Aquatic Mammals 1988, **14.2**, 46–48

The Sixteenth Symposium of the European Association for Aquatic Mammals—Windsor Safari Park, United Kingdom—11th to 14th March 1988

The 16th symposium of the Association was held at Windsor from the 11th to the 14th March, and once again, was attended by representatives from all over the world. For the first time, poster presentations of work were made, in addition to the 25 formal papers presented. There was also a chance to see video films of animals from other collections. The Safari Park at Windsor were excellent hosts, and showed us around the many improvements carried out in the Park over the last few years. The summaries below contain the full addresses of the authors, from whom further information on their papers may be obtained, although a number of these have appeared, and some will appear in full, in succeeding volumes of 'Aquatic Mammals'.

The President—**Mr D. C. Taylor**—and the host—**Mr Andrew Haworth-Booth**—welcomed members to the symposium, and handed over the first session, entitled 'Captive Environment' to the chairman, **Mr V. J. A. Manton.**

Ron Kastelein illustrating the efficiency of photographic records to identify individual animals, emphasized the importance for future legislation to be able to record accurately marks in the outline of individuals.

Dr R. A. Kastelein,
Zeedierenpark Harderwijk B.V., Strandboulevard Oost 1, 3841 AB Harderwijk, The Netherlands.

Patricia St. John compared the conditions under which specimens of *Inia geoffrensis* were kept at Pittsburgh, USA and Duisberg, West Germany, and commented on the different environments, and the way the two collections treated the animals. She made an interesting comment about the success in maintaining body weight using live fish for feeding.

Patricia St. John,
Midpoint, Research Foundation for Creative Communications Inc., Box 17, Bridgewater, Connecticut 06752, USA.

In the absence of **Dr Gewalt, Mr Ostenrath** from Duisburg presented his paper on play behaviour of Inia. It was emphasized that natural play should be encouraged rather than enforced play, and even in this species, there was much invention by the animals themselves. This was illustrated on slides, including how they would play with bubbles and yard brooms.

Dr W. Gewalt,
Duisburg Zoo, 4100 Duisburg 1, West Germany.

Dr Keskitalo, a water engineer, brought us up-to-date with the recent developments in the biological water treatment systems, referred to at previous meetings, at Tampere in Finland. He commented that they were still working on the system, and were now considering the use of ozones.

T. Rahunen & P. Keskitalo,
Delphinarium, Tampereen Sarkanniemi Oy Sarkanniemi, SF-33230 Tampere, Finland.

Mr P. Scott gave a fresh and very useful review of environmental monitoring. He pointed out that as a veterinary surgeon he had come into this field from that of fish farming, and so was looking at many more elements in the water than had been considered before. He demonstrated what he considered to be a useful bacterial testing kit, which could give a very quick result.

P. W. Scott,
'Keanter', Stoke Charity Road, Kings Worthy, Winchester, Hampshire, United Kingdom.

The second session, on the first morning, was devoted to 'Population Biology', and the first speaker was **Dr Klinowska**. She described the bureaucratic muddles over definitions of endangered and threatened species under different forms of legislation. She also explained some of the gaps in legislations, which—for example—would not stop harassment of marine mammals in coastal waters.

Dr M. Klinowska,
Research Group in Mammalian Ecology & Reproduction, Physiological Laboratory, University of Cambridge, Downing Street, Cambridge, United Kingdom.

Dr Bill Amos, in the first of two papers which he read, discussed the history of information gathering, and went on to illustrate an unobtrusive and apparently relatively painless method of obtaining samples of

skin via an arrow fired from a compound bow. This, at a distance of between 10 and 50 metres, caused no apparent reaction in large whales. The arrow was able to produce a centimetre long plug of skin 6 mm thick. His second paper, which had been written together with **Russ Hoelzel,** from the same address, gave a very clear exposition of the use to which these were subjected. He pointed out that DNA was very tolerant to degradation, and could be recovered from mammoth, quagga and other dried skins up to 2000 years old. He summarized what could be learnt from this finger-printing, and pointed out that there was variation in this between species, the whales in general not being as good as humans.

Dr B. Amos,
Department of Genetics, University of Cambridge, Downing Street, Cambridge, United Kingdom.

The first session on the Sunday morning was chaired by **Dr D. C. Taylor. Dr Baker** summarized the causes of mortality in male Antarctic fur seals on Bird Island. He found many more deaths where the carcasses had a large number of bite wounds than those with fewer. The beachmaster bulls were not affected, only the sub-beachmasters.

Dr John Baker,
Veterinary Field Station, Leahurst, Neston, Wirral, United Kingdom.

Dr Laurie Gage emphasized the importance of regular medical health checks on cetaceans, and illustrated how animals could be trained for regular examination without restraint, even as frequently as monthly, over a long period. She had, in fact, taken blood samples regularly like this. She emphasized the importance of hydration with debilitated animals, which may even need help to swim for up to 24 hours.

Dr Laurie Gage,
Marine World Africa USA, Marine World Parkway, Vallejo, California 94589, USA.

Professor Turner commented further on the blood parameters in bottlenose dolphins, which he had reported to the meeting at Hamburg. Although, he had not a vast number of results, he presented information showing how that there was variation in blood cell counts if they were split up into the four quarters of the year—January, April, July and October.

Professor R. L. Turner,
Moorhouse Farm, Oxenthorpe, Keighley, West Yorkshire, United Kingdom.

Dr van der Kamp summarized the post-mortem results of 74 seals, including one Hooded seal from Belgium, whose carcass he had obtained through the Seal Nursery at Pieterburen. He highlighted one sarcoma-like growth, and commented that in his animals he found no congenital deformities, except for one diaphragmatic hernia.

