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Erratum

In Elephant Newsletter, no, 1, an error appeared on page 6. The Elephant Symposium is planned to take place during the 59th Annual Meeting of the ASM at Corvallis, Oregon and not at Portland, Oregon as was stated in the first printing of the previous issue. This error was corrected in subsequent printings.

MEETING OF THE ELEPHANT INTEREST GROUP

AT

MICHIGAN STATE UNIVERSITY, JUNE 21, 1977

Organizational meeting - Following is the digest of the minutes taken during the first informal meeting of the Elephant Interest Group. This meeting took place during the 57th Annual Meeting of the American Society of Mammalogists, ASM. The get-together started at about 9:30 p.m. and ended long after midnight. Beer and Sabra were provided. The general order of the meeting was: introduction, discussion, slide presentation and further discussion.

Present at the meeting were: Robert Baker, John Czelusniak, John Eisenberg, Joseph Engelhard, Morris Goodman, William Jacobs, Mike Kutilek, Larissa and William Prychodko, Jan Randall, Galen Rathbun, Kent Redford, Jeheskel Shoshani, Mary Jo Szuba, Richard VanGelder, and Kenneth Wylie.

This part of the meeting was initiated with the general discussion of: future objectives, more immediate goals, delineating and naming of this group, politics of this organization and its relationship to existing International Elephant Group(s).

- It was agreed that we should distinguish between basis of this group (major premise = scientific preservation of magnificent species) and its tasks or goals.
- As for immediate goals, the possibility of a symposium in the near future was brought up but no decisions were made at that point.
- The general consensus was that:
 - this group should be associated with the ASM. Richard VanGelder agreed to serve as a liaison between this group and the Conservation of Land Mammal Committee of the ASM, of which he is a member.
 - we should contact and coordinate our activities with the already established International Elephant Group, IEG. (The IEG is a bi-continental group. In Africa, it is chaired by Iain Douglas-Hamilton and Harvey Croze and in Asia by J.C. Daniel and Robert Olivier.)

Newsletter - availability and means of obtaining published material and specimens for research purposes. The first issue under this heading contains the difficulties that one must endure in order to obtain certain references. For example, Douglas-Hamilton's thesis (titled "On the ecology and behavior of the Lake Manyara elephants D. Phil. thesis, Oxford, 1972").

- It has been mentioned that a copy of Douglas-Hamilton thesis can be found at the Bronx Zoo and with Jim Allaway at Cornell.
- A suggestion was made that we should maintain an updated file of specimen sources and literature and that we should be able to notify interested people of any relevant information they wish to know, such as elephant in musth or in estrus.

Future Projects: John Eisenberg suggested that we should set up projects that could be carried out in this country, e.g., the breeding of the Asiatic elephant. Such a project would involve the following:

- freezing and storing sperm
- determining and getting estrus animals
- finding a good insemination method
- financing cost approximately \$20,000.

Musth - information compiled from minutes, slides and others. Musth (Hindi, Mast = intoxicated or ruttish) is a phenomenon known to occur in both African and Asiatic elephants. It is associated with a secretion from the Musth or Temporal gland, located subcutaneously, midway between the eye and the ear on each side of the elephant's head. The exact nature and function of this gland and the associated behavior is not known. However, it is generally agreed that the pattern of which musth appears in the African elephant is quite different from that of the Asiatic; the African elephant exhibits perhaps a "general condition" while the Asiatic elephant is a "specific case".

- African elephant, Loxodonta africana.

Male and female: both secrete musth pre- and post-puberty. When the female is in heat, the male secretes a different type of musth liquid than usual. This secretion may function as individual and group recognition as well as communication. In addition, it may indicate reproductive state.

- Asiatic elephant, Elephas maximus.

Male: secretes post-puberty (15-50 years), depending on nutrient status. Secretion lasts 1-8 months and averaging 2-3 months. There is a correlation between secretion and level of testosterone. The musth possibly functions to communicate sexual status to other males and females.

