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Zoo-Related Organizations Files.

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American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

27.IX.76

*File
ISIS Studbook
Committee*

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CH-4054 Basel
Switzerland

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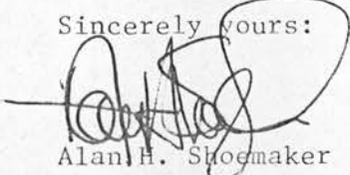
Dear Dr. Lang!

Thank you for the letter of 21.9.76 concerning your interest in entering you Indian Rhinoceros and Pigmy Hipps pedigrees into the AAZPA/ISIS data bank. Your enthusiasm is appreciated.

Although studbook data will be placed into the computer by the keeper, the cost is not borne by the keeper's institution, zoological park, etc. Rather, this project will be covered by funds of ISIS itself and their funding sources, and not charged to the zoos which enter such data.

The pedigree project is being finalized this fall, and in 3-5 months, will hopefully be ready for startup. The purpose of contacting all keepers prior to startup is to enable us to project the level of interest, number of individual animals, etc. This has been almost unanimous and will hopefully be completely accepted in the near future.

Sincerely yours:


Alan H. Shoemaker
Presidential Advisor on Studbooks/AAZPA

Columbia Zoological Park
P.O.Box 1143
Columbia, S.C. 29202



VETERANS ADMINISTRATION
HOSPITAL
54TH STREET AND 48TH AVENUE SOUTH
MINNEAPOLIS, MINNESOTA 55417
August 4, 1976

IN REPLY
REFER TO:

Noah Bowman
Noah's Ark
212 N. Gay
Auburn, Alabama 36830

Dear Mr. Bowman:

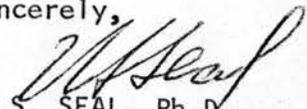
I am writing in response to your letter of July 13th concerning the two Hallstrom's dogs which we at one time had in our possession. As you probably know, we passed them on to the Portland zoo, from whom you presumably obtained them. We originally obtained them ourselves from the Brookfield Zoo, Chicago, Illinois. However, I do not nor have I ever worked for the Brookfield Zoo, rather, my facilities are at the VA Hospital in Minneapolis, Minnesota. I did obtain the animals from the Brookfield Zoo however, as your records apparently indicate, and would suggest that you write Dr. George Rabb, Director of that zoo, for further information on their history at his zoo. He might also be able to help you with respect to contacting Sir Edward Hallstrom, but the current director of the Taronga Zoo is Dr. Peter Crowcroft who, incidentally, was formerly director at the Brookfield Zoo in Chicago. I might note that the Hallstrom's dogs are not considered on any endangered species list and are currently considered to simply be a ferral offshoot as it were of the original domestic dog stock in a matter entirely analagous to the dingo of Australia. This is also our impression after working with these animals for some time.

While this pair of animals was in our possession they bore two litters, of which one litter (a male and female) is still in our personal possession.

Incidentally, I note from the membership list that you have not joined the AAZPA ISIS program. Perhaps you have not heard of it. In any case, I am requesting the ISIS office to send you information about the program if you might be interested. It would, for example, allow you to identify any other holders of Hallstrom's dogs in this country which are being maintained in zoological exhibits.

If I can be of any further assistance, please let me know.

Sincerely,


U. S. SEAL, Ph.D.

cc: ISIS ✓

Show veteran's full name, VA file number, and social security number on all correspondence.

Noah's Ark

212 N. Gay
Auburn, Alabama 36830
205-821-3993

July 13, 1976

Dr. U. S. Seal
Brookfield Zoo
Chicago, Illinois

Dear Sir:

We are now the owners of two Halstrom's Dogs which were in your possession for three years. We would like to find out as much information about this animal as we can. We are a private zoo interested in the breeding and preservation of the species we possess. We are a USDA liscensed zoo, both state and federal. If you can share any information with us regarding these two animals we would greatly appreciate it. If not, can you give us the name or address of someone who may be able to help us. Perhaps the address or means of contacting Sir Edward Hallstrom former president of the Taronga (Sydney) Zoo. Thank-you very much for your time.

Sincerely,

Noah Bowman
Noah Bowman

NB/ab

*Send to ISIS @ have them contact these people
for possible membership in ISIS*



American Association of Zoological Parks and Aquariums

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13 July, 1976

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DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Dear John:

Over the past several months, we have been in touch with all studbook keepers in regard to participation in the AAZPA/ISIS program when it becomes operational. At this point, nearly all keepers here and abroad have responded favorably or at least requested further information.

One point that continually arises concerns funding. The cost of ISIS pedigree programs can not realistically be assessed to the keepers, especially when many are not connected to zoological parks. On the other hand, this project is part of an overall AAZPA-endorsed program which will be of great use to member institutions, not to mention others. Now that all Appendix I species are considered legally endangered, other species will also become incorporated into the studbook system.

As I remember, AAZPA was approached last year for funding of the pedigree part of ISIS and turned down. With the change of regulations and the positive reaction to this program from the various keepers, I would like to recommend this project be funded by AAZPA in as much as it does effect the long term existence of many of our species. With most of our member institutions now involved in ISIS and the Europeans beginning to enter, it may well be deleterious to the pedigree project to shelve it another year for want of funding. With interest high among keepers and much of the program already formulated, I do recommend that we fund this project so that the data can begin to be entered and stored in the safety of the bank.

Yours truly:

Alan H. Shoemaker
Presidential Advisor on Studbooks/AAZPA

cc: Robert O. Wagner
Donald D. Bridgwater



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

12.VII.76

Mr. Atsushi Komori
Studbook Keeper, Japanese Serow
Tama Zoological Park
Hodokubo, Hino-Shi
Tokyo 191, Japan

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Dear Mr. Komori:

Thank you for the studbook data on Japanese Serows and especially for your expressed interest in the ISIS program regarding pedigree projects. As soon as the format and other parts of the program are finalized, more detailed information will be sent to you. Funding of the pedigree program will be the responsibility of ISIS and its funding sources and no cost to the studbook keeper or his institution.

The basic computerized inventory system for mammals and some taxa of birds has been very successful and well received in this country. The rest of the avian taxonomy and later poikiotherms will also be completed. The inventory program is now being adapted for use abroad, translated into suitable languages, etc. and your institution will be contacted as soon as this is ready.

Again, your interest in ISIS is greatly appreciated.

Sincerely yours:

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

Columbia Zoological Park
Columbia, South Carolina 29202



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

12 July, 1976

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Chicago, Illinois 60614

Dear Dr. Asakura:

Thank you for your interest in the ISIS pedigree program. The format and input procedures should be finalized shortly and more detailed instructions will be sent to you at that time. The pedigree program in ISIS is financially borne by the computer bank itself and will not be assessed to the studbook keeper or his institution.

Sincerely yours:

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

Columbia Zoological Park
Columbia, South Carolina 29202



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12 July, 1976

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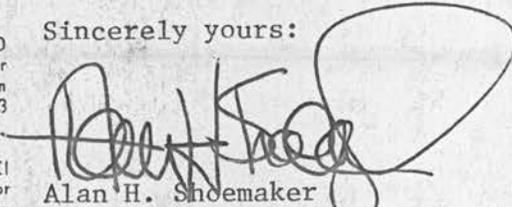
Dear Mr. Manton:

We are in receipt of your letter and questions concerning the entrance of Pére David's Deer material into the ISIS data bank. The cost of the Pedigree Program of ISIS is the responsibility of the computer bank and its funding sources, and is not passed onto the studbook keeper or his institution. Pére David's Deer pedigree material is somewhat different than other studbooks in that numbers are not assigned to specific individuals. In order to put such data into a computer, numbers would have to be assigned. Although exact parentage is not known for a-1 individuals, numbers may possibly be assigned to some lines and therefore be useful to the computer's storage and analysis capability's.

Przewalski's Horse data was experimentally reviewed in a computer from data taken directly from the studbook. Not only has Prague been contacted in this matter, but also the Boumans in Rotterdam.

I hope the Deer can be utilized in some way.

Sincerely yours:



Alan H. Shoemaker
Presidential Advisor on Studbooks/AAZPA

Columbia Zoological Park
Columbia, South Carolina 29202



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12.VII.76

Dr. Z. Veselovsky, CSc
Zoologicka Zahrada Praha
Praha 7, Czechoslovakia

Dear Dr. Veselovsky:

Thank you for your interest in the ISIS system involving pedigree programs. We have also been in contact with the Boumans, Rotterdam. The program for input will hopefully be complete this fall and more details will be sent to you at that time.

The basic inventory system for mammals and some taxa of birds is being adapted for use abroad, including translations into other capital languages. I think you will find the basic inventory system to be of great use to your collection. Many thanks for your cooperation.

Sincerely yours:

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

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12 July, 1976

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Jersey Wildlife Preservation Trust
Les Augres Manor
Trinity, Jersey
Channel Islands

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Dear Mr. Mallinson:

Thank you for your interest in entering the White-Eared Pheasant studbook into the ISIS computer bank. The format and procedures will hopefully be finished soon and you will be sent such material as soon as it is complete. Many thanks for including your publication material on the pheasants.

Sincerely yours,

Alan H. Shoemaker

Presidential Advisor on Studbooks/AAZPA

Columbia Zoological Park
Columbia, South Carolina 29202



American Association of Zoological Parks and Aquariums

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27 July, 1976

Mr. Richard S.R. Fitter
Fauna Preservation Society
Zoological Society of London
Regent's Park
London NW1 4RY, England

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DENNIS A. MERITT
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Dear Mr. Fitter:

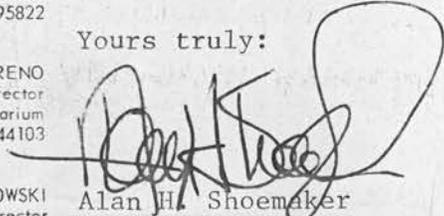
Thank you for your letter concerning Arabian Oryx. As you suspect, all three collections in this country are already entered into ISIS. We had thought that you might have other data from collections in the Middle East, which seems unfortunately to not be the case.

Although it would indeed be a duplication for you to enter data which is already in the computer bank, if at a later date, the other collections provide genealogical facts, etc. to you, we would like to enter this onto tape for both permanent, safe storage and comparison of inbreeding problems.

Hopefully, the ISIS pedigree project will begin by the first of the year. An annual inventory will be issued to the studbook keepers and although you have not had to directly provide data, this will be available to you.

We thank you for your interest and cooperation.

Yours truly:


Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

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American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

28.VII.76

Dr. Heinz-Georg Klös
Zoologischen Gartens zu Berlin
1 Berlin 30
Hardenbergplatz 8
West Germany

Dear Dr. Klös!

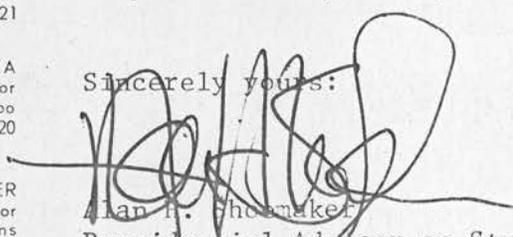
Thank you for your expressed interest in entering the Gaur and Black Rhino studbooks in ISIS. The information which you listed is quite sufficient for accurate inventory storage and later genetic examination.

All studbook keepers were invited to participate in this project; nearly all have now responded and in a favorable way. It is expected that the computer bank will be ready for pedigree data acceptance by the end of the year. At that time, necessary forms and instructions will be sent to you. Regarding time, it would be quite sufficient for you to update the computer on an annual basis, at the end of the year if convenient for you. The computer now sends out an annual inventory on microfiche in the winter to all participants and this would also be done for studbook keepers to insure accuracy and to provide you with a convenient storage tool. I would appreciate a status list for these species; it would be useful in projecting work requirements for the computer.

Of course we hope you will decide to join the basic inventory program at a later date. The work load for your staff versus the large size of the collection can be appreciated but once completed, is simple to maintain and extremely useful. Translation work into German and later other capital languages is now underway for greater convenience.

Many thank for you cooperation.

Sincerely yours:


Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

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A non-profit, tax-exempt organization dedicated to the advancement of zoological parks and aquariums for conservation, education, scientific studies, and recreation.

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13.VII.76

Dr. Rainer Lorenz
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der Universität Göttingen
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Dear Dr. Lorenz:

Thank you for your interest in ISIS and the developing program for studbooks. This is indeed the same data bank mentioned to you by Don Bridgwater and located in Minnesota Zoological Park. As the program for input of pedigree data will hopefully be operational in the near future, you and other keepers here and abroad were formally invited to participate.

The ISIS system was initially established to permanently and safely house inventory data of zoological, research, and private collections throughout the world. A numerical system has been assigned to all species of mammals (and subspecies if present) and a similar system is now being completed for birds. Likewise, a numbering code has been adapted for zoological parks, zoos, safari parks, private collections, etc. throughout the world, as well as regions, countries, and so forth. Optimistically, this will go into reptiles and other forms in the future.

The ISIS system was presented to this country first and now has been adopted by nearly all institutions. The cost of membership and participation to the zoos is \$1.00 for each mammal entered and about \$.50 for each bird. ISIS issues a yearly synopsis to all participants of their individual inventory and a total inventory by species of animals held in captivity. The latter is especially important, including the ages and numbers of the various species/subspecies within the participating institutions. With such data, member zoos can locate potential breeding stock for loans or acquisition and project selection of species for future exhibits based on current numbers in captivity. Parentage is kept within the data bank and genealogy of potential breeders can be examined in a demand printout to the member institution for a nominal fee. The microfiche on which the synopses are issued can easily be read in a reader adapted for this or under a microscope (4X). The basic inventory program has been widely accepted in this country and is now being adapted for international use via translation, etc.

The studbook program is one of the newer offshoots of ISIS. Not only



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

9 August, 1976

Dr. Tim Lovel
World Pheasant Association
Garverny, Hurstbourne Tarrant
Andover, Hants
England

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Houston, Texas 77002

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PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Garden's
Chicago, Illinois 60614

Dear Dr. Lovel:

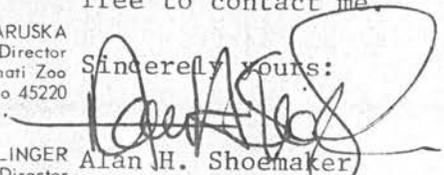
Thank you for notification of studbook initiation for Edward's Pheasant. This is quite worthwhile and needed in view of their status in the wild and the inbred captive condition certainly warrants registration of living individuals. A thorough examination of the gene pool can hopefully correct the trends of degeneration and infertility.

Since you are attempting to identify as many individuals as possible, living and deceased, it may well be a good idea to use a numbering system adaptable to computerization. The ISIS (International Species Inventory System) computer bank will shortly begin entering studbook data onto tape, not only for safe and permanent storage but, and perhaps more important, to provide insight into lethal gene development, inbreeding, and potential pairing by the keeper or genetic specialists. On a trial basis, this approach has already been done for Przewalski's Horse and Golden-Lion Tamarin.

It would be most desirable for notice of this studbook's initiation to be published in the Newsletter of AAZPA. Such a notice can be submitted by you to the Editor, AAZPA Newsletter, in Wheeling, W.V. or we can submit such a notice for you, as you direct.

When your data is complete, I would like to invite you to place it in the computer bank of ISIS for storage and mathematical examination. Naturally, control of the studbook is in the hands of the studbook keeper, the computer serving only as a storage and examination tool. If we can be of greater assistance or answer questions, please feel free to contact me.

Sincerely yours:


Alan H. Shoemaker
Presidential Advisor on Studbooks/AAZPA

Columbia Zoological Park
P.O. Box 1143
Columbia, S.C. 29202



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

4.VIII.76

Dr. Walter Fiedler
Tiergarten Schönbrunn
113 Wien XIII
Austria

Dear Dr. Fiedler:

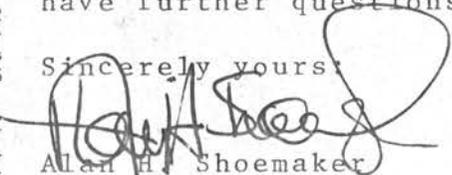
Several years ago, the data bank of ISIS initiated the pilot project for computerizing animal inventories of captive collections. This program was well-received in this country, the yearly issued synopses of inventories going to all participants and aiding them in locating potential breeders, keeping track of animal movements, births, etc.

In addition to having the capacity to safely store inventory data, ISIS is now developing a pedigree program for studbooks. In addition, the data bank offers the opportunity for a species whose geneological past within successive captive generations is entirely known to be examined by the keeper and genetic specialist. This gives the keeper the chance to search for potential inbreeding problems, lethal gene development, and on a trail basis, Przewalski's Horse and Golden-Lion Tamarin have already been reviewed.

As the studbook keeper for Ibex, I would like to invite you to enter your studbooks into the ISIS data bank. This project will hopefully be ready for data acceptance late this fall and would be of no expense to the keeper. The overall control of the studbook will of course remain with the keeper, the data bank serving as a storage and examination tool. We think the computer can be of great service to the zoological park community, especially as more species become unobtainable.

Aside from this, I would like to thank you for showing your hospitality to my interpreter, Frau Elfe Andersen during her stay and visit in your institution. If you have further questions, please contact me.

Sincerely yours,


Alan H. Shoemaker

Presidential Advisor on Studbooks/AAZPA

Columbia Zoological Park
Columbia, S.C. 29202 USA

A non-profit, tax-exempt organization dedicated to the advancement of zoological parks and aquariums for conservation, education, scientific studies, and recreation.

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Lincoln Park Zoological Gardens
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American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

August 29, 1976

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Chicago, Illinois 60614

Dr. Peter Roben
Zoologisches Institut I
Der Universitat
Heidelberg
Berlinerstr 15
69 Heidelberg
West Germany

Dear Dr. Roben:

We appreciate your interest in the AAZPA-ISIS data bank and when their program becomes operational, further material will be sent to you. I am sorry to hear that you are experiencing difficulties in eliciting the pedigree material from some zoological parks. If I may be of assistance in contacting those in North America, please let me know. I could perhaps write or talk to those persons having animals about which you are concerned.

Sincerely yours,

Alan H. Shoemaker
Presidential Advisor on Studbooks/AAZPA

Columbia Zoological Park
P. O. Box 1143
Columbia, S. C. 29202

AHS:rp



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

29 August, 1976

Mr. John E. Werler
Houston Zoological Gardens
P.O. Box 1562
Houston, Texas 77001

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

Dear John:

President-Elect
GORDON HUBBELL, D.V.M.
Director
Crandon Park Zoo
Key Biscayne, Florida 33149

I received from Dr. Peter Röben, Heidelberg University, a rather enthusiastic acknowledgement today concerning my invitation to enter his studbook into ISIS. Dr. Röben holds books for Maned Wolves, Spectacled Bears, and Bush Dogs. He is more than willing to place his pedigree material into the computer when it is ready and quite excited about its potential.

Vice-President
LARRY O. CALVIN
Director
Dallas Zoo and Aquarium
Dallas, Texas 75203

His studbook data, as published in IZY, 15, is for 1973-74. He is presently working on 1975 but having trouble getting cooperation from some zoological gardens (unnamed). I will offer to provide what assistance may be possible if these are member organizations.

Past President
RONALD L. BLAKELY
Director
Sedgwick County Zoo
Wichita, Kansas 67212

Executive Director
ROBERT O. WAGNER
Oglebay Park
Wheeling, West Virginia 26003

Sincerely:

Alan H. Shoemaker
Presidential Advisor on Studbooks/AAZPA

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EDWARD J. MARUSKA
Director
Cincinnati Zoo
Cincinnati, Ohio 45220

cc: Robert O. Wagner
Donald D. Bridgewater

PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

8 September, 1976

Dr. Patti Scollay
San Diego State University
San Diego, Ca.