J. van der Kamp,
Muntinglaan 11, 9751 PT Haren, The Netherlands.

Dr C. J. van Nie presented the joint paper put up by himself, **Dr Smeenk** and **Dr van Foreest** showing, in detail, a silent video on the post-mortem of a Harbour porpoise.

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

The next session, headed 'Care of the Newborn' was chaired by **Dr Laurie Gage**, who introduced **Dr John Baker** discussing the development of the immune system in grey seals. He pointed out that even in stage 5 seals, just preparatory to going to sea, there were only 50% levels of gamma-globulins, which ties up with the high level of infection of young grey seal pups. There appears, in this species, to be no significant transplacental transmission of globulins, neither are there significant levels in colstrum. In summary, he would say that the grey seal is immunologically deficient at birth with the possibility that this applies to Northern and Harbour fur seals, both of which were recorded in the States.

Dr J. R. Baker,
Veterinary Field Station, Leahurst, Neston, Wirral, United Kingdom.

Ron Kastelein gave a slide presentation illustrating the paper on the study of the neonatal period of a captive grey seal, which is published in 'Aquatic Mammals', Volume 14, No. 1.

R. A. Kastelein & P. R. Wiepkema,
Zeedierenpark Harderwijk B.V., Strandboulevard Oost 1, 3841 AB Harderwijk, The Netherlands.

Jacques Smolders from Antwerp gave a long and detailed account of the commencement of fostering of a young bottlenose dolphin, whose mother had died, by a heavily pregnant second animal. Unfortunately, the outcome, although initially giving rise to optimism, did not give a successful result. It did, however, show that a 15 month old animal can survive without milk if it is accepted by the group, and takes enough fish by hand.

J. Smolders,
Zoological Society of Antwerp, Koningen Astridplein 26, B-2018 Antwerp, Belgium.

The next session of 'Sound and Sensory Physiology' was chaired by **Dr Klinowska**, and the first paper was

given by **Frans Engelsma** on an ecological approach to echolocation. He summarized the practical uses of echolocation in many species, and defined the difference between this and the commonly used phrase sonar. He gave examples of the blocking of echolocation clicks by high frequency sound, which may explain why fish are not able to hear dolphins coming.

Frans Engelsma,
Ouwehands Zoo, P.O. Box 9, 3910 AA Rhenen, The Netherlands.

Mademoiselle Lescrauwaet and **Cees Kamminga** presented a paper illustrating how that a blind-folded dolphin could differentiate a target containing a moveable plunger, 8 mm away from its centre, giving a time difference of 10.6 μ seconds, with 100% success. Although, the animal was able to differentiate, in time, at a difference of 4 mm, 2 mm was too short a distance to create any differential response at all.

A. C. Lescrauwaet & Cees Kaminga,
Delft University of Technology, P.O. Box 5031, 2600 GA Delft, The Netherlands.

David Goodson gave a very clear and detailed description of the interpretation of acoustic pulse emissions from a wild bottlenose dolphin, illustrating how a spectograph can be used to find out more detail from the pulses.

A. D. Goodson,
Sonar Signal Processing Group, Loughborough University, Department of Electronic & Electrical Engineering, Loughborough, Leicestershire, United Kingdom.

Dr Kamminga looking at some curious underwater sounds from bottlenose dolphins illustrated the two frequency behaviour in underwater sound. The shape of the long duration wave, which is built up from the main sonar signal, may be followed by not less than eight internal reverberations.

Dr Cees Kamminga,
Delft University of Technology, P.O. Box 5031, 2600 GA Delft, The Netherlands.

Dr Paul Nachtigall showing slides of a Risso's dolphin, summarized the history and the maintenance of this animal, and went on to define some peculiarities of the fundus of the eye, which may be related to its apparent poor hearing and its ability to 'spy hop' in the wild.

Dr Paul Nachtigall,
Head, Research Branch, Code 512, Naval Ocean Systems Centre, P.O. Box 997, Kailua, Hawaii 96734, USA.

Mr van der Toorn, recommending variable reinforcement training in dolphin husbandry, felt that if fish was not used so much for reinforcement, an animal off food could still respond, enabling it to be examined more easily and without stress.

J. D. van der Toorn,
P.O. Box 303, NL-3860 AH Nijkerk, The Netherlands.

R. Kroger clearly illustrated the significance and the adaptability of dolphins to widen their breadth of vision when necessary.

R. H. H. Kroger,
Max-Planck-Institut fur Biologische Kybernetik, Spemannstrasse 38, D-7400 Tubingen, West Germany.

Ron Kastelein gave a fascinating paper on their experiences in assessing how sea otters should be treated should they suffer from an oil spill off the coast of California. This was a very well thought out paper, leading to a successful conclusion.

R. A. Kastelein,
Zeedierenpark Harderwijk B.V., Strandboulevard Oost 1, 3841 AB Harderwijk, The Netherlands.

Patricia St. John, with some fascinating slides, showed evidence of inter-action between humans and wild Stenellas (the spotted dolphin) in the ocean, without contact between the two species. She noted that dolphin behaviour sometimes mimicked that of humans in the ocean.

Patricia St. John,
Midpoint, Research Foundation for Creative Communications Inc., Box 17, Bridgewater, Connecticut 06752, USA.

Ron Kastelein illustrated in full his paper on the influence of human contact on the behaviour of Steller's sea-lions, which is printed in Volume 14, No. 1 of 'Aquatic Mammals'. He noted that in non interactive weeks, there was a slight increase in aggression although this was not statistically significant.

R. A. Kastelein,
Zeedierenpark Harderwijk B.V., Strandboulevard Oost 1, 3841 AB Harderwijk, The Netherlands.