Female: secretes only when in menopause.

- Order of events prior to and during secretion:

1. the orifice of the gland dilates
2. for the first few days, the secretion is clear and often is mistaken for tears.
3. the musth becomes dark and sticky and this is associated with an increase of aggression in the (Asiatic) elephant.

On the mental state of elephants - by Kenneth Wylie.

When an elephant was captured and traumatized, ancient Orientals believed in curing the mental health of the elephant (which deteriorates as a result of such stress). They recommended treating it just like another elephant would treat it - give it lots of physical attention.

About tusks - comments made by different participants.

- There are economic implications in this issue of extermination vs. conservation.
- Perception of people in the U.S.: has implications for educational role of this group, i.e., point out the potential role of the elephant in economics of each country.
- Increase awareness of media hype.

- The economic relationship of the elephant to the individual should/could be made functional.
- Decrease the romantic view of conservation.
- The U.S. is one of the largest markets for poachers.
- Ivory exports were probably greater in the 1700's than now.
- The Lapidary Journal, April 1977, lists dozens of ivory dealers in North America.
- Also the Indian Trader.
- Tusk size is probably related to nutrition, isolation, population control and genetics.
- The size and weight of tusks available commercially today, seem to indicate that much younger animals are being cropped or obtained by other means.

Movies which can be shown at future meetings - as suggested by Richard VanGelder and others.

- Simon Traver's film which has not been distributed commercially. R. VanGelder has a copy.
- On elephant poaching.
- Also, the one with the scene of the elephant cow with its tusks through the rover.

Slide presentation

Outlined below are the major topics discussed while the slides were shown.

World population of elephants (estimate).

African elephant: 1,500,000	} a ratio of 1:100
Asiatic elephant: 15,000	

African vs. Asiatic elephant

Species differences

Sexual dimorphism

Ahmed: The giant of Marsabit.

Elephant twins at Lake Manyara National Park, after Oria Douglas-Hamilton.

Oria reported when she was in New York that one of the twins had died.

Elephant de-barking Acacia tree at Lake Manyara National park.

It was mentioned that the trees recover more rapidly than expected.

Elephant at work: Large tusker in Sri-Lanka (Ceylon), carrying logs from the forest and loading them onto trucks.

The technique used to train elephants differs depending on whether or not they have tusks. They use the leverage technique as shown in these slides if the elephant has tusks. If he has no tusks, they teach him to use his mouth.

Forest African elephants and their riders.

Some discussion revolved around the question "which elephants did Hannibal use to cross the Alps?" (This famous crossing occurred in 219 B.C.)

Kenneth Wylie: "He (Hannibal) used the Forest and not the Savannah African elephants to wade across the Rhône on the way to the Alps. Most of the original 37 survived the crossing of the Alps, but only Hannibal's own elephant survived the next winter in the Apennines."

Swimming: It was generally agreed that elephants can swim for distances.

Coloration: of elephants is correlated with the color of the soil of the particular environment due to dusting and wallowing.

Relationship between the rate of pinnae flapping and temperature (after Buss and Estes, 1971): It was observed that the ear flapping increased with increase of temperature.

Large herds of elephants: There is controversy over culling only selected individuals within a herd or exterminating the entire family unit as proposed by Douglas-Hamilton. He believes that if part of the herd survives the remaining elephants would associate man with death and destruction, and therefore would tend to be more aggressive and form larger than normal herds (for greater security) which would be more likely to destroy the environment than smaller family units. (Africana Vol. 5, No. 5, 1977).

Elephant behavior: Comments were made on the mysterious fact that elephants exhibit particular interest in dead elephants' remains and pay special attention to tusks. Also mentioned were authenticated accounts that elephants bury their dead in entirety or in parts! Elephants exhibit interest not only in their dead but also in other animals'. (After Douglas-Hamilton, Moss and others.)