President
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Director
Houston Zoological Gardens
Houston, Texas 77002

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Assistant Director
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Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Dear Dr. Scollay:

The initiation of international studbooks for Cotton-Top Marmosets, Saguinus oedipus, was announced in a recent Laboratory Primate Newsletter, with yourself as studbook keeper.

I would like to offer any assistance involving procedural steps, locating owning institutions, establishment of necessary records and data cards, etc. as may be possible. If we can be of help in this worthwhile project, please feel free to ask.

Sincerely yours:

Alan H. Shoemaker
Presidential Advisor on Studbooks/AAZPA

Columbia Zoological Park
P.O. Box 1143
Columbia, S.C. 29202

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

30 June, 1976

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BUSINESS MANAGER

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Mr. John E. Werler
Houston Zoological Gardens
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PALMER E. KRANTZ, III
SUPERVISOR
HOSPITAL-LABORATORY

RIVERBANKS PARK COMMISSION
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COLUMBIA, SOUTH CAROLINA 29202
(803) 256-7419 / (803) 772-6323

DENNIS S. DECOURCEY
CURATOR, BIRDS

Dear John:

NEAL A. STOWE
HEAD KEEPER, MAMMALS

Over the last several months, all the studbook keepers listed in Volume 15, IZY, have been contacted in regard to placement of their pedigree data into the ISIS program when this program becomes operational. Copies of each invitation, all basically the same, were sent to you, Bob Wagner, and Don Bridgwater. Enclosed is a progress report of reactions from the keepers and in the case of American books, some indication of completion.

DALFORD MANESS
SUPERVISOR
CONSTRUCTION & MAINTENANCE

1. White-Eared Pheasant - The studbook compiler/zoological director, Jeremy Mallinson, answered for Durrell, including in his letter a complete report of the Pheasant. He is quite anxious to be included in the data bank. Those institutions possessing the birds have good records themselves and geneological history, although not burdened by successive generations, is in good shape. Baring any problems, this species may well increase in the next few years to become more available to zoos and private breeders, and the bank will thus be needed to better handle genetic questions.

BEN J. MACINNIS, II
HORTICULTURIST

2. Manchurian Cranes/Japanese Serows are both kept at Tama Zoological Park, Tokyo, by the Director and General Curator respectively. Both men are quite interested in ISIS as an inventory system and for both of their studbooks. They appear to be eager to learn more about the overall project and need to be contacted. They would probably need the instructions etc. in Japanese, not to mention an instruction booklet for studbooks.

RANDALL E. BROOKS
ARBORICULTURIST

3. Rare Parrots - Mr. Nickols, the husband of the studbook keeper, replied with some show of interest but needs to be shown more proof that ISIS is of use. Although IZY lists three species/subspecies of parrot in these books, there are several others as well. It would appear that he at least is somewhat skeptical of the ability of an AAZPA group or the overall organization to accomplish this sort of project. When his wife returns from the Caribbean this fall, she will provide more input.

RALPH HUTTO
SUPERVISOR
ART AND EXHIBITS



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3. The Orang Utan and Golden-Lion Marmoset need no further comment, both being in good hands. I did write Devra for formality's sake, just as she apparently was sending me the new pedigree report.
4. Sand Cat- Dr. Hemmer is a big ISIS supporter and will be glad to place his data into the bank. One of the races, F.m.scheffeli, may be extinct in the wild due to over-collecting by commercial collectors. Only two breeding groups are extant but of course due not reproduce as well as lions. Most of his other races are complete. He has had some trouble getting responses from Center Hill but this was alleviated by a phone call to Baudy. All the animals in question were deceased with no offspring, unfortunately.
5. Clouded Leopard - A telephone conversation with Jim Fouts was needed. He has a time problem as this studbook is done in addition to his regular duties. He is expecting the studbooks to be finished this summer. The cards are already printed.
6. Snow Leopard - I talked with Mark Rosenthal who is doing the work and his questionnaires are now coming back. He may be ready this fall. There is of course the problem of Helsinki also preparing similar data for a studbook. This is being smoothed out.
7. Przewalski's Horse - Dr. Veselovsky is quite interested in the Horse going into the data bank. I would think that he was already aware of Nate's trial run of this species but he may not be. He also referred me to Mr. and Mrs. Jan Bouman who have already prepared much of this data for computer. I am enclosing a copy of an official invitation to them for joining the overall ISIS program. It would appear as if Prague is interested in the basic inventory program and if he has not received data via IUDZG, he should receive it from us. Although most of his people write excellent English, German would facilitate matters.
8. Asiatic/African Wild Asses - Ralph Hutto, our Art and Exhibits supervisor, visited Tierpark Berlin last month and discussed ISIS with both Dathe and Pohle. They are quite interested and they are supposed to be sending us a copy of their pedigree book, via surface.
9. Mountain Tapir - I talked with Bob Wilson by phone and found him very enthusiastic about the data bank for species examination. Animals in his own collections are in ISIS and the Mountain Tapir data is in very good shape.
10. Pére David's Deer - Manton is a little skeptical about using ISIS for this species as the individual animals are not identified by number; rather the number of individuals per zoo are kept track of for overall inventory control. He would need to do a great deal of research before ready to place his data into ISIS. He also wants to know the cost factor, and basically needs more proof that we can be of assistance.
11. Bonobo/Okapi have a new studbook keeper, Mr. Van Puijenbroeck B., one of the biologist at Anwerp. Dr. A. Gijzen is on pension. Dr. Van den bergh had little more to say than the above and may be skeptical or uninterested

Mr. John E. Werler
Page three

in the ISIS bank for their books, may not have understood the invitation, or is waiting to see. At the very least, he needs to be approached again. As Marvin is over in that area now, I will contact him. It may be that these studbooks are now yet suitable for this but I would not think so.

12. Arabian Oryx - Mr. Fitter responded with the question of whether or not his presenting the data would not be just a duplication of the basic ISIS inventory data presented by Los Angeles, San Diego, and Phoenix. I would not think that they have placed their older data of deceased animals into ISIS, just the living ones and at any rate there seems to be a need for a central input section. If one of these three zoos would want to be responsible for the geneological data for the ISIS studbook program, this is one solution but that would not solve getting data from Middle East collections. Fitter said that he has never had a response from the Arabs concerning their collections. They do respond however to IZY questionnaires.

I would think that most of the other keepers would respond sometime this summer. Some are a little slow in routine correspondence but they do eventually come across. I do need some printed copies of the general ISIS inventions concerning pedigree program potential by Nate Fleshness and his subsequent analysis of Przewalski Horse. I hesitate to duplicate this on my copier as it does not do too good a job and the graphs did not turn out well. They are asking for more information and we do need to have the answer. When sufficient data arrives this summer, I will prepare another update; all additional correspondence will be copied to you, Bob Wagner, and Don Bridgwater although I do not usually indicate this on foreign mailings.

Sincerely yours:



Alan H. Shoemaker
Zoologist

cc: Robert O. Wagner
Donald D. Bridgwater



American Association of Zoological Parks and Aquariums

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30.VI.76

Mr. and Mrs. Jan Bouman
101a Mathenesserstraat
Rotterdam, Netherlands

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PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Dear Mr. and Mrs. Bouman:

Several years ago, the data bank of ISIS initiated the program for computerizing the animal inventories of captive collections. This first step was well-received in this country, the yearly inventories issued on microfiche greatly assisting participating institutions in locating potential breeding animal, keeping track of animal movements, birth, deaths, and projecting suitable species for future exhibits.

Beside having the capacity to safely store inventory data and issue synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the studbook keeper or genetic specialist in search of potential problems in future generations. As you probably know, Przewalski'd Horse was reviewed in this manner in looking for lethal gene development. This will be increasingly important for other species as well once they reproduce into successive generations and replacements from the wild become unobtainable.

Once developed, I would like to invite you to enter your pedigree data into the ISIS data bank. As Dr. Veselovsky tells me, you have been computerizing data on the Horse for the last years anyway and such data would be in more or less suitable format anyway. A special data input form is being readied, very similar to a studcard to make such data presentation quite convenient. The overall studbook control will of course remain with the studbook keeper, the data bank serving as a storage and examination tool.

We think the computer can be of great service to the zoological park community. Once a species' data is entered into the computer, new data can be entered simultaneously with the studcard update or issuance. I hope you will consider this project and I look forward to your answer or further questions that may arise.

Sincerely yours:

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

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P.O.Box 1143
Columbia, South Carolina 29202

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American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

5.VII.76

Mr. Van Puijenboreck
Antwerp Zoological Gardens
Koningin Astridplein 26
B-2000 Antwerp
Belgium

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Lincoln Park Zoological Gardens
Chicago, Illinois 60614

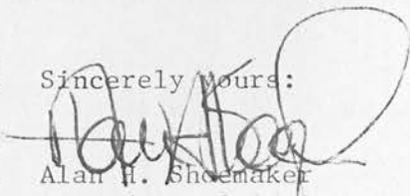
Dear Mr. Puijenbroeck:

We are informed that you have taken over the studbooks for Okapi and Bonobo, and would like to invite you to enter the pedigree program of ISIS (International Species Inventory System) which is located in Minnesota Zoological Gardens. The basic program designed to house animal inventories has been very successful in this country and is now expanding to include several large European collections.

Beside having the capacity to safely store inventory data on tape and issue yearly or periodic synopses of captive populations on microfiche, ISIS is now developing a pedigree program for studbooks. In addition to storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialist in search of potential problems in future generations. Such factors as inbreeding, potential pairing, and lethal gene development can be reviewed; on a trial basis Przewalski's Horse has already been examined.

I hope you will consider entering your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready shortly. The overall studbook control will remain with the keeper, the data bank serving only as a storage and examination tool. I would be pleased to answer any further questions and look forward to hearing from you.

Sincerely yours:



Alan H. Shoemaker

Presidential Advisor on Studbooks, AAZPA

Columbia Zoological Park
Columbia, South Carolina 29202

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

20 June, 1976

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
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(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

Mr. John E. Werler
Houston Zoological Park
P.O.Box 1562
Houston, Texas 77001

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Dear John:

GEORGE R. DAVIS
BUSINESS MANAGER

Two years ago when we petitioned the Editor, IZY, for permission to do studbooks on three races of leopards, we also included Brown Hyenas in this petition. Nicole Duplaix-Hall, who was Editor at that time, rejected the Hyenas on the basis that there were too few and that they were not breeding well enough. Peter Olney, the present Editor, mentioned suggesting this project to SSC last spring (1975) but we had heard nothing since then. Last week I was notified by Olney that both SSC and IUZDG had just endorsed this studbook with us as the Keeper.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

We have been accumulating data from a questionnaire designed to examine husbandry and reproductive techniques practiced by a variety of owning institutions. We do therefore have suitable data on most individuals and their geneology; we will begin this project shortly. As in the leopards, a numbering system suitable for ISIS will be assigned, probably with three digits. There is of course no problem with hybridization (we should perhaps be so lucky) and no problem with institutional support.

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Sincerely:


Alan H. Shoemaker
Zoologist

cc: Robert O. Wagner
Donald D. Bridgwater

8/15/76
142,000

181,000

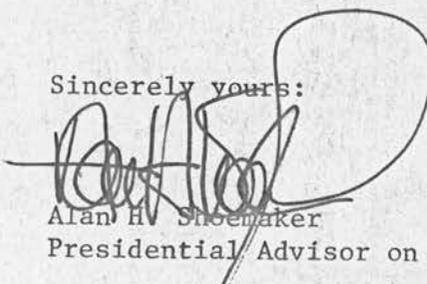
Dr. Rainer Lorenz:
Page two

does the computer of the same storage capability as used for inventory data but it also allows the studbook keeper or others to examine a species for potential problems related to successive generations in captivity. Dr. Nate Fleshness has reviewed several species on an experimental basis from data in the pedigree books to provide long-range or indefinite assistance to species in captivity. This is important now for some like the Przewalski Horse and no doubt others will approach similar states in the wild.

ISIS is operated in conjunction with AAZPA. The cost for operating the pedigree project is borne by AAZPA-ISIS and not by assessment to the keeper or his institution. Although all the details have not yet been worked out, a yearly synopsis of each species would probably be prepared (this is the case with the overall animal inventory), and the keeper would receive a copy. As studbook data is not normally considered secret, but rather is necessary for selection of future breeding stock animals for loan, member institutions would probably be able to get a copy from ISIS for a nominal fee. Data entered into the system is similar to that placed on studcards. When a card for a newly born or imported individual is made, it would not be any trouble to prepare a data sheet for the computer.

Your interest in this project is greatly appreciated. When the project is finalized, you will be sent more concrete data will be sent to you. If you have any other questions I have failed to answer, please feel free to contact me.

Sincerely yours:



Alan H. Shoemaker
Presidential Advisor on Studbooks/AAZPA

Columbia Zoological Park
Columbia, South Carolina 29202



The Zoological Society of London

Secretary: Professor Lord Zuckerman
OM, KCB, DSc, FRS

Regent's Park London NW1 4RY
01-722 3333

28th May, 1976.

Mr Donald D. Bridgwater,
Minnesota Zoological Garden,
Veterans Service Building,
Columbus Circle,
St Paul, Minn. 55155, USA.

Dear Don,

I was very pleased to meet you in Morges and I was particularly taken by your proposal for a captive breeding specialist group. I will be happy to co-operate in any way I can on this and indeed if I can help in any other way, do let me know.

We have got in a slight muddle with the studbook on Goeldi's monkey, for Dr Lorenz has said that he will be transferring the studbook to you. I am not sure now if you have taken this over and if so whether you expect to have some data soon. Can you let me know what is happening and if you are going to run the studbook, I will send you our questionnaire so that we can put the basic details in the next volume.

My best wishes,

Yours sincerely,

P. J. S. Olney
Editor, International Zoo Yearbook

cc Terms of Reference

May 19, 1976

Mr. William G. Conway
General Director
Bronx Park
Bronx, New York 10460

Dear Bill:

Just a quick note related to the Przewalski horse studbook information.

On our return from Morges, there was a brief discussion with Nate Flesness and our programmer, Dale Makey, relative to polishing up the pedigree analysis on the horse.

I suspect that most of the gaps can be derived from the Bouman material which you are holding. Would it be possible to provide that set of data to us for use. I believe Brad has asked Joe Bell to come out for a day or so to work with him on some final plans on our bird exhibits, and it has been suggested that it might be possible for Joe to hand carry the material from which we could make copies and establish a second repository. Another alternative would be for copies to be made there and forwarded, but I am not certain of the nature of the material, ie. cards, paper, etc.

At any rate, with our approval, it would be desirable to obtain the information as early as possible in order to finalize the Przewalski paper.

I will follow this letter with some additional comments and plan recommendations relative to the conference at Morges.

Best regards,

Sincerely,

DDB vc

Donald D. Bridgwater, General Director

COLUMBIA



ZOOLOGICAL PARK

File ISIS
STUDBOOKS

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

3 May, 1976

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Mr. Donald D. Bridgwater
Minnesota Zoological Gardens
Wentworth Office Center
33 E. Wentworth Ave.
West St. Paul, Minn.

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Don:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

Relative to our conversation today, I am enclosing a summary of events pertaining to studbook activities. I had wanted to have complete responses from the American keepers before contacting the Europeans. In several cases, however, this has not been forthcoming. I will have to go with the telephone for this and will keep you informed. On the others:

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

1. Mrs. Holly Nickols, San Antonio, keeps (according to IZY-15) studbooks on 3 forms of Caribbean parrots. Although she is in the field studying this summer, her husband informs me that she is also keeping a studbook on A. leucocephala hesterna, the Cayman Brac subspecies. New studbooks initiated by her include the Imperial Parrot, Amazona imperialis; St. Lucia Parrot, A. versicolor; and A. arausiaca. She will give more complete data when she returns. I infer that she does not consider studbook programs too successful.

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

2. Mark Rosenthal has just sent out questionnaires so he will be collecting data most of the summer. He has been in contact with Ullie regarding a numbering system and the studcards are already published so he is on the right track.

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

3. Rainer Lorenz is back in Germany.

4. Our Art and Exhibits head, Ralph Hutto, is in Europe this month and will be visiting many of the studbook centers. I have asked him to get whatever copies of data are available.

5. I will be writing the other studbook keepers this month now that things are getting back to normal here. You will be copied on all correspondence.



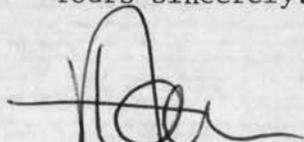
Mr. Donald Bridgwater

Page 2

6. I hope you decide to go with a modification of the inventory form, one specifically designed for studbooks. Not only would it be easier for myself, but it is probably a good idea, in getting the other European keepers to enter their data into ISIS, to have a simple and workable format rather than having to enter several sheets into the program just for one animal. This would be especially necessary for studbook keepers who are directors and have numerous present and past individuals (Asses, Pigmey Hippos, Wisent). My data is up to date so there is no problem of assembling it prior to filling out the sheets.

Have a good trip in Morges and good luck.

Yours sincerely:

A handwritten signature in black ink, appearing to read 'Alan H. Shoemaker', with a large, stylized initial 'A'.

Alan H. Shoemaker
Zoologist

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

24 May, 1976

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Mr. Donald D. Bridgwater
Minnesota Zoological Gardens
Wentworth Office Center
33 E. Wentworth Ave.
West St. Paul, Minn. 55118

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Don:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

Enclosed are copies of the last invitation to studbook keepers to place their data into the ISIS data bank. It will probably be a time before they answer although I am optimistic. Our Art & Exhibits supervisor is in Europe right now and mail from indicates some interest at least for some keepers. When I have something in writing, I will let you know.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

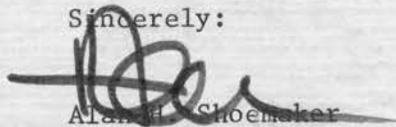
I now have input from all the American keepers. All are interested and except for Holly Nickols who is out of the country, will enter their data as soon as it is ready. I talked at length with Bob Wilson and Jim Fouts. Wilson's book is complete and includes 10 living individuals at this time. All told, 40 animals have been exported from Ecuador since WW II and he has their complete history. Fouts is coming along. He is rather pressed for time which is his biggest problem. There may be financial problems as well. He expects to issue cards in July and is eager to enter the data to ISIS.

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Now that CSSP is Proposed for Pantherids, Lemurs, and various birds, have you considered petitioning FWS/USDI for similar status for a few Primates in the new proposal. It would appear that section 17.40 Special rules, part (2) only refers to the afore mentioned Threatened species and unless data is presented for the Endangered Species, we will be faced with the old permit problem again, including the long wait for publication in the Register. The computer is in a good position to determine what species are suitable for CSSP status in the Proposed Endangered Primates but I would think at the very least, Mandrills, Diana Monkeys, and Cotton-Top Marmosets. Perhaps Drills and a few Cercopithicines as well. It may be that you will have to petition USDI every time they decide to add additional species to the Endangered list.

Sincerely:


Alan H. Shoemaker
Zoologist

COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

24.V.76

Dr. Jiri Volf
Zoologicka Zahrada Praha
Praha 7, Czechoslovakia

Dear Dr. Volf:

Several years ago, the data bank of ISIS initiated the program for computerizing the animal inventories of captive collections. This first step was well-received in this country, the yearly inventories issued on microfiche greatly assisting participating institutions in locating potential breeders, and in keeping track of animal movements, births, deaths, and transfers.

Beside having the capacity to safely store inventory data and issue synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialist in search of potential problems in future generations. As you probably know, Przewalski's Horse was reviewed in this manner in looking for lethal gene development. This will be increasingly important for other species as well once they reproduce into successive generations and replacements from the wild become unobtainable.

