals, and compared them with identical observations in man, dog, pig, calf and sheep. These observations lead to a possible morphological explanation of the bradycardia present during diving.

Dr C. J. van Nie
*Loevestein 15, 2352 KN Leiderdorp,
 The Netherlands.*

Dr van der Kamp listed the autopsy findings he had come across in seals, especially from the seal nursery at Pieterburen during '82, '83 and '84 updating the report he had previously given for 1975 to 1981. An interesting case he found was of an atresia ani in a young seal, and a cardiac carcinoma in a very old animal. He also came across a previously unidentified herpes virus in nine animals examined recently, full details of which were published in the Journal of Virology.

Dr J. S. van der Kamp
*Gezondheidsdienst voor Dieren in Noord Nederland,
 Postbus 30014, 9700 RH Groningen,
 The Netherlands.*

Dr John Baker summarized his experiences in the use of 'Carfentanil' (Janssen) and Ketamine/Xylazine in the immobilization of wild grey seals (*Halichoerus grypus*). All the doses he listed were given on an estimated body weight, but the bodies weighed later. The mean dose given to an adult grey seal was 9.92 µg/kg, and naloxone was used as the antagonist.

Dr J. R. Baker
*Department of Veterinary Pathology, University of
 Liverpool, Veterinary Field Station, Leahurst,
 Neston, Wirral L64 7TE, Great Britain.*

Dr L. Gage gave a well illustrated paper on almost 700 pinnipeds admitted to the Californian Marine Mammal Center over the past few years. She commented on the 220 of the last 236 beached in 1984 in which were found evidence of leptospirosis caused by *Leptospira pomona* leading to renal failure. The animals were not so heavily parasitized as those in 1973 and she listed the reasons and methods for surgical interference with cataract which she found in a number of animals at the center. After an initial investigation and exploratory surgery to remove fish hooks she found that if fish hooks were left in the stomach of sealions they would disintegrate after two or three weeks so that now the procedure was to leave them in situ if they are not related to lesions.

Dr L. G. Gage
*Dinnes Memorial Veterinary Hospital, c/o Marine
 World Africa USA, Redwood City, California, USA.*

Professor R. Turner gave some ideas on the functional morphology of the cetacean erythrocytes based on a number of samples which had been passed to him. He had found Howell Jolly bodies and anacytosis in samples from apparently normal animals with raised mean corpuscular volume, presumably because of the thickness of the erythrocytes. He commented that the size of normal cells did not follow a normal distribution pattern and wondered whether some of the variations were due to nutritional deficiencies.

Professor R. Turner
*Department of Pathology, Yorkshire Clinic, Bingley,
 Yorkshire, Great Britain.*

Dr J. C. Sweeney reported on the results of assorted investigative clinical studies in aquatic mammals since he was able to post mortem all carcasses washed ashore and these totalled 31 cetaceans in 2 years and 63 pinnipeds. Most of the animals were presented with injuries rather than with disease, although he had seen erysipelothyrix infection in a wild *Tursiops gilli*. He noted especially a high rate of stillbirths and neonatal deaths in the wild.

Dr J. C. Sweeney
*Veterinary Consultant Services, 4467 Saratoga
 Avenue, San Diego, California 92107, USA.*