In a nutshell: The following objectives were achieved (these are only suggestions and are based on the general consensus expressed during the meeting. If you feel that what is written here or anywhere in the newsletter does not agree with your thoughts, please let us know. We shall consider every comment and make future corrections as may be necessary in accordance with requests.):

1. Delineation

- This group is described as an Informal Elephant Study Group associated with the ASM (Richard VanGelder will serve as a liaison between this group and the Conservation of Land Mammal Committee of the ASM).
- This group will coordinate all its major activities with the already established International Elephant Group.

2. Goals

- To collect information and disseminate through newsletters, meetings and symposium(a).
- To assist co-members with any information or material needed (see questionnaire).
- To meet at least once a year to discuss and/or exchange some ideas.
- The above, hopefully, will encourage adequate interest within the U.S.A. and perhaps, outside the country, so that when the situation arises and there will be a need for moral or other support to assist in preserving these noble species, we hope we shall have enough voices to be heard.

Organizing for the first symposium:

As mentioned earlier, one of the more immediate goals of this group is to organize a symposium. Upon contacting Robert Hoffmann, the Program Committee Chairman of the ASM, it was agreed that two years from now, would

be a good time for a possible symposium on elephants. This symposium, should it take place, will be during and an integral part of the 59th Annual Meeting of the ASM at Corvallis, Oregon, in 1979. In addition, the editor contacted other symposia organizers and it appears to be a fairly involved matter that requires long and tedious planning. In light of the above, preliminary arrangements are being made for this symposium.

Via correspondence and personal communication, two persons have committed themselves to speak at the planned symposium. There is a place for 3-4 speakers. The final decision as to which papers will be presented, will be decided by an elected committee.

In order to avoid any future misunderstandings, it should be added that from conversation with Robert Hoffmann at Michigan State University, it became clear that there are no funds available to cover any of the speakers' costs. Whether for travelling, lodging or meals; symposium speakers will have to assume their own expenses or apply to other sources for financial support.

EXCERPTS SELECTED FROM THE SURVEY OF NORTH AMERICAN ZOOS

Found below is some information pertinent to elephantine material cited from the questionnaire referred to in the first section. This information is included herein for future reference and after one studies these excerpts, it seems that there is a need for a center which would collect, organize and regularly disseminate this kind of information. For complete addresses of the following institutions, please refer to the mailing list:

- Cleveland Zoological Park: "Possibly a sleep study on our elephants."
- Dickerson Park Zoo: "We are in collaboration with Portland Zoo in artificial insemination of captive elephants."
- Honolulu Zoo: "Some behavioral engineering with our elephants, on signal, if the animal pulls a ring, a shower will be turned on." Future: "Perfecting the above arrangement and completing the required behavior to activate."
- Jungle Larry's African Safari: "We hope by raising the male African elephant and the female Asian - at maturity, we can interbreed them."
- Lion Country Safari Inc.: "Glandular research on African elephants - Cal State Dominguez Hills Ethologic Search for Self-Administered hallucinogens- University of California at Los Angeles."
- Philadelphia Zoo: "Asian elephant reproductive cycle and study of urine in relationship to this cycle."
- Portland Zoological Gardens: "Asian elephant - three series of studies: reversal discrimination learning; visual acuity; and reproductive behavior." Three reprints and detailed elephants' records were also included.
- Sacramento Zoo: "Elephant - determination of estral cycle by vaginal smears vs. temperature."

CAPTIVE ELEPHANT POPULATION OF NORTH AMERICA

As indicated, the survey was not complete; it provided some valuable as well as interesting information, but it lacked accuracy (as not all the addressees replied). In order to obtain a better picture of the elephant population in North America, it was necessary to seek more accurate records.

These records were provided by the International Species Inventory System (ISIS). The ISIS is a computerized data collection from most of the Zoos in North America. The original system was developed to maintain an active inventory-census and compilation of vital statistics of all captive animal species by the use of the computer. Information on particulars can be obtained from any institution that is a participant in the system or by writing directly to: International Species Inventory System
Minnesota Zoological Gardens
12101 Johnny Cake Ridge Road
Apple Valley, Minnesota 55124 USA

The table below summarizes the information compiled from the computer printout.