I would like to invite you to enter your pedigree data into the ISIS data bank. A special data input form is being readied, very similar to a studcard, and will make such input quite convenient. Leopard studbooks will be entered first to help smooth out any potential programming difficulties. The overall studbook control will of course remain with the studbook keeper, the data bank serving as a storage and examination tool.

We think the computer can be of great service to the zoological park community. Once a species' basic data is entered into the computer, new data can be entered simultaneously with the studcard update or issuance. I hope you will consider this project and look forward to your answer or further questions that may arise.

Sincerely yours:

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

24.V.76

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

Dr. Heinz-Georg Klös
Zoologischer Garten Berlin
1 Berlin 30
Hardenbergplatz 8
West Germany

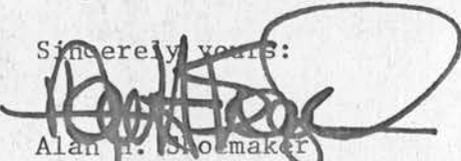
Several years ago, the data bank of ISIS initiated its program for computerizing the animal inventories of captive collections. This first step has been well received in this country, the yearly inventories issued on microfiche being of great assistance to participating institutions. Several of the larger collections of Europe are now entering ISIS as well.

Beside having the capacity to safely store inventory data and issue synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialist in search for potential problems in the futures. Such factors as inbreeding, potential pairing, and lethal gene development can be examined and on a trial basis, Przewalski's Horse has already been reviewed.

I would like to invite you to enter your studbooks into the ISIS data bank. According to IZY, at least Gaur and Black Rhinoceros are extant; White rhinoceros would also be useful. A special data input form, very similar to a studcard, will be ready soon. Leopard studbooks will be entered first to smooth out any potential programming difficulties. Overall studbook control will of course remain with the studbook keeper, the data bank serving as a storage and examination tool.

We think the computer can be of great service to the zoological park community. Once a species' basic data is entered into the computer, new data can be entered simultaneously with the studcard updating or issuance. I hope you will consider this project and look forward to your answer or further questions that you may have.

Sincerely yours:


Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA



COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
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(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

20.V.76

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Herr Claus Pohle
Tierpark Berlin

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

DDR-1136
Berlin-Friedrichsfelde
Am-Tierpark 125

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Herr Pohle:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

The computerized data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Gardens was developed several years ago to permanently house the animal inventories of zoological collections. This data bank has been very successful in this country and now is entering data from European institutions. This data bank offers a number of useful services to participating institutions, such as issuing yearling synopses on microfiche of both inventories of each institution and total inventories in captivity of all species, their births, deaths, transfers, etc.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

Beside having the capacity to safely store inventory data and issue periodic or yearly synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialist to search for potential problems in future generations. Such factors as inbreeding, potential pairing, and lethal gene development can be examined, and on a trial basis, Przewalski's Horse has already been reviewed. The Wild Asses have been in captivity for many generations now and a similar review could be of great use to perpetuating the races.

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

I would like to invite you to enter your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready soon. Leopard studbooks will be entered first and serve to smooth out any difficulties. The overall studbook control will of course remain with the keeper, the data bank serving as a storage and examination tool.

I hope you will consider the ISIS pedigree program for permanent housing of pedigree data. I think this type of system can be of great value in long range maintenance of rare species, especially in event of total extinction. If there are further questions, I will gladly assist you and do look forward to hearing from you.

Sincerely:

Alan H. Shoemaker

Presidential Advisor on Studbooks, AAZPA



COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

19.V.76

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Dr. Ernst M. Lang
Zoologischer Garten Basel
CH-4051 Basel, Switzerland

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Dear Dr. Lang:

GEORGE R. DAVIS
BUSINESS MANAGER

Several years ago, the data bank of ISIS initiated its initial program for computerizing the animal inventories of captive collections. This first step has been well-received in this country, the yearly issued inventories on microfiche greatly assisting participating institutions in locating potential breeders, keeping track of animal movements, births, deaths, transfers, etc.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

Beside having the capacity to safely store inventory data and issue synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialist and search for potential problems in future captive generations. Such factors as inbreeding, potential pairing, and lethal gene development can be examined, and on a trial basis, Przewalski's Horse has already been reviewed.

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

I would like to invite you to enter your studbooks into the ISIS data bank. The Pigmy Hippo is now breeding well in captivity and well suited to a computerized examination of its geneology, especially in the future when new stock from the wild becomes virtually unobtainable. A special data input form, very similar to a studcard, will be ready soon. Leopard studbooks will be entered first and act as a trial run to help smooth out programing difficulties. The overall studbook control will of course remain with the studbook keeper, the data bank serving as a storage and examination tool.

I hope you will consider the ISIS data bank for permanent housing of your pedigree data. We think the computer can be of great service to the zoological park community. Once a species basic pedigree data is entered into the computer, new input will be quite easy and could be done at the same time studcards are issued, updated, etc. If you have any further questions, feel free to contact me and until then, I look forward to your reply.

Sincerely:

Alan H. Shoemaker

Presidential Advisor on Studbooks/AAZPA



COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

17 May, 1976

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Mr. R.S.R.Fitter
Zoological Society of London
Regent's Park
London NW1 4RY, England

Dear Mr. Fitter:

You are listed by International Zoo Yearbook as the studbook keeper for Arabian Oryx, a rather complete pedigree program which appears to be experiencing an increase in numbers of individual animals.

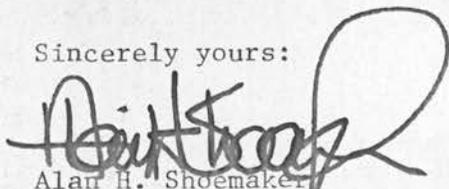
You may be familiar with the computer data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Park. Designed to permanently house animal inventories, this project has been very successful in this country and several large collections in Europe are now entering their inventories.

Beside having the capacity to safely store inventory data and issue yearly or periodic synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialist and search for potential problems in future captive generations. Such factors as inbreeding, potential pairing, and lethal gene development can be examined, and in the first trial run, Przewalski's Horse has already been reviewed.

I would like to invite you to enter your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready soon. The overall studbook control will remain with the keeper, the data bank serving only as a storage and examination tool.

I hope you will consider the ISIS data bank for permanent housing of your pedigree data. I look forward to hearing from you and will answer any further questions that you may have.

Sincerely yours:



Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

17 May, 1976

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Studbook Keeper, P ere David's Deer
Whipsnade Park

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Regent's Park
London NW1 4RY, England

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Sir:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

Several years ago, the ISIS program (International Species Inventory System) was initiated to permanently house animal inventories within a computer data bank. This project, based in Minnesota Zoological Park, has been very successful in this country and several European collections are now entering their inventories.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

In addition to having the capacity to safely store inventory data and issue yearly synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialist to search for potential problems in future captive generations. Such factors as inbreeding, potential pairing, and lethal gene development can be examined and on a trial basis, Przewalski's Horse has already been reviewed.

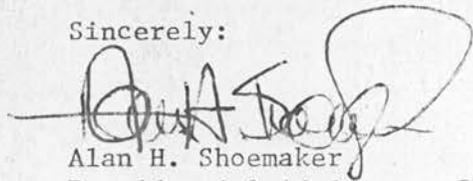
ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

I would like to invite you to enter your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, is nearly ready. The overall studbook control would remain with the keeper, the data bank serving as a storage and examination tool.

I hope you will consider this data system for permanent housing of you pedigree program. This is especially well adapted for this species since it has bred into numerous successive generations. I look forward to hearing from you and will gladly answer any further questions you may have.

Sincerely:



Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA



COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

17 May, 1976

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Dr. J.P. Guillermo Staudt
Wildföigehege Hellenthal
5374 Hellenthal/Eifel, Germany

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Dr. Staudt:

You are listed in International Zoo Yearbook as the studbook keeper for Pudu, under the supervision of Carlos Junge, Chile. This appears to be a completed pedigree program, with a publication planned or in print.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

You may be familiar with the computer data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Gardens. Designed to permanently house animal inventories, this project has been very successful in this country and several large European collections are now entering their inventories as well.

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

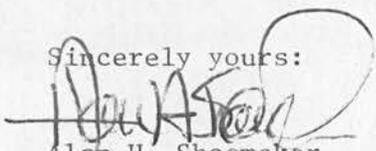
Beside having the capacity to safely store inventory data and issue yearly or periodic synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the opportunity for a species to be examined by the studbook keeper or genetic specialist in search of potential problems in future captive generations. Such factors as inbreeding, potential pairing, and lethal gene development can be examined, and on a trial basis, Przewalski's Horse has already been reviewed.

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

I would like to invite you to enter your studbooks into the ISIS data bank. A species data input form, very similar to a studcard, will be ready soon. The overall studbook control will remain with the keeper (yourself), the data bank serving only as a storage and examination tool.

I hope you will consider this data bank for permanent housing of your pedigree data. If you have further questions, please contact me.

Sincerely yours:


Alan H. Shoemaker

Presidential Advisor on Studbooks, AAZPA

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

17.V.76

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

Prof. Jacques Nouvel
Parc Zoologique de Paris
53 avenue de St. Maurice
75012 Paris, France

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Dear Prof. Nouvel:

GEORGE R. DAVIS
BUSINESS MANAGER

You are listed by International Zoo Yearbook as the studbook keeper for the various subspecies of Eld's Deer, a project which already has animals in registration. The computer data bank of ISIS (International Species Inventory System), located in Minnesota Zoological Gardens, is now developing its pedigree program for studbooks. The permanent housing for animal inventories has been very successful in this country and is now able to enlarge its scope.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

The ISIS data bank has several capabilities beside the aspect of permanent data housing. The computer offers the chance for the studbook keeper or genetic specialist to search for potential problems in future captive generations. Data can be issued on a yearly or demand (periodic) basis to interested institutions or persons. Such factors as inbreeding, potential pairing, and lethal gene development can be examined and on a trial basis, Przewalski's Horse has already been reviewed.

DENNIS S. DECOURCEY
CURATOR, BIRDS

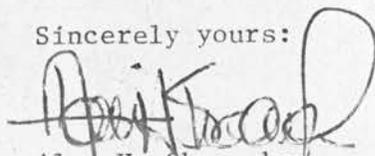
ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

I would like to invite you to enter your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready soon. The overall studbook control would, of course, remain with the keeper, the data bank serving as a storage and examination tool.

I hope you will consider this data bank for permanent housing of your pedigree data. As your animals are very well suited to this type of program, the computer can be of very great benefit. If there are further questions, please contact me; I will look forward to your interest.

Sincerely yours:



Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

12.V.76

Dr. Rainer Lorenz
D-3400 Göttingen
Bürgerstr. 50
West Germany

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

President-Elect
GORDON HUBBELL, D.V.M.
Director
Crandon Park Zoo
Key Biscayne, Florida 33149

Vice-President
LARRY O. CALVIN
Director
Dallas Zoo and Aquarium
Dallas, Texas 75203

Past President
RONALD L. BLAKELY
Director
Sedgwick County Zoo
Wichita, Kansas 67212

Executive Director
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Oglebay Park
Wheeling, West Virginia 26003

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Director
Sacramento Zoo
Sacramento, California 95822

DANIEL H. MORENO
Director
Cleveland Aquarium
Cleveland, Ohio 44103

DANIEL R. MICHALOWSKI
Director
Seneca Park Zoo
Rochester, New York 14621

EDWARD J. MARUSKA
Director
Cincinnati Zoo
Cincinnati, Ohio 45220

PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Dear Dr. Lorenz:

You are listed by International Zoo Yearbook as the studbook keeper for Goeldi's Monkey, a pedigree program near completion or finished. A publication is also listed for 1975 or 1976.

You may be familiar with the computer data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Park. Designed to permanently house animal inventories, this project has been very successful in this country and several large European collections are now entering their inventories as well.

Beside having the capacity to safely store inventory data and issue periodic synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialists to search for potential problems in future captive generations. Such factors as inbreeding, potential pairing, and lethal gene development can be examined, and on a trial basis, Przewalski's Horse has already been tried.

I would like to invite you to enter your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready soon. Leopard studbooks will be entered first to act as a trial run and smooth out any differences. The overall studbook control will remain with the keeper, the data bank serving only as a storage and examination tool.

I hope you will consider the ISIS data bank for permanent housing of your pedigree data. If you have further questions, I will be glad to assist you.

Sincerely yours:

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

Columbia Zoological Park
Columbia, S.C. 29202



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

8 May, 1976

Dr. Shigeharu Asakura
Tama Zoological Park
Hodokubo, Hino-shi
Tokyo 191, Japan

Dear Dr. Asakura:

You are listed by International Zoo Yearbook as the studbook keeper for Manchurian Cranes, a pedigree program which is not only complete but also into its second publication.

You may be familiar with the computer data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Park. Designed to permanently house animal inventories, this project has been very successful in this country and several large European collections are now entering as well.

Beside having the capacity to safely store inventory data and issue yearly synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialists to search for potential problems in future captive generations. Such factors as inbreeding, potential pairing, and lethal gene development can be examined, and on a trial basis, Przewalski's Horse has already be tried.

I would like to invite you to enter your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready soon. Leopard studbooks will be entered first to act as a trial run and smooth out any differences. The overall studbook control will remain with the keeper, the data bank serving only as a storage and examination tool.

I hope you will consider the ISIS data bank for permanent housing of your pedigree data. If you have further questions, I will gladly answer them.

Sincerely yours,

Alan H. Shoemaker
Presidential Advisor on Studbooks/AAZPA

Columbia Zoological Park
Columbia, S.C. 29202

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

President-Elect
GORDON HUBBELL, D.V.M.
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Key Biscayne, Florida 33149

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Cincinnati, Ohio 45220

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Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Garden's
Chicago, Illinois 60614



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

5.V.76

Dr. Peter Röben
Zoologisches Institut I der Universität Heidelberg
69 Heidelberg
Im Nuenheimer Feld 230
West Germany

Dear Dr. Röben:

We note in International Zoo Yearbook, Vol 15, the completion of your studbooks on Spectacled Bears, Bush Dogs, and Maned Wolves. Knowing these projects to be very time consuming as well as important, their completion is quite important and commendable.

The computerized data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Gardens was developed several years ago to permanently house the animal inventories of zoological parks worldwide. This data bank provides a number of useful services to participating institutions, such as issuing yearly printouts on microfiche of both overall inventories of participating institutions and total inventories of all species in captivity, their births, deaths, transfers, etc. This program has been very successful in this country, with nearly all parks having entered their collections into ISIS. The inventory program has also been presented to IUZDG last fall and several European collections are in the process of joining this project.

Another very useful advantage of the ISIS project concerns pedigree programs. Not only does ISIS offer a permanent data storage facility but studbook species can be closely examined by the computer to suggest breeding pairs, locate potential genetic problems, predict future lethal gene development, etc. This type of examination has already been done for Przewalski's Horse, producing very useful data needed for continued captive propagation. As studbook species breed into successive generations, the need to analyze captive populations becomes more acute.

I would like to invite you to enter your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready soon. Leopard studbooks will be entered first to

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JOHN E. WERLER
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Houston Zoological Gardens
Houston, Texas 77002

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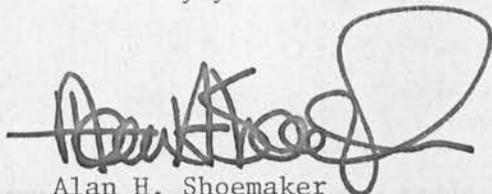
Dr. Peter Röben

Page 2

act as a trial run and smooth out any difficulties. The overall studbook control will of course remain with the keeper, the data bank serving only as a storage and examination tool.

I hope you will consider the ISIS data bank for permanent housing of your pedigree data. If you have further questions, I will gladly assist you.

Sincerely yours:

A handwritten signature in dark ink, appearing to read "Alan H. Shoemaker". The signature is stylized with a large loop at the end and a horizontal line extending to the left.

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

Columbia Zoological Park
P.O.Box 1143
Columbia, S.C. 29202



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

7 May, 1976

Mr. Gerald Durrell
Jersey Wildlife Preservation Trust
Les Augres Manor
Trinity, Jersey
Channel Islands

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

President-Elect
GORDON HUBBELL, D.V.M.
Director
Crandon Park Zoo
Key Biscayne, Florida 33149

Vice-President
LARRY O. CALVIN
Director
Dallas Zoo and Aquarium
Dallas, Texas 75203

Past President
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Sedgwick County Zoo
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ROBERT O. WAGNER
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Wheeling, West Virginia 26003

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Rochester, New York 14621

EDWARD J. MARUSKA
Director
Cincinnati Zoo
Cincinnati, Ohio 45220

PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Dear Mr. Durrell:

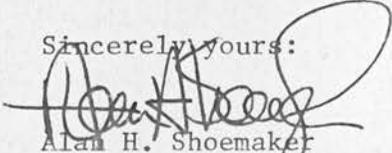
Several years ago, the computerized animal inventory system was established by ISIS (International Species Inventory System) at Minnesota Zoological Gardens. After two years of operating time, the collections of most parks in this country have been entered into the system and several European collections are now joining.

In addition to the permanent storage capability offered by the ISIS data bank, there is also a storage and examination capacity for pedigree programs. Studbook keepers and specialists can better examine the genealogy of a species on tape and use it for predicting genetic problems, searching for potential breeding pairs, etc. This sort of use has already been done on a trial basis for Przewalski's Horse to search for lethal gene development. This same type of examination can be done for White-eared Pheasants and other birds which have been bred into successive generations.

I would like to invite you to enter your studbooks into the ISIS bank for permanent storage and possible examination when you feel it may be necessary. A special format for entering data will be ready soon and Leopard studbooks will be entered shortly thereafter. The studbook ownership and control will of course remain with the keeper, the main purpose of ISIS being to ensure permanent and safe storage and periodic or demand printout inventories.

I hope you will consider this project and in case of any further questions, please feel free to contact me.

Sincerely yours:



Alan H. Shoemaker

Presidential Advisor on Studbooks/AAZPA

Columbia Zoological Park
P.O. Box 1143
Columbia, S.C. 29202



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

12.V.76

Dr. Rosl Kirchshofer
Zoologischer Garten Frankfurt
6 Frankfurt/Main 1
Alfred Brehm Platz 16
West Germany

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

President-Elect
GORDON HUBBELL, D.V.M.
Director
Crandon Park Zoo
Key Biscayne, Florida 33149

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Cincinnati, Ohio 45220

PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Dear Dr. Kirchshofer:

You are listed by International Zoo Yearbook as the studbook keeper for the Gorilla, a pedigree program which has been extant for some time.

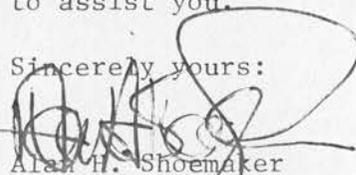
You may be familiar with the computer data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Park. Designed to permanently house animal inventories, this project has been very successful in this country and several large European collections are now entering also.

In addition to the capacity of safely storing inventory data and issuing yearly synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialists to search for potential problems in future captive generations. Such factors as inbreeding, potential pairing, and lethal gene development can be examined; on a trial basis the Przewalski's Horse has already been tried.

I would like to invite you to enter your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready soon. Leopard studbooks will be entered first to act as a trial run and smooth out any difficulties. The overall studbook control would remain with the keeper, the data bank serving only as a storage and examination tool.

I hope you will consider the ISIS data bank for permanent housing of your pedigree data. If there are further questions, I would be glad to assist you.

Sincerely yours:


Alan H. Shoemaker

Presidential Advisor on Studbooks, AAZPA

Columbia Zoological Park
Columbia, S.C. 29202

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

5.V.76

PALMER E. KRANTZ, III
GENERAL CURATOR

Dr. Jan Raczynski
European Bison Pedigree Book
17-230 Bialowieza, Poland

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Dear Dr. Raczynski:

GEORGE R. DAVIS
BUSINESS MANAGER

A computer data program was established several years ago called ISIS (International Species Inventory System). Located at Minnesota Zoological Gardens, this system was designed to permanently house animal inventories. This project has been very successful in this country and several European collections are now in the process of entering their inventories.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

Beside having the capacity to safely store inventory data and issue yearly synopses of captive studbooks, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialists to search for potential problems in future captive generations. Such problems as inbreeding, potential pairing, and lethal gene development can be examined, and on a trial basis, Przewalski's Horse has already been reviewed.

DENNIS S. DECOURCEY
CURATOR, BIRDS

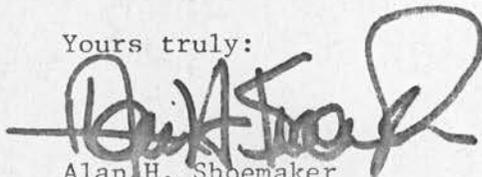
ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

I would like to invite you to enter the European Bison (Wisent) studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready soon. The overall control of the studbook of course will remain with the studbook keeper, the data bank serving as a storage and examination tool.

I hope you will consider the ISIS data bank for permanent housing of your pedigree data. If you have further questions, I would be glad to assist you.

Yours truly:



Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA



COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

12.V.76

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Dr. S. Seifert
Zoologischer Garten Leipzig
Leipzig 701
Dr. Kurt-Fischerstr. 29
DDR

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Dr. Seifert:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

You have heard, I believe, of the computer data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Gardens. Designed to permanently house animal inventories, this project has been very successful in this country and is now becoming used by European institutions.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

Beside having the capacity to safely store inventory data and issue yearly synopses of captive populations, ISIS is now developing a pedigree program for studbooks. The computer offers the chance for a species to be examined by the keeper or genetic specialist in search of future captive problems related to genetics, potential pairings, etc. On a trial basis, the Przewalski's Horse has already been reviewed.

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

I would like to invite you to enter the Siberian Tiger studbooks into the ISIS data bank, and other Tiger subspecies when ready. A special data input form, very similar to a studcard, will be ready soon. The overall studbook control will, of course remain with the studbook keeper. The data bank is to serve as a storage and examination tool.

I hope you will consider the ISIS bank for permanent housing of your pedigree data. If I can be of further assistance or answer other questions, please contact me.

Sincerely yours:

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA





American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

5.V.76

Mr. S.V. Bakshi
Zoo Officer
Sakkarbag Zoo
Junagadh, Gujerat
India

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

President-Elect
GORDON HUBBELL, D.V.M.
Director
Crandon Park Zoo
Key Biscayne, Florida 33149

Vice-President
LARRY O. CALVIN
Director
Dallas Zoo and Aquarium
Dallas, Texas 75203

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Cincinnati, Ohio 45220

PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Dear Mr. Bakshi:

You are listed by International Zoo Yearbook as the studbook keeper for Indian Lions. According to IZY, some animals have been registered and additional data is being collected.

You may be familiar with the computer data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Gardens. Designed to permanently house animal inventories, this project has been very successful in this country and several large European collections are now entering as well.

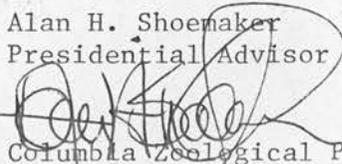
Beside having the capacity to safely store inventory data and issue periodic or yearly synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for a species to be examined by the studbook keeper or genetic specialists in search of potential problems in future captive generations. Such factors as inbreeding, potential pairing, and lethal gene development can be examined; on a trial basis, Przewalski's Horse has already been reviewed.

I would like to invite you to enter your studbooks into the ISIS data bank now or when they are finished. A special data input form, very similar to a studcard, will be ready soon. The overall studbook control will remain with the keeper, the data bank serving only as storage and tool for manipulation.

I hope you will consider the ISIS data bank for permanent housing of your pedigree data. I would be glad to further assist you or answer questions if necessary.

Sincerely yours:

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA


Columbia Zoological Park
Columbia, S.C. 29202



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

8.V.76

Mr. Christian Schmidt
Zoolgoscher Garten Zurich
8044 Zürich, Switzerland

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

Dear Mr. Schmidt:

President-Elect
GORDON HUBBELL, D.V.M.
Director
Crandon Park Zoo
Key Biscayne, Florida 33149

Now that your studbook is published, a major milestone in your Vicuna studbook has been achieved. You may be familiar with the computer data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Gardens. Designed to permanently house animal inventories, this project has been very successful in this country and several large European collections are now entering as well.

Vice-President
LARRY O. CALVIN
Director
Dallas Zoo and Aquarium
Dallas, Texas 75203

In addition to the capacity of safe storage of inventory data and issuance of yearly or periodic synopses of captive populations, ISIS is now developing a pedigree program for studbooks. Beside storage, the computer offers the chance for a species to be examined by the keeper or genetic specialists to search for potential problems in future captive generations. Such factors as inbreeding, potential pairing, and lethal gene development; on a trial basis, Przewalski's Horse has already been reviewed.

Past President
RONALD L. BLAKELY
Director
Sedgwick County Zoo
Wichita, Kansas 67212

Executive Director
ROBERT O. WAGNER
Oglebay Park
Wheeling, West Virginia 26003

I would like to invite you to enter your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready soon. The overall studbook control will remain with the keeper, the data bank serving only as a storage and examination tool.

DIRECTORS

WILLIAM E. MEEKER
Director
Sacramento Zoo
Sacramento, California 95822

I hope you will consider the ISIS data bank for permanent housing of your pedigree program. If you have further questions, I will be glad to answer them.

DANIEL H. MORENO
Director
Cleveland Aquarium
Cleveland, Ohio 44103

Sincerely yours:

DANIEL R. MICHALOWSKI
Director
Seneca Park Zoo
Rochester, New York 14621

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA

EDWARD J. MARUSKA
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Cincinnati, Ohio 45220

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Columbia, S.C. 29202



American Association of Zoological Parks and Aquariums

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12.V.76

Prof. Dr. Agatha Gijzen
Antwerp Zoo
Koningin Astridplein 26
B-2000 Antwerp, Belgium

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

Dear Prof. Gijzen:

President-Elect
GORDON HUBBELL, D.V.M.
Director
Crandon Park Zoo
Key Biscayne, Florida 33149

You are listed by International Zoo Yearbook as the studbook keeper for Bonobo. According to IZY, your studbook should be published soon.

Vice-President
LARRY O. CALVIN
Director
Dallas Zoo and Aquarium
Dallas, Texas 75203

You may be familiar with the computer data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Gardens. Designed to permanently house animal inventories, this project has been very successful in this country and several large European collections are now entering as well.

Past President
RONALD L. BLAKELY
Director
Sedgwick County Zoo
Wichita, Kansas 67212

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Executive Director
ROBERT O. WAGNER
Oglebay Park
Wheeling, West Virginia 26003

DIRECTORS

WILLIAM E. MEEKER
Director
Sacramento Zoo
Sacramento, California 95822

I would like to invite you to enter your studbooks into the ISIS data bank. A special data input form, very similar to a studcard, will be ready soon. The overall studbook control will remain with the keeper, the data bank serving only as a storage and examination tool.

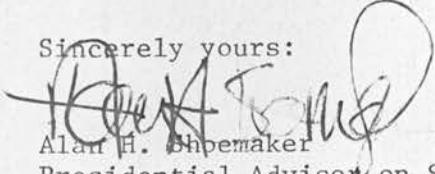
DANIEL H. MORENO
Director
Cleveland Aquarium
Cleveland, Ohio 44103

I hope you will consider the ISIS data bank for housing your pedigree data on a permanent basis. If there are further questions, I will gladly answer them.

DANIEL R. MICHALOWSKI
Director
Seneca Park Zoo
Rochester, New York 14621

Sincerely yours:

EDWARD J. MARUSKA
Director
Cincinnati Zoo
Cincinnati, Ohio 45220


Alan H. Shoemaker

Presidential Advisor on Studbooks, AAZPA

PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

Columbia Zoological Park
Columbia, S.C. 29202

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
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12.V.76

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Mr. Atsuchi Komori
Tama Zoological Park
Hodokubo, Hino-shi
Tokyo 191, Japan

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Mr. Komori:

You are listed by International Zoo Yearbook as the studbook keeper for Japanese Serow. According to IZY, the book is complete and available in a mimeographed form.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

You may be familiar with the computer data bank of ISIS (International Species Inventory System) located in Minnesota Zoological Gardens. Designed to permanently house animal inventories, this project has been very successful in this country and several large European collections are now entering as well.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

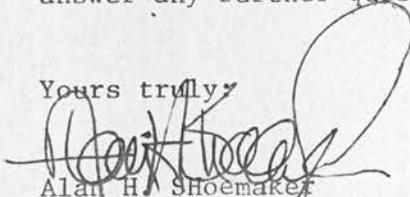
Beside having the capacity to safely store inventory data and issue yearly synopses of captive populations, ISIS is now developing a pedigree program for studbooks. In addition to data bank storage, the computer offers the chance for the studbook keeper or genetic specialists to search for potential problems in future captive generations. Such factors as inbreeding, potential pairing, and lethal gene development can be examined; on a trial basis, Przewalski's Horse has already been reviewed.

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

I would like to invite you to enter your studbook into the ISIS program. A special data input form, similar to a studcard, will be ready soon. The overall studbook control would remain with the keeper, the data bank serving as a storage and examination tool.

I hope you will consider the ISIS data bank for permanent housing of your pedigree data. I look forward to your reply and will gladly answer any further questions you may have.

Yours truly,


Alan H. Shoemaker

Presidential Advisor on Studbooks, AAZPA





American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

2 May, 1976

Mr. P.J.S. Olney
Editor, International Zoo Yearbook
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London NW1 4RY, England

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Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Dear Mr. Olney:

We received IZY, Vol. 15, and appreciate your efforts in expediting their arrival. The increase of species within the Rare Animal Census is needed and it would also appear as if greater numbers of studbooks are now being completed and kept up to date.

The studbook section, listing your office as Coordinator, directs potential keepers to refer back to Vol. 9 for more detailed instructions. Many of the procedures in Vol. 9 seem to have been modified since then, especially instructions regarding the change of keepers, the use of colored cards to specify male and female animals, and the role of the Zoo Liaison Committee. Now your office appears to coordinate all aspects of the studbook programs and to suggest endorsement of new species, thereby increasing your workload as well as overall responsibility.

We have been in contact with studbook keepers in North American institutions for eventual inclusion of their data into the computer bank of ISIS. In addition to the permanence of the computer bank, this system can analysis studbook data for for solutions to potential propagation problems. Such examination has already been done on a trial basis for Przewalski's Horse to search for lethal gene development.

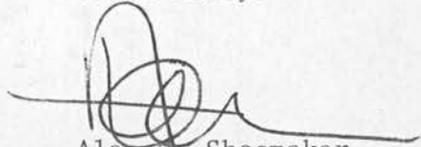
At this time, we are particularly interested in the status of all studbooks listed as "in process". Ideally it is hoped that those keepers outside of this country will be willing to enter their data into the ISIS data bank. Any input you can provide concerning the stage of completion of these unfinished books and potential cooperation would be greatly appreciated.

Concerning leopards, I am including a current listing of living individuals. In the fall, an anual questionnaire will be sent to all

Mr. P.J.S.Olney
Page two.

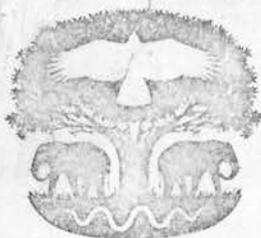
owners for annual updating of this information. Within the Pure Animal Census section there should soon be a marked change in the number of institutions listing Amur and Chinese Leopards. Many of the animals outside the USSR and heretofore called orientalis are now registered as japonensis. This change should be finished by Vol. 17.

Yours truly:



Alan H. Shoemaker
Presidential Advisor on Studbooks,AAZPA

Columbia Zoological Park
Columbia, South Carolina



Post Office Box 551, San Diego, California 92112
Telephone (714) 234-5151
Cable Address: SDZOO San Diego, California, U.S.A.

File = Studbooks

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Dear Members of the AAZPA Conservation Committee & Special Friends:

Enclosed is a copy of the fourth AAZPA survey of the captive lion-tailed macaque in North America. This is a project I started six years ago in lieu of a studbook on this species because I was dissatisfied with the limitations imposed by the studbook system. It has proven to be so successful and superior to studbooks, I am proposing this system replace most, if not all, of the studbooks now kept on captive wild animals. Therefore, I am asking the AAZPA Conservation Committee to study my system and to recommend to the AAZPA Board of Directors to adopt this system or to recommend that it be adopted by studbook keepers or potential studbook keepers. I also, by one route or another, hope this proposal can be brought forth to the IUDZG so it can take a similar action. Therefore, so you can study this system thoroughly, you will also find surveys one through three enclosed.

Some of the advantages of this system over studbooks is the latter provides little information other than a genealogy. Often each reader must discover trends and truths himself, nothing is pointed out. Much of the information of the species is held only by the studbook keeper; it is not generally disseminated. Studbooks require printing and are more expensive.

My system is based on the newsletter principle. First a survey is made which is not only a head count but other information is sought as well. The census becomes a major feature of the report but animal husbandry techniques are discussed, the situation in nature is discussed (not every member of the group has access to an up-to-date journal library) and other relevant items are mentioned. One of the most interesting features is the encouragement of voluntary exchange of specimens to upgrade and improve breeding. The voluntary method has superb acceptance and has worked well. A great deal of doubt was expressed by some European colleagues that a voluntary system would work. Some Europeans believed the studbook keeper should make a program of exchanges and follow through with the exchanges.

This prompted me to ask in the third survey the question: "Is your zoo willing to participate in an exchange program that would improve your breeding situation?" The reply was an unanimous yes. I therefore believe that the studbook-newsletter should present all the facts and thus the proper programs of exchange become obvious to everyone. Follow-through by the various owners has taken place in North America the past six years. When the newsletter is mailed a report is published in Oryx, the journal of the Fauna Preservation Society. Thus another feature of strength is added held by few studbooks. Permanence by printed publication on a worldwide scale. Furthermore, by this procedure the conservation program is announced to the world of conservation not just the participants of the studbooks and their limited audience. Enclosed are two samples of Oryx lion-tailed macaque reports.

Rather than fill another page with a long list of reasons why this system is better than the ordinary studbook, your examination of the enclosed newsletters will uncover them. There is an obvious question. Should the newsletter system be married to the traditional studbook? In some cases, yes. In other cases no, especially when there is a large gene pool or when time is limited for the preparator.

Your thoughts and criticisms would be appreciated.

Sincerely,



Clyde A. Hill
Curator of Mammals

CAH:mas
Enc. •

Fourth AAZPA Survey of the Lion-tailed Macaque (Wanderoo Monkey)
Macaca silenus in Captivity (North America)

September 1975

Clyde A. Hill

SAN DIEGO ZOO

In April 1970 the American Association of Zoological Parks and Aquariums published a questionnaire in its newsletter to determine the number of Macaca silenus held by member zoos. The survey showed there were 52 adults and 21 juveniles in North America. The sex ratio was approximately even. In September 1971 another survey was taken to record changes in the various collections. There was a decrease of one adult but an increase of 18 juveniles. In September 1972 a third survey was taken. Gains and losses balanced so there were 90 animals as there were in 1971. Surveys were not made in 1973 or 1974. The fourth survey was made in September 1975.

The fourth survey showed the population almost doubled since the first survey. There were 17 more adults and better than twice as many juveniles, 47 to be exact. As of September 1975 there were 32 adult males and 37 adult females. There were 40 juvenile males, 23 juvenile females and four sex undetermined. This yields a total of 72 males, 60 females and four sex unknown. In 1972 there were eight breeding groups in North America plus two zoos having a potential of breeding. In 1975 there were 14 breeding groups plus two potentials. Since 1970 only one importation was

made into the United States and Canada. The San Diego Zoo found a solitary adult female living in the Santo Domingo Zoo, Dominican Republic. Upon arrival it was found to be crippled and its reproductive potential, low. Nevertheless, it is kept with a breeding age male with the hope offspring may be produced.

Although reproduction has increased there is a problem which could potentially block these efforts in the future. Several zoos exchanged animals in nonbreeding group situations since 1970 in an attempt to create new breeding groups. Surveys two and three showed poor results from these introductions. The fourth survey contained a question for those institutions who had participated in such exchanges. Comments from them are given in appendix one. In most cases the introduction of a new animal did not help. Perhaps those zoos should place these problem animals in a different breeding situation. Perhaps the problem animals should be studied critically to determine if there is physiological incapability. Behavior is another area. It is hoped further study on these problem animals will be made. Unless such a program is worked upon one cannot help but wonder if animal transfers will be of much success in improving breeding situations.

For several years the Seattle Zoo has been working on improving primate behavior by giving their lion-tailed macaques, and other primates, a variety of objects to manipulate. One of their most successful devices has been to give the macaques a

deep bed of alfalfa hay in their exhibit cage. The monkeys spend hours picking out the dried leaves and eating them as well as the more tender stems.¹ The hay bed is changed every few days. We tried the same trick in San Diego and it works well. I wondered if other zoos were doing this and at the same time wanted to suggest the technique through the survey. Replies to the question are given in Appendix 2.

Since improvement of primate activity has interested several zoos across the country, the hay question was followed by, "Do you know of or have you tried any other unusual husbandry technique which would benefit the species?" Various devices were reported by several zoos all of which were enthusiastic about the recreational benefit of rather simple and easy to obtain "toys". It would be well worth the time to read these comments in Appendix 3.

The fourth AAZPA survey uncovered enough information on the sexual development of juveniles in captivity that a follow-up survey was made on some groups. Although enough information was obtained to establish the captive minimum age of sexual maturity more information will be sought in the fifth AAZPA survey to

¹ Survey one described the wild diet in detail. Much to the surprise of many, lion-tailed macaques naturally consume much leaf material somewhat like langurs. They are not concentrate eaters (nuts, seeds, roots, etc.) in the same way as are rhesus, pig-tails and such.

Thus, alfalfa hay not only gives them something to but it should be nutritionally beneficial as well.

determine the average age of sexual maturity. In the meantime participants are asked to try and establish the actual age of all their animals. If they were obtained from another zoo without specific age data, please write and attempt to tie these figures down. It will be most helpful to all of us if this information is available.

The minimum age of sexual maturity seems to be about four years for females and a little less than five years for males. However, these animals probably represent the exception rather than the rule. The Winnipeg stock seems to be especially precocious. Using animals with known births dates, Winnipeg has two females that gave birth at 4 1/2 years. The infants were successfully raised. A male "Joey", born at Winnipeg and sent to Toronto, was five years three months old when his first son was born. The Duluth Zoo has a Winnipeg male which was five years old when his first daughter was born. On the other hand, some known age animals mature at a much slower rate. San Diego has a male which was six years old when his first son was born. The obvious question materializes. Should the seven and five year age brackets be adjusted downward in light of the Winnipeg animals? I think we should not do it at this time for several reasons.

Sexual maturity of macaques in nature has been generally believed to be five years for females and seven years for males.

The social, nutritional and living space situation for wild macaques greatly differs from the usual captive condition. It has been known for many decades that sometimes primates will breed earlier in captivity than will their counterparts in nature. Breeding suppression in nature, especially of males, is probably caused primarily by a lack of opportunity, or so it would seem. Large males may not allow younger males breeding privileges. However, recent studies indicate the females, in the wild, have much more to say about breeding partners than was previously understood. Peripheral males may be fathering more infants than was suspected.