	<u>At zoos within the U.S.A.</u>	<u>At zoos within Canada</u>	<u>Total</u>
African elephant	64	11	75
Asiatic elephant	<u>112</u>	<u>4</u>	<u>116</u>
Total	176	15	191

All in all, 191 elephants were held in one hundred and twelve zoos (excluding circuses) in North America as of December 31, 1976.

NEW BUSINESS

Recent correspondence - Shortly after the meeting at Michigan State University, the editor received a letter from Iain Douglas-Hamilton and a fortnight thereafter, another letter. Both letters were very receptive, informative and co-operative. Accompanying the letters were two newsletters titled "WWF/IUCN Elephant Survey & Conservation Programme" (WWF/IUCN = World Wildlife Fund/International Union for Conservation of Nature and Natural Resources). Both newsletters are cited in the references. Included also was a copy of the questionnaire distributed by Iain Douglas-Hamilton and Harvey Croze. The above was titled "I.U.C.N. Pan African Elephant Survey Questionnaire - 1976." Douglas-Hamilton's letters confirmed the estimate of the African elephant to be "in the vicinity of 1½ million", and the fact that one of the twins at Lake Manyara National Park had died.

Irven O. Buss, a wildlife biologist who has spent many years in East Africa, had kindly answered all questions presented to him by the editor in a long and detailed letter. He also included the name of another person to be added to the mailing list.

Both Iain Douglas-Hamilton and Irven O. Buss expressed interest in the information regarding the elephant population of North America (given in the previous section).

Requests: Iain Douglas-Hamilton and his co-workers are presently assessing methods in order to determine the age of elephants by measuring back length from aerial photographs and hind footprint length. They need to correlate these measurements with known-age animals. They request readers to inform them of any individuals and/or institutions that have elephants of a known age from which they have been taking measurements such as height, length, weight, etc. If you do know of such persons or any relevant information that might be helpful to them, please address your correspondence to:

Ian Douglas-Hamilton
P.O. Box 38
Naivasha, Kenya

Miscellaneous comments - Included you will find a questionnaire regarding general and specific information. The purpose of this questionnaire is two-fold:

- 1) To have this information on file and handy for use if and when needed.
- 2) To compile and send to all members the same info... so that we become familiar with each other and are able to inform and/or assist co-workers whenever possible.

Please type or print the information requested and feel free to attach additional sheets if you run out of space. There is no "deadline" to complete this questionnaire but the sooner it is received the sooner it will be compiled and disseminated.

Included also is a mailing list of members known to be interested in elephants. An asterisk beside a name denotes that this person was present at the informal meeting of the Elephant Interest Group. This is by no means a complete list. Please send all names and addresses of persons you know, who might be interested in joining such a group. In addition, kindly include your correct address if the one listed is incomplete or inaccurate. Listed at the end of the mailing list are the names of persons known to be interested or actively studying elephants. Their addresses are not known.

It might be worth mentioning here that a notice will appear in the three upcoming issues of Journal of Mammalogy regarding the group interested in 'Proboscidea' (the name has since been changed to 'Elephant') - look for it!

In the event that it is not possible to meet before the ASM meeting, either on individual basis or on a larger scale, definite arrangements will be made to meet at the next ASM meeting in Athens, Georgia. Please bring with you any suggestions you may have or any material to be discussed and slides or movies you wish to show us over a glass of beer.

If you are in the Detroit vicinity, please stop by. During the month of September, I will be in New York at the American Museum of Natural History, Department of Mammalogy. So if you are in New York then or passing by, please visit.

In conclusion, I agree wholeheartedly with a participant who remarked that he was impressed by "the general fascination and the deep sense of interest and serious concern (regarding elephant preservation) within the meeting despite the good humor and camaraderie." Once more, thank you all for any past, present and future assistance. Looking forward to hearing from and/or meeting you.

Hezy

JS/sh