I believe the human is a good model to better understand the macaque and other primates. Thirteen year old male humans provide a wide variety of physical and mental maturation. My three sons have been active in youth athletics for many years. When watching them participate in basketball, wrestling, swimming and other scantily clothed sports the differences between 13 year olds is greatly apparent. Secondary sexual characteristics such as underarm hair, muscular development and other well known phenomena are possessed by some and not at all by others. The same wide time spectrum of differences in the maturation of girls also occurs. Therefore, if we were to choose an age for humans where adulthood begins and the juvenile period ends it would be best to choose an older bracket rather than a younger one so that more, if not most, could be included. At the same time we would realize

part of the older juveniles would be, in many respects, part of the adult group. Establishment of this rather fuzzy gradient of captive sexual maturity for lion-tailed macaques will be an interesting challenge for the next survey.

I visited India in 1968 and traveled by automobile through much of the area where the lion-tailed macaque lives and had lived. In my opinion the species has little hope of survival in the wild if present conditions continue. Captive propagation of this aberrant and spectacular macaque seems to be the only hope for its survival. Fortunately, its captive record in North America is good and seemingly is getting better all the time. On December 22, 1975 Professor Charles H. Southwick of Johns Hopkins University, one of the top authorities on Indian primates, sent me a letter containing the following. "At the Indian Primate Symposium in New Delhi (November 3-8, 1975) two estimates were offered on the status of the lion-tailed macaque in India. Dr. G. U. Kurup of the Zoological Survey of India, Madras Office, estimated a total population of M. silenus in India at 800 animals. He quoted an estimate of Dr. Steven Green of Rockefeller University at 450 animals total. So apparently the future of the lion-tailed macaque in the wild is very bleak. Dr. Kurup mentioned it is still occasionally shot by local people."

Mr. Pearce Johnson wrote for copies of surveys one through three and mentioned he is doing graduate work at the Baltimore Zoo on various aspects of social dominance of the species. He is associated with Johns Hopkins University.

TABLE I

Male/Female/Sex Undetermined

Institution Alphabetical by State	Adults+(Juveniles)	Born since Sept 1973	Remarks
Alabama, Birmingham	1/1		
Arizona, Tucson Randolph Park Zoo	1/1 + (0/1)		
California, San Diego	3/2 + (1/0)	1/0	
California, San Francisco	1/1		
Colorado, Colorado Springs	3/4 + (4/1/1)	1/1/1	1/0 loan from San Antonio. old 1/1 loan from Cincinnati
District of Columbia National Zoo	1/0 + (0/2)	1/1	1/0 on loan to Tucson
Florida, Miami Crandon Park Zoo			0/1 on loan to Tucson
Florida, Miami Monkey Jungle	2/0		old animals
Georgia, Atlanta Zoo	0/0 + (2/1)		
Georgia, Atlanta Yerkes Primate Center	1/0 + (3/0)		
Hawaii, Honolulu			2/1 on loan to Seattle
Illinois, Chicago Lincoln Park Zoo	1/1 + (0/2/2)	0/1/2	
Indiana, Evansville	1/0 + (1/1)		old breeding 0/1 died in 1975
Kansas, Wichita	0/1		congenital defect non breeder
Louisiana, Monroe Louisiana Purchase Zoo	0/1 + (4/0)	2/0	
Maryland, Baltimore	2/3 + (4/1)	3/1	
Minnesota, Duluth	(1/1)	0/1	
Minnesota, St. Paul Como Zoo	1/1	0/2	0/1 born 1973 on loan Tucson, 0/1 born 75 on loan to St. Louis
Mississippi, Jackson	2/1 + (1/2)	1/1	plus 1/0 stillbirth

Institution	Adults+(Juveniles)	Born since Sept 1973	Remarks
Missouri, St. Louis	1/1		
New York, New York Central Park Zoo	1/2 + (3/1)	1/1	
Ohio, Cincinnati			old 1/1 on loan to Colorado Springs
Ohio, Toledo	1/1 + (2/0)	1/0	1 stillbirth Nov 72
Oregon Portland			2/1 on loan to Seattle
Tennessee, Memphis			0/1 on loan to Milwaukee
Texas, Houston	1/0		
Texas, San Antonio	1/1		
Washington, Seattle	5/6 + (2/4/1)	3/1/1	+ 1 stillbirth since 1972
Wisconsin, Milwaukee	2/3 + (4/2)	2/0	

.....
CANADA

British Columbia, Vancouver, Stanley Park			1/1 on loan to Seattle
Manitoba, Winnipeg	0/4 + (4/3)	1/3	early maturation
Ontario, Toronto	0/2 + (4/1)	2/1	early maturation

TOTAL ADULTS	TOTAL JUVENILES	BORN SINCE SEPTEMBER 1973
32/37	40/23/4	19/14/4

GRAND TOTAL

72/60/4

Or

136 animals

TABLE II

BREEDING GROUPS

POTENTIAL BREEDING SITUATIONS

Alphabetical by State

San Diego

Tucson

Colorado Springs

San Antonio

National Zoo

Lincoln Park, Chicago

Louisiana Purchase

Baltimore

St. Paul

Jackson

Central Pk. N.Y.

Toledo

Seattle

Milwaukee

Winnipeg

Toronto

TOTAL 14

APPENDIX 1

QUESTION: Several zoos have exchanged animals in nonbreeding group situations since 1970 in an attempt to create breeding groups. If your zoo participated in such an exchange please describe briefly the earlier group makeup, what was introduced and the results. Surveys two and three showed poor results. I hope the situations have improved in the past three years.

Seattle, Gledhill: 1. We received one female from Portland 2/29/72 which was placed in our main troop and has since produced three young--she had never produced at Portland. 2. We received one male and one female from Stanley Park, Vancouver B. C. which were placed in our second troop and to date they have not produced young. 3. We received a male and a female (both over twenty three years of age) plus their twelve year old son from Honolulu 8/11/72--to date we have had trouble introducing the female to either troop due to aggressiveness toward the other females--the older male is in our second troop at present and the younger male is used to introduce into the troops to induce copulation activity. The older female still ovulates and we are going to attempt to artificially inseminate her.

(Note: Seattle has 5/6 adults, 2/4/1 juveniles. Since 1970 Seattle had 3/4 births plus 2 stillbirths)

Birmingham, Truett: One male was received from the Houston Zoo November 13, 1973 as a mate for our adult female. No offspring have been produced from this match so far.

Colorado Springs, Aragon: The male from San Antonio was introduced to a group of 3 juvenile males and 4 adult females--introduction successful after removal of juvenile males, but no breeding. Recent births sired by juvenile (now young adult) males. Neither of pair from Cincinnati successfully introduced to group. They are quite old animals.

Note: Colorado Springs has 3/4 adults, 4/1/1 juveniles. Since 1970 Colorado Springs had 3/1 births plus one stillbirth.

San Antonio, Reed: In June 1970 we received a pair from Buffalo Zoo and in April 1971 we obtained a male from Portland Zoo. In May 1971 the Buffalo pair was observed mating but nothing was produced so we switched the males that August and observed mating that day. In November 1972 we received a pair from the Bronx Zoo and eight months later we observed them mating. The Portland male was shipped to Colorado Springs November 1973. (See Colorado Springs for additional failure for this male.) The Bronx male died in 1973, the female died in 1974. The Buffalo Zoo pair have been observed breeding on 4-26-75, 7-2-75 and 7-26-75.

Lincoln Park, Chicago, Meritt: Exchanged male with the Baltimore Zoo in 1972 in an effort to improve breeding potential. This new male bred both adult females which produced viable offspring. Former male was mate of one female and father of other female--and did not breed his daughter despite repeated cycling on her part.

Houston, Quick: Two males were received in August 1965, a pair had been ordered. March 1971, one of the males sent to San Francisco in exchange for a "non-breeding" male which had been with females but had not produced young.

(Note: The Houston male has yet to produce at San Francisco.) November 1973, the other 1965 male was sent to Birmingham. (This male has yet to produce at Birmingham.)

APPENDIX 2

QUESTION: The Seattle and San Diego Zoos regularly place a deep bed of alfalfa hay on the cage floor. We are pleased with the increased activity and other benefits this husbandry technique provides. Have you tried a hay bed in the exhibit?

Most zoos answered no.

National Zoo, Roberts: We have been trying many things in our new Monkey House to keep the animals active and alert including the alfalfa hay idea. The most interesting results with the alfalfa are obtained when sunflower seeds are scattered in the hay and crickets released into the enclosure--then, the animals spend hour after hour foraging through the substrate.

San Antonio, Reed: We have just instituted this technique on a trial basis. Preliminary findings show increased activity.

Winnipeg, Henning: Not a bed but a handful of alfalfa for something to do.

Wichita, Blakely: Use it always. Also sleeping rags and a variety of toys--when interest wanes in one, another provided.

Central Park, Clement: No, but it's a great idea.

APPENDIX 3

QUESTION: Do you know of or have you tried any other unusual husbandry technique which would benefit the species?

Seattle, Gledhill: We have found that to maintain an active level of breeding it is necessary to have two males present. I'm currently preparing a report on our practices and the findings of my survey, but basically the points are: (1) two males, (2) high protein foods, (3) floor covering, and (4) much climbing apparatus.

We are looking forward to your report.

Toronto, Gamble: No, except we allow our group their choice of the outer or inside areas during the winter season.

Lincoln Park, Chicago, Meritt: Ample plastic hanging chain in cages, plus wooden shelves. Daily offer hydroponic grass as supplemental feed. Also spread seeds/nuts over cage floor. These are relished by the animals.

San Antonio, Reed: Supplementing additional fruit and vegetables to normal diet of Monkey Chow "25".

National Zoo, Roberts: Give cooked oxtails, crickets, rawhide chew bones, browse, one inch diameter maple and mulberry sticks, burlap bags, cardboard boxes, rubber balls, and varied diet, access to outdoors year around climbing apparatus, ropes.

Submitted for publication in Oryx, Journal of the Fauna Preservation Society: London

LION-TAILED MACAQUES PROSPER IN NORTH AMERICA

In 1970 the American Association of Zoological Parks and Aquariums published a questionnaire in its newsletter to determine the number of Lion-tailed Macaques Macaca silenus held by member zoos. The survey showed there were 52 adults and 21 juveniles in North America. The sex ratio was approximately even. The fourth survey, taken in 1975, showed the population approaching the doubling mark of the first survey. There were 17 more adults and over twice as many juveniles, 47 to be exact. Significantly, the increase was not due to importations because only one animal was imported into the U. S. and Canada during the six-year period.

Although reproduction increased there is a problem with some of the animals. Several have failed to breed even when introduced into a new social situation at another zoo. The 1975 survey pooled the information on the non-breeders and studies are underway at several zoos to determine if any of these animals can be salvaged.

The fourth survey emphasized environmental enrichment programs which have been successful at several zoos. A minimum age for sexual maturity of captive Lion-tailed Macaques was discovered. Two females had viable births at 4 1/2 years and the infants were successfully raised. One male was five years old when his first daughter was born.

The thriving breeding program for this species in North American zoos is welcome news. At the Indian Primate Symposium in New Delhi (November 3-8, 1975) two estimates were offered on the status of M. silenus in India. Dr. G. U. Kurup of the Zoological Survey of India, Madras Office, estimated a total population of the species in India at 800 animals. He quoted an estimate by Dr. Steven Green of Rockefeller University at 450 animals total. Therefore, the North American collection represents the equivalent of 17 to 30 percent of the wild population.

Clyde A. Hill
San Diego Zoo

27 April 1976
CAH:mas

AAZPA SURVEY OF THE
LION-TAILED MACAQUE (WANDEROO MONKEY) Macaca silenus
IN CAPTIVITY
August 1970

Clyde Hill
San Diego Zoo

In April of 1970 the American Association of Zoological Parks and Aquariums published a questionnaire in its Newsletter to determine the number of Macaca silenus held by member zoos. Virtually every zoo in North America is a member of the AAZPA and many of the major zoos elsewhere in the world also belong. Most of the zoos that would be more likely to exhibit this species have more than one membership with this association, thus the probability of missing specimens is greatly reduced. The response to the questionnaire has been good and it is assumed that only a few, if any, M. silenus in North America escaped the survey.

There are 51 adults and 21 juveniles in North America. The sex ratio is approximately even. It would seem that since the species is gravely threatened with extinction in the wild, an ideal undertaking for this association would be a conservation-through-captive breeding program. A cursory examination of the history of this species in captivity shows that captive breeding has been anything but spectacular. A more critical examination probably would show that births do not equal deaths and importations must be made to keep up or expand the present population. It is evident that an intelligent animal husbandry program should be instituted at once on a national level.

Not much is known about this animal as it occurs in nature but there is enough information available to indicate that it would not be wise to consider handling this animal as one would a rhesus monkey, pig-tailed macaque or baboon. For example, its diet in nature is more langur-like than that of the typical macaques. Much of its diet consists of leaf buds of evergreen trees. It also has been observed to eat wild fruits, guava and even coffee berries. Insects make up a small percentage of its diet. We do not know what the ideal composition of a zoo group would be since nothing is known of group composition in the wild.

However, estimates of troop strength vary from 12-20 with no comment as to sex or age ratio.

Attached is a breakdown of diets used by zoos that are breeding this species and those that are not. One improvement that most zoos could make, at least seasonally, would be the addition of browse to the diet. However, diet alone is not enough for there is evidence that the psychological fare must also be improved. For example, it has been noted at the NIH primate colony at the San Diego Zoo and at other primate laboratories that some species of primates refuse to breed with cage mates with whom they have been living since infancy. An exchange of males often produces a breeding situation in both groups. At present there is a hypothesis that this is a mechanism inherent in some monkeys to prevent the breeding of brothers to sisters and other close relatives and thus keep the gene pool open. If such a phenomenon exists in M. silenus then it might be wise to switch mates in non-breeding groups. The attached breakdown by collection will hopefully aid in this process.

This brief report should be only the start of a well-designed project managed by members of the AAZPA. It would be appreciated if some thought could be given to this matter before the Buffalo meeting. I hope that all of you who exhibit Macaca silenus will be able to attend the conference and that we can develop an appropriate program for this primate.

Note: I have been asked by Dr. Jack Fooden, Field Museum of Natural History, Chicago, Illinois 60605, to notify all those who keep M. s. that he would appreciate receiving preserved male and female genitalia. Dr. Fooden has published a number of papers on the genitalia of macaques, the most interesting of which was the "lock and key" phenomenon which prevents hybridization between some kinds of macaques.

Diets Used by Zoos Reproducing Macaca silenus

Colorado Springs: oranges, spinach, Ralston Purina Monkey Chow.

Chicago: Fresh fruits and vegetables, horsemeat, R. P. Monkey Chow.

Evansville: Fresh willow leaves, whole milk w/ wheat germ, multiple vitamins, R. P. Monkey Chow-25.

Baltimore: Fruits and vegetables, Hallwood Primate Diet.

Bronx: Fruits, vegetables, boiled egg, peanuts, raisins, kale, mealworms, Zu-preem Monkey Diet, R. P. Monkey Chow.

Toledo: R. P. Monkey Chow.

Seattle: Apples, lettuce, oranges, misc. fruits, boiled eggs, R. P. Monkey Chow.

Winnipeg: Main diet is bananas, oranges, apples, celery (in season), onion, R. P. Monkey Chow. Second meal is boiled rice, boiled egg, raisins, multivitamins, stimulite (import from England), fruit cocktail.

West Berlin: Normal monkey diet plus leaves.

Diets Used by Zoos Not Reproducing Macaca silenus

Birmingham: Fruits and vegetables, ground horsemeat, R. P. Monkey Chow.

San Francisco: Bread, apples, bananas, fruits in season, sweet potatoes, lettuce, celery (in season), R. P. Monkey Chow.

Honolulu: Papaya, banana, apples, oranges, fruits in season, meat, R. P. Monkey Chow.

Buffalo: Bananas, oranges, grapes, apples, raisins, carrots, green beans, escarole, spinach, R. P. Monkey Chow.

Portland: Fruits, vegetables, meat, R. P. Monkey Chow, monkeybread, vitasil.

Macaca silenus in captivity, August 1970

Number in Captivity (Code: Males/Females)

North American: Adults, 26/25. Juveniles, 11/10.
Adelaide, South Australia: Adults, 2/1.
Rome, Italy: Adults, 1/1.
West Berlin, Germany: Adults, 3/6. Juveniles, 0/1.

Unmatched Specimens:

Philadelphia: Adults, 1/0
Houston: Adults, 2/0.
Washington, D. C.: Adults, 2/0.
Monkey Jungle, Goulds, Florida: Adults, 2/0.

Breakdown by Collection (Code: Adult Males/Adult Females. (Juvenile Males/
Juvenile Females). * = Breeding Colony.)

U. S. A.

Alabama, Birmingham: 1/1
California, San Diego: 0/0 (1/2)
California, San Francisco: 1/2
*Colorado, Colo. Springs: 1/3 (1/2)
District of Columbia: 2/0
Florida, Monkey Jungle: 2/0
Georgia, Atlanta: 0/0 (1/1)
Hawaii, Honolulu: 1/1
*Illinois, Chicago: 1/1 (0/1)
*Indiana, Evansville: 1/1 (1/0)
*Maryland, Baltimore: 1/1 (0/2)
New York, Buffalo: 1/1
New York, Bronx: 1/1
*Ohio, Toledo: 1/1 (0/1)
Oregon, Portland: 1/1
Penn., Philadelphia: 1/0
Texas, Houston: 2/0
*Washington, Seattle: 1/3 (1/0)
*Wisconsin, Milwaukee: 2/2 (2/0)

CANADA

*Winnipeg: 1/4 (4/1)

Second Annual AAZPA Survey of the Lion-tailed Macaque: (Wanderoo Monkey) Macaca silenus in Captivity (North America).

September 1971

Clyde A. Hill

SAN DIEGO ZOO

Master

In April 1970 the American Association of Zoological Parks and Aquariums published a questionnaire in its newsletter to determine the number of Macaca silenus held by member zoos. That survey showed that there were 52 adults and 21 juveniles in North America. The sex ratio was approximately even.

In September of 1971 another survey was taken to record changes in the various collections. Five males, five females and four sex undetermined were born between surveys. Two males and one female were newly acquired with four males and two females transferred from one zoo to another to improve the breeding situation. Only two deaths were recorded. The 1971 survey shows 26 adult males, 25 adult females, 17-16 juvenile males, 13 juvenile females and four infants, sex unknown. This represents a decrease of one adult but an increase of 16 juveniles.

In 1970 there were nine breeding groups. Another was created in 1971 when the Yerkes Field Station in Lawrenceville, Georgia, produced its first offspring. It is hoped that the number of breeding groups will increase and it is encouraging to note that the 1970 census motivated several zoos to improve their breeding potential by exchanging animals. There are still several zoos that possess adult nonbreeding pairs. Those zoos are urged to study their particular situation and refer to the collection list in this survey for possible exchanges.

BIRTHS Since Last Survey:

- A. Male, 20 September 1970 and a tentative female 4 July 1971, COLORADO SPRINGS.
- B. Three sex unknown born 3 January 1971; 14 February 1971; and 5 March 1971. One female is considered pregnant and there is possibly another, SEATTLE.
- C. Male, 7 December 1971; male January 1971; female March 1971; WINNIPEG.
- D. One sex unknown 15 September 1971, TOLEDO
- E. Male, 13 October 1970; female 2 August 1970, MILWAUKEE.

F. Female, 11 March 1971, EVANSVILLE.

G. Male, 22 June 1970, YERKES, LAWRENCEVILLE, GEORGIA

H. Female, 11 October 1971, BALTIMORE

I Male 15 Sept 71
ACQUISITIONS

Imported pair plus an adult male kept as a pet in Riverside, California,
SAN DIEGO.

EXCHANGES:

A. Two males from WINNIPEG to BALTIMORE.

B. Males exchanged HOUSTON - SAN FRANCISCO.

C. Male from NATIONAL ZOO to PORTLAND

DEATHS:

A. Female, SAN DIEGO, arrived 8 October 1953 died 28 August 1971.

B. Male, PHILADELPHIA - cancer.

Breakdown by Collection (Code: Adult Males/Adult Females. (Juvenile Males/
Juvenile Females). * = Breeding Colony.)

U. S. A.

Alabama*, Birmingham: 1/1

California, San Diego: 1/0 (2/2)

California, San Francisco: 1/2

* Colorado, Colo. Springs: 1/3 (2/3)

District of Columbia: 2/0 (0/1)

Florida, Monkey Jungle: 2/0

* Georgia, Lawrenceville, Yerkes Field Station: 3/1 (1/0) Dr. Irwin S. Bernstein, Route 1

Hawaii, Honolulu: 1/1

* Illinois, Chicago: 1/1 (0/1)

* Indiana, Evansville: 1/1 (1/1)

Louisiana, Monore: 0/1

* Maryland, Baltimore: 1/1 (2/3)

New York, Bronx: 1/1

* Ohio, Toledo: 1/1 (0/1) + 1 sex-unknown— *1/1 (1/2)*

Oregon, Portland: 1/1

- * Tennessee, Memphis: 1/1
- Texas, Houston: 2/0
- Texas, San Antonio: 2/1
- * Washington, Seattle: 1/3 (1/0) + 3 sex unknown
- * Wisconsin, Milwaukee: 1/1 (3/2)

CANADA

- * Winnipeg: 1/4 (4/3)

Although the sex ratio of Lion-tailed Macaque births last year was even, zoos have been cursed with an over abundance of male births for many species of primates. Christopher E. Parker, Psychology Department, San Diego State College, San Diego, California, has some ideas about this problem and offers possible solutions. His paper, "The Genesis and Perpetuation of Sexual Dimorphism in Primates" should be read by all who are concerned with primate husbandry. Write to him for a copy.

Third Annual AAZPA Survey of the Lion-tailed Macaque (Wanderoo Monkey) Macaca silenus
in Captivity (North America).

September 1972

Clyde A. Hill

SAN DIEGO ZOO

In April 1970 the American Association of Zoological Parks and Aquariums published a questionnaire in its newsletter to determine the number of Macaca silenus held by member zoos. That survey showed that there were 52 adults and 21 juveniles in North America. The sex ratio was approximately even.

In September of 1971 another survey was taken to record changes in the various collections. Five males, five females and four sex undetermined were born between the surveys. Two males and one female were newly acquired with four males and two females transferred from one zoo to another to improve the breeding situation. Only two deaths were recorded. The 1971 survey showed 26 adult males, 25 adult females, 17 juvenile males, 18 juvenile females and 4 infants, sex unknown. This represents a decrease of one adult but an increase of 18 juveniles.

In September 1972 a third survey was taken. Gains and losses balanced so there are 90 animals as there were in 1971. In this survey adult males were considered to be seven years or older, adult females five years or older.

There are 22 adult males in 15 zoos and 27 females in 13 zoos. There are 10 zoos having potential breeding situations. Of those only 8 zoos have produced offspring in the last five years. They are: Colorado Springs, San Francisco, Lincoln Park Chicago, Evansville, Toledo, Seattle, Milwaukee and Winnipeg. The zoos having potential breeding situations but not producing are San Antonio 2/1 and the Bronx 1/1 (offspring not viable). Perhaps an exchange of mates is indicated. Zoos having adult animals in non-breeding situations, i.e. one adult plus juveniles, bachelor groups, etc. are: Monkey Jungle 2/0, Houston 2/0, National Zoological Park 1/0, Yerkes 3/0, Birmingham 0/1 and Baltimore 0/2. It is suggested that the obvious exchanges be made.

There are 25 juvenile males in 12 zoos and 15 juvenile females in 11 zoos. There is one juvenile sex unknown.

One of the questions in the 1972 survey was, "Is your zoo willing to participate in an exchange program that would improve your breeding situation?" The response was an unanimous yes.

The results of these surveys were published in Oryx, The Journal of the Fauna Preservation Society, London in May 1971 and in May 1972. A reprint of the latter is attached to this report.

A reprint from CRYX Vol XI No 5

Breeding a Rare Monkey

The efforts of the American Association of Zoological Parks and Aquariums to organise captive breeding of the highly endangered lion-tailed macaque or wanderoo monkey *Macaca silenus*, described in *Oryx*, May 1971, have scored some success. Six animals were transferred from one zoo to another in order to improve the chances of breeding, breeding colonies increased from nine to ten, and sixteen young were born.

Journal of the
Fauna Preservation
Society
May 1971

Oryx



A reprint from Volume XI No. 1

Zoos' Help for a Rare Monkey

Clyde A. Hill

The lion-tailed macaque of southern India is in danger; even in 1963 there were probably fewer than a thousand in the wild. But zoos have found them easy to obtain, and a survey this year showed 79 in US zoos. The author, who is Associate Curator of Mammals at San Diego Zoo, having visited India and seen how precarious was the monkey's situation in the wild, proposed that AAZPA (American Association of Zoological Parks and Aquariums) should consider starting a captive breeding project using animals already in American zoos. In September 1970 AAZPA agreed to do this and also placed restrictions on imports of the macaque by its members. The author is chairman of the committee that is running the project, and appeals for European and other zoos to take part.

The lion-tailed macaque, or wanderoo monkey, *Macaca silenus* has never been common. Most curators of primate collections in America and Europe have not realised this, probably because it is readily obtainable from animal dealers. Its range is confined to the southern third of India, generally in the Western Ghats – a strip of forested hills parallel to the coastline – where it appears to be localised to certain areas in evergreen forests at 2000 feet and above. Sugiyama (1968) estimated, after field trips in 1961, 1962 and 1963, that the wild population was less than 1000 individuals and could become extinct. In a more recent survey, by the Bombay Natural History Society, contributors variously described it as 'very rare', 'rare', 'comparatively rare', 'uncommon', 'sparingly distributed', and 'needs serious consideration'.

When I visited the Bombay Natural History Museum in January 1968, the Curator of Mammals, J. C. Daniel, who has been interested in the macaque for a number of years, told me of the forest devastation in its range. From Bombay I went on to Bangalore and then drove a thousand miles through the Western Ghats to the southern tip of India. What I saw confirmed the devastation Daniel had described, and also that the re-forestation projects consisted primarily of eucalyptus and acacia. The expansion of the tea plantations was only too evident, and sawmills were everywhere; the commonest large vehicles on the road were heavy log-laden trucks supplying them. The animal sanctuaries in the region of Bandipur, Mudumalai and especially Periyar, were practically disaster areas, abounding with squatters and homesteaders, where poaching was not concealed. Talks with gamekeepers and forestry officials indicated that *M. silenus* was getting very hard to find. The Nilgiri langur, too, was hard-pressed, but I saw a number of them and believe their plight is not as severe as that of the macaques. Poaching was so common in Periyar that in midday I saw eight

63
1.5
31
63
94.5

poachers' fires (used to drive game into pitfalls), all within the sanctuary. In 1969, when I again visited India, the situation had not improved; it had become worse.

In January, 1969 I proposed to the Conservation Committee of AAZPA that *M. silenus* be considered for a captive breeding project similar to that for the golden marmoset. The President favoured such a project and agreed that my information should be coordinated with that of the IUCN so that the species could be entered in the Red Data Book. In April, 1970, in order to determine the number of lion-tailed macaques held by member zoos, AAZPA published a questionnaire in its Newsletter. Virtually every zoo in North America is an AAZPA member, and, as the response to the questionnaire was good, results showed 57 adults and 22 juveniles in North American zoos, with the sex ratio approximately even. It also showed that captive breeding had been anything but spectacular. A more critical examination of zoo records would probably reveal that births do not equal deaths, and imports are needed to keep up or expand the present population. Analysis of diets showed that zoos usually fed them on much the same diet as rhesus monkeys, pig-tailed macaques or baboons, whereas their natural diet is more langur-like, with a substantial amount of leaf buds from evergreen trees; the addition of browse to the zoo diets seems indicated. There was also evidence that psychological factors needed more attention. In several primate colonies some species of primates refuse to breed with cage mates with whom they have been living since infancy; an exchange of males often leads to a situation in which breeding can take place in both groups. One theory is that this is an inherent mechanism to prevent the breeding of brothers to sisters and other close relatives and thus keep the gene pool open. If this is true of *M. silenus* then it might be wise to switch mates in non-breeding groups.

Put on the Blacklist

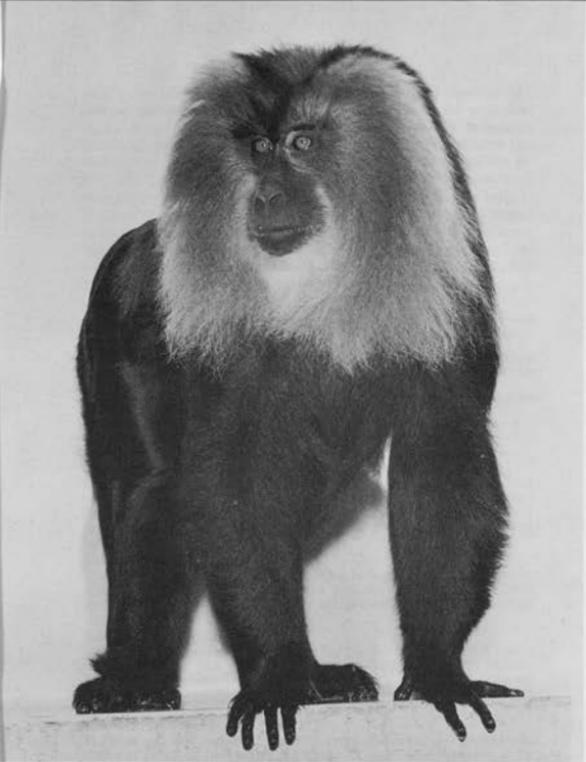
At AAZPA's annual convention in September 1970, the Board of Directors put the lion-tailed macaque on their Blacklist with a Priority Two basis, along with the orang utan and the Galapagos tortoise; this means that imports are allowed but only when regulated by AAZPA. (Priority One prohibits members from importing or trafficking in certain species, which include the monkey-eating eagle, and the Javan and Sumatran rhinoceroses.) The Directors also ordered that a studbook be maintained on this macaque and this task was given to Marvin L. Jones. WAPT (the Wild Animal Propagation Trust), an incorporated organisation whose membership is primarily composed of AAZPA members, agreed to administer this project, and a committee was appointed, of which the writer is chairman. This committee is following the lines of WAPT's golden marmoset captive breeding project which has been under way for several years.

A captive-breeding project for the lion-tailed macaque should have

all other 20 animals that have been at least one year old and had been off their mothers since 1964. They are housed in a large enclosure at the San Diego Zoo.

The lion-tailed macaque is a member of the Old World monkey family. It is found in the Western Ghats of India. The species is characterized by its long, shaggy tail and its distinctive white beard. The lion-tailed macaque is a social animal and lives in troops. It is a highly intelligent and curious animal. It is a good climber and can move easily through the forest canopy. It is a frugivore and eats a variety of fruits, leaves, and insects. It is a highly adaptable animal and can survive in a variety of habitats. It is a highly intelligent and curious animal. It is a good climber and can move easily through the forest canopy. It is a frugivore and eats a variety of fruits, leaves, and insects. It is a highly adaptable animal and can survive in a variety of habitats.

The lion-tailed macaque is a highly intelligent and curious animal. It is a good climber and can move easily through the forest canopy. It is a frugivore and eats a variety of fruits, leaves, and insects. It is a highly adaptable animal and can survive in a variety of habitats. It is a highly intelligent and curious animal. It is a good climber and can move easily through the forest canopy. It is a frugivore and eats a variety of fruits, leaves, and insects. It is a highly adaptable animal and can survive in a variety of habitats.



LION-TAILED MACAQUE San Diego Zoo

good potential. There is enough breeding stock in North America right now to warrant success without further imports from the wild. Diet modification along with a few basic animal husbandry techniques should improve the situation a great deal. Furthermore, the mere fact that captive specimens are no longer in small isolated groups but are part of a larger, coordinated aggregation should increase their productivity considerably and get them on a self-perpetuating basis. It is hoped that European collections will become involved in this project as well as other zoos around the world. Please address comments, suggestions or information on this species to the writer (San Diego Zoo) or the stud book keeper, Marvin L. Jones, c/o Hotel St. Mark, 621 Twelfth and Franklin Street, Oakland, California 94612.

References

- Daniel, J. C. and Kannan, P. 1967: The Status of the Nilgiri Langur and Lion-tailed Macaque in South India - A Report. Bombay Natural History Society (mimeographed).
- Hill, Clyde, A. 1970: AAZPA Survey of the Lion-tailed Macaque (Wanderoo Monkey) in Captivity. Zoological Society of San Diego, California (mimeographed).
- Sugiyama, Yukimaru 1968: The ecology of the lion-tailed macaque - a pilot study. *J. Bombay Natural History Society*, Vol. 65, No. 2.

National Parks and Reserves

First National Park in Portugal

The recently created Peneda Geres National Park is Portugal's first national park in Europe, covering 60,000 hectares in north-east Portugal. Inside the park are several strict reserves for the protection of endangered species, which include the wolf and the Spanish imperial eagle.

Aldabra Research Station

The first buildings for the Royal Society's biological research station on Aldabra were completed last October and the staff moved in. £2900 was advanced by the FPS/WWF Revolving Fund towards the purchase of a launch for the station.

Northern Ireland Nature Reserves

Twelve nature reserves were declared by the Northern Ireland Minister of Development last year on the recommendation of the Nature Reserves Committee. These are the country's first national nature reserves. They include five woodlands, three bogs, one freshwater pondage and one geological site.

National Park Field Study Centre

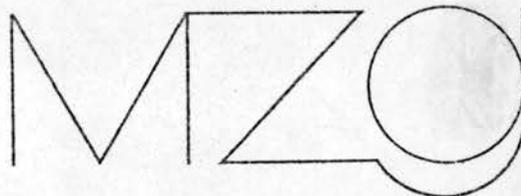
The first national park field study centre in Britain is to be in the Peak National Park, in Derbyshire, at Loosehill Hall, near Castleford. By 1972 a full range of courses will be available with residential facilities for 60 students.

Six Million Acres for Wildlife

The creation of a new six-million-acre reserve, the Northern Nullarbor Wildlife Sanctuary, has doubled the area set aside for wildlife conservation in Western Australia.



MINNESOTA ZOOLOGICAL GARDEN



April 23, 1976

Mr. John Werler
President, AAZPA
Houston, Texas

Dear John:

In view of the recent disruptions at the Columbia Zoological Park of which I have been made aware both through a visit to the area and through close communication with John Mehrtens, I feel constrained to express the following to you with reference to the Wildlife Conservation Committee and the AAZPA-ISIS Studbook Committee activities.

What has happened at Columbia should in no way affect the ability of the Wildlife Conservation Committee chairman, John Mehrtens, to function, provided he feels able to carry on the responsibilities. However, his removal as Director at Columbia has left the zoological garden without any qualified professional leadership, in my opinion. For this reason, I strongly recommend as a followup to John's letter to you earlier that the AAZPA Presidential Studbook advisor position be abolished and that during the interim or until a stable structure can be achieved that AAZPA-ISIS Studbook Committee would continue to function in this capacity.

John Mehrtens and I have talked about this situation a number of times and feel that such an action would not damage, and, at this point, would perhaps enhance our abilities to continue development of this most important effort.

Sincerely,

DDBvc
CC John Mehrtens
Robert Wagner

Donald D. Bridgwater
Chairman, AAZPA - ISIS COMMITTEE.

Send me the money as the original is too light to read.

Mr Donald Bridgewater
Minnesota Zoological Gardens
St Paul, Minnesota

c/o Zoologisk Have
Copenhagen

Rotterdam 22 Apr 76

Dear Don;

Please DO NOT send any more of the register run items for my comment inasmuch as I get them too late to take any action, save the postage.

A few things. Mile Brambell of the London Zoo here today said that he told someone at ISIS that they have space at the London meeting for a static exhibit but has never gotten a reply, suggest someone get on this right away. They will NOT allow any time to talk about ISIS (he is very opposed, thinks that we should wait until the FAD system gets in order, I think he is just sort of anti american) altho inasmuch as most folks know this is why I am over here am sure I will get the word out. Dutch zoos that I have talked to are more in favor when you tell them the cost etc etc. We shall see if I can get more to join. IUCN is telling zoos that they should join a inventory system if they wish to be a member of IUCN (or if already a member to stay in) since only Rotterdam and Copenhagen will join from Europe you have your work cut out for you at Merges.

A major problem however exists which I am sure we never thought about, the fact that zoos here have to pay duty on the books and forms. Somehow you have to get together with the postal folks and not put a dollar value on the packages. I think you can classify all of it as scientific works, maybe send the booklets separate from the forms. The forms I had sent from San Diego came as printed matter, no duty was required, but on the 380 sent this week the local zoo had to pay several dollars duty. This could well be a stumbling block. Check into it please. Also I think you might check the price for sending forms etc via sea, that is straight first class, yes it will take a few weeks longer but may be worth it. In any event always use a box, since the US mail service cuts envelopes of any size to shreds. Even the heaviest do not survive. I know it's the US end since things sent between European cities arrive in perfect shape.

that is thicker than a normal letter

The IUCN is not paying any attention to these problems
 this one is the we have nothing

Please pass on to John Mertens that England has put into force the International Convention and London Zoo has a say in who gets permits, Brambell is of a very critical mind and is one of those looking askance at most permits. They have not ratified the Convention but still have brought into force, with all of the animals on both Appendixes requiring permits. Holland is planning to bring into force on 1 Jan a very tough law that will cover far more animals, so far they have not even begun to talk permits, one effect is that most dealers will be almost forced out of business. Belgium is also drafting a even tougher law that will ban ALL imports exports and reexports without a permit. Other common market countries are getting on the bandwagon, so I can see that by next year it will be almost impossible to bring out of Europe most animals, since US zoos would have to apply (in the native language) for permits for animals to transit Europe. In short zoos in the US better buy what they can NOW. Authorities over here I might add are nowhere near as cooperative as USDI or USDA. We are really very lucky.

he also dislikes dealers with a passion
 stuff

The ISIS for Rotterdam is now in the final process, it has taken a long time just to determine what the zoo had, when it came, ages etc. I will have to return for a few days after the Munich meeting next week, but it should be ready for mailing the first week of May. I cannot add too strongly that once the data arrives it should be added to the system as soon as possible so that by the time of the Caracas meeting Rotterdam data will be in the National Quarterly Microfiche printout. I will then go to Copenhagen and have it in by mid June.

Have found a treasure trove of old journals here one of which hints that Paris may have had and bred Bongo in the 1890's. Then they were not called Bongo but Euryceros Antilope which is the scientific name. The English coined Bongo after the East African form was found in the 1900's. In any event found lots of new and interesting data.

Regards to all, I trust that Linda has had her baby and all turned out well.

Mary Jones



April 8, 1976

Mr. Donald Bridgwater
Minnesota State Zoological Gardens
33 E. Wentworth Avenue
West St. Paul, Minnesota 55118

Dear Don:

I have read over the mass of materials sent. With reference to the Studbooks, I agree with Shoemaker's proposals. AAZPA should be setting standards for the development and maintenance of the Studbooks, and formats must be standardized. Studbooks should be officially endorsed and policies for publication developed. Currently, I am updating the Leontopithecus population twice yearly; I have sent out lists of births and a register, but mainly to owners. I have not developed a Studcard and will not until it is determined whether I will have to completely alter the scheme for Studbook numbers developed by Marvin (which I find very useful) in order to conform with ISIS.

I agree with Marvin and Shoemaker that the Studbook Number is the most important number and should be the major means of identifying an animal. I also feel that for the data to be useful, it should go into ISIS as a package including all known animals from 1960. A register which includes only the living animals is not very informative, because the population trends are completely masked. That is why I have been sending owners lists of all births, regardless of whether young lived or not.

One other point that should be kept in mind is that for species in small numbers where rapid pairings are critical, the Studbook Keeper and the Committee ought to recommend exchanges and loans among zoos on an annual basis. This should also keep the inbreeding down once we are into 3rd, 4th, and 5th generations, and beyond.

Yours sincerely,

D. G. Kleiman

DGK:wmh

File ISIS Studbook Committee journal



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

7 April, 1976

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DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Dear Mrs. Nichols:

Your name was listed in the International Zoo Yearbook, studbook section, as the studbook keeper for Malachite Parrots, Triclaria malachitacea; St. Vincent Parrots, Amazona guildingii; and Caymen Parrots, A. leucocephala. As this institution is involved with similar projects, we are well aware of the work needed to collect, analyze, and maintain data for captive species, numerous or otherwise.

We are contacting studbook keepers in this country and abroad to examine the possibility of eventual inclusion of pedigree data into the ISIS (International Species Inventory System) data bank. As you are probably aware, the ISIS program, based in Minnesota State Zoological Gardens, St. Paul, Minn. is designed to permanently store inventory, origin, and transaction data of species held by zoological parks, zoos, research, and private collections. Members are both here and abroad. The results have been excellent, with most mammal inventories of collections in North America already on tape and birds now in the process of inclusion. Pedigree programs are also being examined for entrance onto tape, the computer having unique capabilities for examining captive populations many generations removed from the wild in order to project genetic problems, lethal gene development, etc. This has already been done with Przewalski's Horse, Equus przewalskii, with very gratifying results.

We would like to invite you to enter your studbooks into the data bank when the pedigree program for ISIS is finalized. A numbering system suitable for computerization is advantageous, such as 001,002, 003, 004.....999. Although your animals have not yet reached the 8-10 generation stage yet, the inclusion of species within your studbooks would assist you in predicting future problems, and suggest potential breeding pairs, loans, etc. We would also like to have a copy of your data, if possible, and a sample studcard. We hope you will consider this and look forward to hearing from you.

Yours truly:

Alan H. Shoemaker
Presidential Advisor on Studbooks, AAZPA



VETERANS ADMINISTRATION
HOSPITAL
54TH STREET AND 48TH AVENUE SOUTH
MINNEAPOLIS, MINNESOTA 55417

April 6, 1976

IN REPLY
REFER TO:

Don
File
Stud Books

Prof. Dr. E. M. Lang
Director, Basel Zoological Gardens
Postcheck-Konto 40-7096
Basel, Switzerland

Dear Doctor Lang:

Thank you for your pedigree of the Somali-Wild-asses. We are examining this information and will shortly send you our comments.

Best regards.

Sincerely,

U.S. Seal

U. S. SEAL, Ph.D.

Show veteran's full name, VA file number, and social security number on all correspondence.

100 JAHRE



ZOOLOGISCHER GARTEN BASEL

SCHWEIZ / SUISSE / SWITZERLAND

TELEFON 061 / 39 30 15 / POSTCHECK-KONTO 40-7096

Mr. Ulysses Seal, S. Ph.D.
Research Biochimist
V.A. Hospital
54 Street and 48 Avenue
S. Minneapolis, Minnesota 55417

IHR ZEICHEN

CH-4054 BASEL 24 March 1976

Dear Colleague:

When we met last time we were talking about our Somali-Wild-
asses. Please find enclosed a design of our group.

As you see the male Simon (1-1) is living on an out post.
The others are living fairly well. But Gumburi (1-2) is
fighting Varida (1-8) and we are very concerned he would
rather kill this beautiful female which was in heat last week
than mate with her. Shall we now exchange the males or do
you think we should wait? I would be very happy to have your
advise in respect of the management of the genes.

Looking forward to your reply I am sending you very kind
regards.

Yours sincerely,

Prof. Dr. E.M. Lang, Director
BASEL ZOOLOGICAL GARDENS

Enclosure

Somali-Wildesel

1-1 Simon ♂

imp. 7.4.1970
seit 19.4.1973 bei Stamm

1-2 Gumburi ♂

imp. 7.4.1970

1-3 Johny ♂

imp. 7.4.1970
17 22.4.1973

1-4 Viktoria ♀

imp. 7.4.1970

1-5 Somalia ♀

imp. 7.4.1970
17 29.3.1973

1-6 Umbu ♀

geb. 23.10.1972

1-7 Ulimali ♂

geb. 21.11.1972
17 9.1.1974

1-8 Varida ♀

geb. 15.3.1974

1-9 Xenar ♂

geb. 6.5.1975

♀ geb. Youla
15.4.76

April 28, 1976

To Prof. Dr. Ernst M. Lange
Director, Basel Zoological Garden
Basel Switzerland

Dear Dr. Lange:

I have undertaken a study of genetic problems and breeding strategy in captive population with the support of ISIS and the Minnesota Zoological Garden.

Dr. Seal has shown me your letter concerning the Somali wild asses and asked me to respond. What follows is based on the idea that the preservation of endangered species in captivity is best achieved by minimizing inbreeding. Some discussion of this point is included in the enclosed manuscript and other works will be submitted for publication in a couple of months. In the case of the wild asses, I assume that animals 1-1, 1-2, and 1-4 have no known relationship to each other. If this is true, then they are considered as founders and the contribution of each to the next generation ought to be equalized as much as possible. With just one founder female, both founder males would ideally have the same number of offspring by her, thus Simon(1-1) should be mated with Victoria (1-4), if behaviorally possible, until the pair have had three surviving offspring. Further mating should be between animals that did not have the same father (All the captive born animals will, of course, have had the same mother).

If there is any possibility of exchange with another zoological garden, it would be a very good idea. Three founders is a dangerously small group. Should such an exchange be possible, I would be happy to provide an optimum mating plan to minimize inbreeding.

Most Sincerely yours,

Nathan R. Flesness

Don

28 April 1976

Prof. Dr. E. M. Lang
Director
Basel Zoological Garden
Basel, Switzerland

Dear Dr. Lang,

I have undertaken a study of genetic problems and breeding strategies in captive populations, with the support of ISIS and the Minnesota Zoological Garden. Dr. Seal has shown me your letter concerning the Somali Wild Asses and asked me to respond.

What follows is based on the idea that the preservation of endangered species in captivity is best achieved by minimizing inbreeding. Some discussion of this point is included in the enclosed manuscript and other work will be submitted for publication in a couple of months.

In the case of the Wild Asses, I assume that animals 1-1, 1-2, and 1-4 have no known relationship to each other. If this is true, then they are considered as founders and the contribution of each to the next generation ought to be equalized as much as possible. With just one founder female, both founder males would ideally have the same number of offspring by her. Thus, Simon (1-1) should be mated with Victoria (1-4) if behaviorally possible, until the pair have had three surviving offspring.

Further matings should be between animals that did not have the same father (all the captive born animals will of course have had the same mother). If there is any possibility of exchange with another Zoological Garden, it would be a very good idea; three founders is a dangerously small group. Should such an exchange be possible, I would be happy to provide an optimum mating plan to minimize inbreeding.

Most Sincerely Yours,

Nathan R. Flesness

Enclosure

NRF/dn



Minnesota Zoological Garden
Wentworth Office Center
33 East Wentworth Avenue
West Saint Paul, Minnesota 55118
Telephone (612) 227-9216

April 6, 1976

Dr. Don D. Farst
Director, Gladys Porter Zoo
500 Ringgold Street
Brownsville, Texas 78520

Dear Don:

This will acknowledge your check for \$100.00 as a contribution toward the AAZPA studbook and pedigree analysis program.

Bill Braker initially contacted 12 people who committed to a similar contribution with firm agreements. We are seeking others as well and do so much appreciate your help.

During the past two weeks, Spring did indeed arrive and construction is proceeding, but it seems so slow. ISIS is continuing to move, as well, and participation is encouraging, but total backing and commitment by AAZPA financially still leaves something to be desired. The Board, because of lack of funds, did not see its way clear to fund the \$10,000 for studbooks, and this area appears to become more critical daily thus your contribution allows us to chip away.

Thanks again for your commitment and support.

Sincerely,

DDB vc

Donald D. Bridgwater, Chairman
AAZPA - ISIS Committee

Gladys Porter Zoo

operated by

VALLEY ZOOLOGICAL SOCIETY

500 RINGGOLD STREET / BROWNSVILLE, TEXAS 78520 / 512 546-7187

April 1, 1976

DON D. FARST, D.V.M.
Director

PATRICK M. BURCHFIELD
General Curator

DAVID P. THOMPSON
General Curator

STUART L. PORTER, V.M.D.
Resident Veterinarian

PENNY BARTON THOMPSON
Curator of Education

FEDERICO VELARDE
Maintenance Supervisor

VIOLET K. SPRINGMAN
Administrative Associate

ROBERT A. PIFER
Comptroller

SALLY HALEY
Concessions Manager

Donald D. Bridgwater
Chairman, AAZPA ISIS Committee
Minnesota Zoological Garden
33 East Wentworth Avenue
West Saint Paul, Minnesota 55118

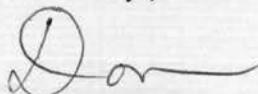
Dear Don:

Enclosed is our check for \$100.00 as a contribution to the new AAZPA ISIS Committee's computerized studbook and pedigree analysis program.

I understand that there were a total of 30 zoos in the country that each agreed to contribute \$100.00 to this project and I believe that the \$3,000.00 will be money well spent when we receive some logical plan for breeding some of our species instead of relying on haphazard selection.

I hope things are going well for you in Minnesota and assume that spring is about to break and that that construction, by now, is at a breakneck pace.

Sincerely,



Don D. Farst, D.V.M.
Director

DDF:vks
Encl.

VALLEY ZOOLOGICAL SOCIETY
500 RINGGOLD
BROWNSVILLE, TEXAS 78520



First National Bank
at Brownsville

Brownsville, Texas 78520
MEMBER SOUTHWEST BANCSHARES, INC.

7249

3 - 31 1976 88-68
1141

PAY
TO THE
ORDER OF

A. A. Z. P. A. - ISIS COMMITTEE

\$100.00

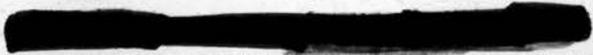
G. P. 200 [00] DOLS [00] CTS

DOLLARS

BY ENDORSEMENT THIS CHECK WHEN PAID IS ACCEPTED IN FULL PAYMENT OF THE FOLLOWING ACCOUNT

VALLEY ZOOLOGICAL SOCIETY

Don D. Faust
Don D. Faust



COLUMBIA ZOOLOGICAL PARK



*File Spidbook
given*

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

5 April, 1976

Mr. Donald D. Bridgwater
Minnesota Zoological Gardens
Wentworth Office Center
33 E. Wentworth Avenue
West St. Paul, Minn. 55118

Dear Don:

It was good to see you last week. More could have been discussed about ISIS but time was short.

One area of ISIS we feel needs modification concerns age. On the New Inventory forms, the blocks for AGE mandatorily require completion for overall acceptance by the computer. Adult animals from the wild, birds of prey, smaller mammals, penguins, etc. are frequently obtained when already past the point of accurately determining age. Local birds of prey brought to zoos in an injured state and kept are especially problematic. Any age assigned to these animals is purely arbitrary but unless this can be demonstrated in this block, will go into microfiche as an age accurately determined and therefore misleading to institutions looking for potential breeders, loans, etc.

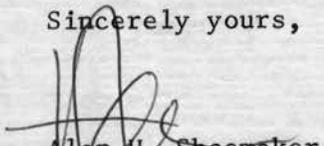
Since the first letter to denote years within the age block is "Y", it may be more accurate to use "YA" for Years Arbitrary. This would give an indication to microfiche readers of the animals adult status upon arrival (importation). It would of course have to be stressed in the instruction manual that all attempts should be made to accurately determine an accurate or approximate age wherever possible. I would not think this problem to be present for Days or Months.

Concerning Gaur, I re-examined our microfiche but the national distribution microfiche does not include origin. In International Zoo Yearbook, Rare Animal Census and Breeding format, it is interesting that West Berlin lists a breeding herd from 1966 to the present nearly all of which are themselves captive born. Breeding is recorded in all years but 1968; frequently they had several young. East Berlin on the other hand lists only 1.0 Gaur, captive born, in only 1966-1968. It seems odd that both Brownsville and OKC lists imports from East Berlin. East Berlin could have been acting as an intermediary or dealer, but it seems equally

Mr. Donald D. Bridgwater
Page 2

possible that the US zoos may have made an error somewhere. This may well be worth checking into.

Sincerely yours,



Alan H. Shoemaker
Zoologist

AHS:rp

29 March 1976

File
Studbooks

Don:

If you can think of an institution that might be interested in having the leopard studbooks, please advise. I will give you all the gory details of this when next you call.

Best regards.

John M. Mehrrens

/ss

F. J. ZEEHANDELAAR INC.

wild animal importers

405 north avenue
new rochelle, n. y. 10801
tel.: (914) 636-2096

western union telex: 137349

March 26, 1976

Dr. P. Ogilvie - Director
Metro Toronto Zoo
P.O. Box 280
West Hill, ONT- M1E 4R5
Canada

Dear Phil:

I have copy of letter from Shoemaker dated March 17, 1976. If Mr. Shoemaker is so ill-informed about Directorship and Management of major Zoos, to simply take a typographical error (use of old stationery etc) for a FACT, causing him to write to Gunter Voss as Director, that could also explain his inexcusable libel-oriented insinuations as if Mr. Ruhe has documented a certain animal and shipped another one. In fact, I should not even pay attention to that letter would it not be that I owe YOU the proper service.

Furthermore, "whether there are some impure animals in Gelsenkirchen which he would like to dispose of quietly" is a) a matter of NO concern to H.R.H. Alan Shoemaker, as long as these animals are not misrepresented as pure b) a remark which is tasteless. "There are some impure animals in Gelsenkirchen" would have been sufficient and correct. What Mr. Ruhe wishes to do with those is of no concern to anyone at this time. I suggest that Mr. Shoemaker be careful and should not try to "play Marvin Jones"

I have no knowledge of any correspondence between Mr. Ruhe and Mr. Shoemaker concerning the male Chinese Leopard you have received; therefore on that specific item I cannot comment. Copy of Mr. Shoemaker's letter and this letter will go to Ruhe and he better comment at once and clearly.

As you know, this week Tuesday evening March 23, there was an opportunity to discuss the matter briefly with Ruhe at JFK airport, but the actual letter from Shoemaker was only received today. Without having seen that letter, Ruhe again confirmed that he shipped the animal as documented.

You will find attached:

- a) Birthcertificate from Stuttgart: birthdate 15 March 1972, studbook # 118 delivered to Ruhe on 1 June 1973.
- b) Studbook record of Stuttgart: you will note that the subject animal was shipped by Ruhe to Fiengurola, Spain on 29 Sept. 1973. This matter has been questioned earlier and Ruhe stated that the animal was taken back to Germany because the recipient in Spain did not pay for the animal. If necessary, I see no reason why this matter could and should not be documented. The parents are # 57/53- origin can be found on same page.
- c) 2 other pages of Shoemaker's studbook showing the origin of the grandparents resp: 25/38 and 1/26.

Dr.P.Ogilvie- March 26, 1976

F. J. ZEEHANDELAAR INC.

page 2

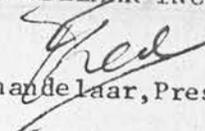
Once again, I donot question or deny Mr/Shoemaker's right to carefully investigate before issuing studbookcards but I object to the insnuations and language, especially from Mr. Shoemaker whose zoo has been furnished many A-1 animals by Ruhe and who has also been treated courteously whik visiting Germany.

Furthermore, my (this) letter is based on documents, facts and experience. There is always the possibility of facts not known to me or even errors (both unlikely in this case)by Ruhe but there is no question of any intentional misrepresentation .

Finally, ^{it} would ~~it~~ have been decent if Mr.Shoemaker (whom I have also helped a lot) had written , in first instance, to ME or at least had furnished me with a copy of his improperly styled letter to Voss.

Kind regards,

Sincerely yours,
F.J.ZEEHANDELAAR INC.


F.J.Zeehandelaar, Pres.

CC: L.Cahill
H.Ruhe
A.Shoemaker ✓



METROPOLITAN TORONTO ZOOLOGICAL SOCIETY

P.O. BOX 280, WEST HILL, ONTARIO M1E 4R5

March 24, 1976

Alan H. Shoemaker, Esq.
Zoologist
Columbia Zoological Park
Riverbanks Park Commission
P.O. Box 1143
Columbia, South Carolina 29202
U.S.A.

Dear Mr. Shoemaker:

Thank you for your letter dated March 17, 1976, and enclosed studcard for our new Chinese leopard.

Sending your letter to the attention of Dr. G. Voss does not come as a surprise as you appear to have taken the information from the A.A.Z.P.A. Newsletters. Although we have sent several corrections over the past year, telling them that Dr. G. Voss (who also wrote himself) had left Metro Toronto Zoo as Director at the beginning of 1975, but in May, 1975, had been appointed as Director on the Board of the Metropolitan Toronto Zoological Society; that I am General Director of the Metro Toronto Zoo since August, 1975, and that our current telephone number is: 284-8181, nothing seems to induce A.A.Z.P.A. Headquarters to change their records accordingly. So, by copy of this letter we keep on trying!

Thanking you again for your attention in sending us the studcard for "Ling", I remain,

Yours Sincerely,

P.W. Ogilvie, Ph.D.
General Director
METRO TORONTO ZOO

cc: AAZPA, Oglebay

File AAZPA-ISIS
Stubb Counters
General

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M. VETERINARIAN

DALFORD W. MANESS
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DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

29 March 1976

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

Mr. John E. Werler, Director
Houston Zoological Gardens
Post Office Box 1562
Houston, Texas 77001

Dear John:

The International Studbook Registry System for Rare and Endangered Leopard subspecies has now been developed and finalized, at least insofar as extant populations are concerned. The development of this new studbook, I feel, is a most worthwhile contribution to the continued professional management of the three subspecies in zoological parks,

The issuance of the studcards does not necessarily complete, however this particular project as I view it. Without periodic publications such as was done for the Golden Marmoset, studbooks will continue to be only more or less formalized world registers of captive populations of certain species. I had hoped, of course, when I first conceptualized the Leopard Studbook that I would be able to generate sufficient funds locally to prepare such a publication. Certainly, the Studbook Keeper's background in research has enabled us to amass a body of information relative to taxonomy, ranges, captive husbandry and related matters that is worthy of such publication.

Despite our best efforts to find and/or develop private funding sources to produce such a publication, we have not succeeded in doing so. As you are more than well aware, the political confusion currently extant involving this facility is such that even in the event the problems reach a satisfactory conclusion within the next few months, at least a year or so would go by before a proper understanding of the scientific and technical contributions of zoological parks would be locally acceptable.

As you are also probably aware, the studbook has had the consistent problem of the studbook keeper's subjective approach to individuals involved, which, as of this date, has essentially culminated in justifiably irate feelings on the part of the Metro Toronto Zoo, Fred Zeehandelaar, and Ruhe. Such personality involvements, do not, in my opinion, play a part in or enhance either the development or continuance of International Studbook Systems.

Mr. John E. Werler
Page two
29 March 1976

Indeed, if anything, the development of such antagonisms probably serve as yet another hindrance to the continuing uphill battle for public acceptance of American zoological parks as scientific institutions. As a result of the above, I take the liberty of offering the following comments and suggestions . . .

1. Eliminate the individual appointment of Presidential Advisor on Studbooks as created this year.
2. Coordinate all studbook activities and/or information either through the AAZPA/ISIS Studbook Subcommittee or, establish an AAZPA Studbook Committee.
3. In the event that the AAZPA/ISIS Studbook Subcommittee can determine an institution possessing the staff expertise and finances to properly maintain and expand the Rare Leopard Subspecies Studbook, that this institution be so advised, whereupon I will be more than pleased to transfer the studbook to such institution. This, I feel, is in the best interests of the studbook system as it now stands and in the forthcoming international involvement of ISIS with studbooks.
4. My personal assurance that the Rare Leopard Studbook will continue to be maintained at this institution until such time as a transfer can be effected and further that, the quality of data incorporated into this studbook will continue to meet those professional standards under which it was conceived.

Sincerely yours,



John M. Mehrtens
Executive Director

JMM:ss

cc Robert O. Wagner
Donald D. Bridgwater

March 23, 1976

Mr. Marvin L. Jones
4070 Kansas St., #113
San Diego, CA 92104

Dear Marvin:

I hope this catches you before Europe.

First - I understand perfectly regarding the petition action. It seems, as ISIS gets more complex and as participants, AAZPA leadership, etc., are spread all over, communication becomes the password and we will simply have to work on it.

I am sure you have heard by now that the orang studbook will be passed on to you. No problems. How you are going to find time to do it is beyond me, but I am sure you will.

With regard to Inga and Jan Bouman, I would appreciate it if you could discuss with them what we are doing here, etc. I am passing your info to Nate. However, he has had a serious auto accident and will be in the hospital for several weeks. Fortunately, everything is O.K. It will just take time for two legs to heal up.

I am enclosing a letter from R. J. Wheeler at Edinburgh explaining their position. We will be writing him relative to their meeting in May and anything you can do to reinforce their discussions will be appreciated. If all goes well, I will attend the Survival Service Commission meeting at Morges on May 11 and 12. It may also be possible for Ukie to be there.

I think Wheeler stated the problem quite well that in order for ISIS to be effective in Europe a number of major zoos of Britain must participate. At least we are getting a start.

Please keep in touch while you are in Europe and if you need any materials, etc., let us know.

Have a good trip.

Best regards.

Sincerely,

DDB vc

Donald D. Bridgwater, General Director

Mr. Marvin Jones
4070 Kansas St. #113
San Diego, CA 92104 USA

Donald D Bridgewater
ISIS Committee AAZPA
c/o Minnesota Zoological Gardens
St Paul, MN 55118

22 February 1976

mailed 11 Mar 76
sorry for delay

Dear Don:

Thank you for yours of the 18th, I am sorry to hear that the AAZPA Board did not act in the affirmative with regard to new seed money, however, I gather from scuttlebutt that the new Education program is now taking most of our funds and ISIS will have to wait a bit.

I would agree that at long last we can offer facts and not guesses with regard to actual stat's, and looking over the national inventory this afternoon convinced me that so much has really been done. If your team does not get an award for this at Baltimore I will be very surprised. It does look tho as if a few zoos still have no idea what animals they have, and its obvious we need somehow to educate our staffs as how to identify mammals. Its all well and fine to have courses in management but AAZPA needs just as well to pursue a field that seems to have passed by the wayside, animal identification.

You might pass on to Nate Flesness that he should contact at once a Dutch couple who I gather from Jim Dolan are THE experts with regard to Przewalski horses and have scores of files. I know they are using a computer at the University of Utrecht for much the same data as Nate, so contact at this point would be valuable. Their names and addresses:

Inge and Jan Bouman
Mathenesserstraat 101a
Rotterdam, Holland tel: 010-37 65 13

will look them
up week of
29 March

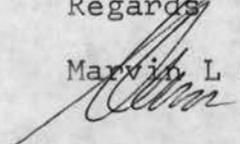
I will try and see them when I get to Rotterdam in March or April. They have no english problem.

I will be seeing Arne Dyhrberg, Director of Copenhagen Zoo next week in San Francisco and will finalize my plans for Europe at that time. The problem is that with only his zoo plus Rotterdam being firm, getting to Europe may be a bit of a problem, and my plans once there may be cut short. But I will advise you next week.

Please understand that while I may be critical of how the petition action was handled I am in no ways opposed to ISIS or any of your programs, and I told John Mehrtens today, we should NOT withdraw any of them now. Good luck.

Regards

Marvin L Jones



Mr. Marvin Jones
4070 Kansas St. #113
San Diego, CA 92104

Mr. John M. Mehrtens
Chairman
AAZPA Wildlife Conservation Committee
Columbia SC 29202

18 March 1976

Dear John:

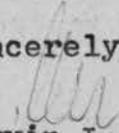
I have received yesterday the application from San Diego Seaworld to acquire 3 Sea Otters as published in the Federal Register of 10 March and sent by Don Bridgewater for our comments.

On this application I must vote no, inasmuch as virtually all of the questions posed by the ES Act have not been explained in any detail. All we know is that Sea World got three animals from a previous permit (which may well have answered some of the questions) which died and which they now plan to replace. While the autopsy results are in some ways complete they do not in any case try to establish the cause of death. It is odd that they were all done by Dr. Cornell since the San Diego Zoo has long done the major autopsy work for Sea World and we of course have a trained pathologist on board. The one animal that was accidentally flushed down the drain at Sea World some months ago was for instance autopsied at the Zoo.

There is no ~~xxx~~ indication in the request just what the animals will be living in etc etc, in short with the data supplied it would be very hard to make a positive reply.

Since I have seen the facilities, which are I must admit quite good sized, I know the animals would have just as good care as say in Tacoma, but its obvious from the turnover in the last two years that more study needs to be made. I have an idea that there is only the one pool and no alternate holding facility.

Sincerely


Marvin L. Jones
CC; D. Bridgewater

Don: You should alert your mailing room staff or secretaries that you pay 13¢ only on the first ounce of domestic postage, on the 2d and succeeding ounces its 11¢. Inasmuch as this is going to be a costly operation, you can afford to save it. Thus on this it would have been 24¢ not 26¢ WHICH MULTIPLIED BY ALL THE Members many times will be a saving. You are not the only zoo that is not aware of this.

Mr Donald D Bridgewater
Director (& AAZPA ISIS Cmte)
Minnesota Zoo

Mr. Marvin Jones
4070 Kansas St. #113
San Diego, CA 92104 USA

9 March 1976

Friends:

I have been invited to spend this spring and summer in Europe, where I will be advising several zoological parks with regard to entry of their mammal data into the ISIS system.

My departure from San Diego is set for the 28th of this month and following a over-the-pole flight on SAS from Los Angeles will begin my journey in Amsterdam the following day.

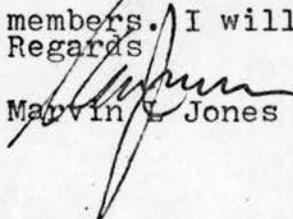
Most of the month of April I will be in the Rotterdam area although I expect on weekends to see other collections as well. From the 26th to 28th of April I will be representing the Zoological Society of San Diego at the 3d International Symposium on the Przewalski Horse where I will present papers from Dr James Dolan and Dr Kurt Benirschke of the San Diego staff. I also will be able to attend the 2d International Conference on the Breeding of Endangered Species in Captivity in London in early July.

My exact plans for the balance of my stay in Europe are not known at this time, it will depend to some extent on how long it takes to add certain zoo data into ISIS and what other collections will be seen.

While in Europe I would appreciate it if you would continue to send copies of newsletters, bulletins, magazines etc to my San Diego address, however, letters should be sent via airmail to me at the following European address, my hosts for this trip, who will in turn forward your letters to me at my current address:

Marvin L Jones
c/o Zoologisk Have
Sdr Fasanvej 79
DK-2000 Copenhagen F
Denmark

I will try and reply to letters but realize that the bulk of my master files will be here in San Diego and my reply may be simply off the top of my head, but I shall do my best. While In Europe I will be taking some slides and 8mm color film, and will plan a short tour of the US on my return where I can share these with you, your staff and perhaps society members. I will be back intime for the AAZPA Baltimore meeting.
Regards


Marvin L Jones

PS Somehow I forgot to mail the enclosed but the Bouman data still of value.



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

23 March, 1976

Studbook Keeper, Goeldi's Monkey
Delta Regional Primate Center
Covington, La. 70433

Dear Sir:

The AAZPA is examining studbook compilation and their continuation in order to formulate overall studbook policies for AAZPA acceptance, studcard format, etc. Part of this appraisal is an overall examination of studbooks held in North American Institutions, especially their progress toward completion.

You are listed in International Zoo Yearbook and elsewhere as having or in the process of completing a studbook for Goeldi's Monkey. Has this been finished, or if not, is there an estimated data for completion? If studcards have been issued, a sample card would be appreciated for our files. Although I do not think there are significant taxonomic problems, your comments regarding successful techniques in eliciting data, factors for considering future species to be entered into studbooks, etc. would be appreciated. When the Pedigree System of ISIS is funded, the data from studbooks will be useful when entered into their data bank to predict future lethal gene developments generations in advance. The numbering system you use in this studbook is important as 4-5 digit numbers can be more easily entered into computers.

I of course feel strongly about these conservation programs for captive species and look forward to your input regarding the Goeldi's Monkey Studbook in particular and studbook problems and policies in general.

Yours truly:

Alan H. Shoemaker
Presidential Advisor for Studbooks

cc: John L. Werler
Donald D. Bridgewater

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

President-Elect
GORDON HUBBELL, D.V.M.
Director
Crandon Park Zoo
Key Biscayne, Florida 33149

Vice-President
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Past President
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Executive Director
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Director
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Sacramento, California 95822

DANIEL H. MORENO
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Cleveland, Ohio 44103

DANIEL R. MICHALOWSKI
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Rochester, New York 14621

EDWARD J. MARUSKA
Director
Cincinnati Zoo
Cincinnati, Ohio 45220

PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Garden's
Chicago, Illinois 60614



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

22 March, 1976

Mr. Robert Wilson
Tapir Research Institute
P.O. Box 382
Claremont, Cal. 91711

President
RONALD L. BLAKELY
Director
Sedgwick County Zoo
Wichita, Kansas 67212

President-Elect
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Houston Zoological Gardens
Houston, Texas 77002

Vice-President
ROBERT O. WAGNER
Director
Jackson Zoological Park
Jackson, Mississippi 39209

Past President
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John G. Shedd Aquarium
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Director
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Dallas, Texas 75203

MURRAY A. NEWMAN, Ph.D.
Director
Vancouver Public Aquarium
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Director
Crandon Park Zoo
Key Biscayne, Florida 33149

DANIEL R. MICHALOWSKI
Director
Seneca Park Zoo
Rochester, N. Y. 14621

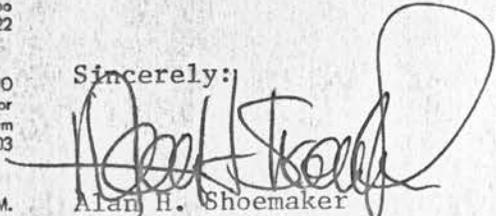
Dear Mr. Wilson:

The AAZPA is examining studbook compilation and their continuation in order to formulate overall studbook policies for AAZPA acceptance, studcard format, etc. Part of this appraisal is an overall examination of studbooks held in North American institutions, especially their progress toward completion.

You are listed in International Zoo Yearbook and AAZPA Newsletters as having or are in the process of completing a studbook for Mountain Tapirs. Has this been finished, or if not, is there an estimated date for completion? If studcards have been issued, a sample card would be appreciated for our files. Although I would not think there are significant taxonomic problems, your comments regarding successful techniques in eliciting data, factors for considering future species to be entered into studbooks, etc. would be appreciated. When the Pedigree System of ISIS is formally funded, the data from studbooks will be useful when entered into their data bank in predicting future lethal gene development generations in advance. The numbering system you use in this studbook is important as 4-5 digit numbers can be more easily entered for computerization.

We appreciate your advise regarding tapirs so freely given both this park and others and look forward to hearing from you about your studbook.

Sincerely:



Alan H. Shoemaker
Presidential Advisor for Studbooks

cc: John L. Werler
Donald D. Bridgewater

ISIS
File - StudBooks



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

21 March, 1976

Mr. James E. Fouts
Sedgwick County Zoological Society
5555 Zoo Blvd.
Wichita, Kansas 67212

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

President-Elect
GORDON HUBBELL, D.V.M.
Director
Crandon Park Zoo
Key Biscayne, Florida 33149

Vice-President
LARRY O. CALVIN
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EDWARD J. MARUSKA
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Cincinnati, Ohio 45220

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Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

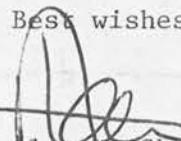
DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Dear Jim:

As you may know, the overall studbook system is being examined in order to have a more uniform system and hopefully to increase the number of using institutions and enlarge upon its overall utilization. A standardization of policy and studbook format is especially important. In addition, the status of American-held studbooks is being appraised, and indirectly, that of studbooks held abroad.

Since your initiation of studbooks for Clouded Leopards, you indicated some degree of success in obtaining necessary data from owning institutions, at least from those in North America and Europe. Taxonomic problems were minimal although I recall a scarcity of subspecifically pure individuals. Did you ever issue studcards? If not, do you have an estimated time for completion of this project. In formulating overall studbook policy, an evaluation of your project would be most useful, problems, suggestions, etc. I would like a sample studcard for deposit here if you can spare one. The degree of cooperation experienced at this point is important, the numbering system employed, etc.

Best wishes:


Alan H. Shoemaker
Presidential Advisor for Studbooks

cc:John E. Werler
Donald D. Bridgewater



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

21 March, 1976

Mr. Saul Kitchener
San Fransisco Zoological Gardens
Zoo Road ? Skyland Blvd.
San Fransisco, Ca. 94132

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

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GORDON HUBBELL, D.V.M.
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Vice-President
LARRY O. CALVIN
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Dallas, Texas 75203

Past President
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Executive Director
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Lincoln Park Zoological Gardens
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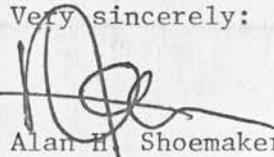
Dear Saul:

As you know the studbook program in North American institutions is being examined for eventual standardization of policy and stud-card format, and will hopefully lead to greater participation and utilization by owning institutions. In addition, the status of American-held studbooks is now being appraised, and indirectly that of studbooks held abroad.

Since your move to San Fransisco, I understand you have given the Snow Leopard studbook and data to Mark Rosenthal. If this data is indeed remaining in Lincoln Park, then I also need to contact him. I am interested in the stage of completion of this studbook, and if it unfinished, an rough estimate of how much time is required for issuance of studcards, etc. The degree of cooperation you experienced from other institutions, systematic problems, etc. are also important. Once funding is finalized for the Pedigree Program in ISIS, it will also be desirable to place this data into their information bank. I would then be interested in the type of numbering system assigned to your animals, and any other comments you feel may be pertinent.

If you had not heard, a male Persian Leopard finally arrived in Lincoln Park from Köln. I doubt if you will forget that application any time soon.

Very sincerely:


Alan H. Shoemaker
Presidential Advisor on Studbooks

cc: John E. Werler
Donald D. Bridgwater

COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

11 March 1976

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Mr. Charles Bieler, Director
San Deigo Zoological Gardens
Post Office Box 551
San Diego, California 92112

Dear Chuck:

GEORGE R. DAVIS
BUSINESS MANAGER

I have received this date, communication from Geoffrey Bourne of Yerkes Regional Primate Research Center stating that he will be shortly sending you all available material on the Orangutan Studbook.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

I have notified pertinent AAZPA officials as well as the Chairman of the AAZPA/ISIS Committee. Marvin is likewise being notified by copy of this letter.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

As Chairman of the AAZPA Wildlife Conservation Committee, I am pleased that this matter has been successfully concluded and extend my appreciation for your institution's efforts. Certainly, Marvin faces the rather complex task of bringing the studbook up-to-date and maintaining it in an acceptable manner in the future.

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Yours sincerely,

John M. Mehrtens
Executive Director

JMM:ss

cc John Werler
Robert Wagner
Don Bridgwater ✓
Marvin Jones

Endygnate

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

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PALMER E. KRANTZ, III
GENERAL CURATOR

11 March 1976

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Geoffrey H. Bourne, D.Sc., D.Phil.
Director
Yerkes Regional Primate Research Center
Emory University
Atlanta, Georgia 30322

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Dr. Bourne:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

I very much appreciate receiving your letter of 9 March
advising that all material re the Orangutan Studbook
will soon be forwarded to Mr. Bieler at San Diego.

ALAN H. SHOEMAKER
ZOOLOGIST

I have also advised, this date, the pertinent officers of
AAZPA as well as the AAZPA ISIS Committee of the transfer.

DENNIS S. DECOURCEY
CURATOR, BIRDS

Again, your cooperation in this matter is appreciated.

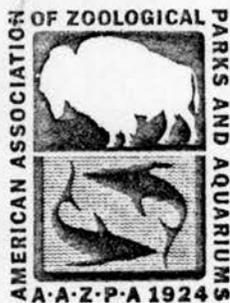
ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

Sincerely yours,

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS


John M. Mehtens
Executive Director

JMM:ss



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

March 10, 1976

Mr. Alan H. Shoemaker
Columbia Zoological Park
Post Office Box 1143
Columbia, South Carolina 29202

Dear Alan:

Apologies for the delay in personally responding to your letter of February 18th, 1976, and also your letter of the same date to John Werler relative to studbook systems.

You will be receiving a set of materials out of the AAZPA-ISIS program which will give you a picture of our progress and needs. In that correspondence, I have circulated your comments relative to studbooks for response from other members of the studbook committee.

With specific regard to your observations, I would request that you go ahead and contact the studbook keepers for clouded leopards, mountain tapirs, Goeldi's monkey, and snow leopards. Devra Kleiman, who is responsible for the lion marmoset studbook, is very well apprised and up to date so far as their participation. She is an extremely competent PhD behaviorist at Washington, and, I think, very capable of handling the studbook, and further, Washington is quite capable of funding it.

With regard to the others, I also am in the dark on clouded leopards and mountain tapirs. The Goeldi's monkey studbook was being handled by Dr. Rainier Lorenz at the Delta Regional Center. I believe, however, that he returned to his position in Germany, as I have had no further correspondence with him, so that one is up in the air. I did talk to Sol Kitchener who was attempting to get the snow leopard started, and he indicated that he would give it up when he moved to San Francisco and that Mark Rosenthal would carry on, but I don't know what has happened there.

With regard to the European studbook keepers, hopefully, we will be able to make some contacts in May in conjunction with the Survival Service Commission meeting.

Nate Flesness, who is working on the computer program, has had some contact with a number of these European studbook keepers, as noted in our earlier report, and I suspect this will be a rather slow process.

Now, with regard to your letter to John Werler, I would render some individual responses as follows: I believe that one of the prime goals of the studbook committee should be that of creating recommendations for a statement of policy involving studbooks and answering a number of the questions you have raised in your letter. Also, efforts to universalize

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PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

a consistent studbook format reporting system, data treatment would also to be worked for within the year.

With regard to Item 1, I think that a general policy statement, objectives and guidelines, etc., must be created before such an evaluation for existing or proposed studbooks can be made. It seems to me that we have taken an initial step in beginning to contact and affirm the status of some studbooks. I do feel that this should not be necessarily limited to American kept studbooks but should also evaluate those on an international basis and perhaps through communications with the IZY, SSC, etc. attempt to establish some general policies and authorities on an international basis. I suspect that this will be most difficult, but probably will have to be done in order to uncloud the issues. For instance, Geoffrey Bourne evidently felt that he was under an IZY directive to keep the studbook and it would take their recommendation to move it. As I understand it, delegation of responsibility for this has been made by John Werler to the studbook committee, but John should confirm this.

With regard to Point 2, as the AAZPA - ISIS program progresses, all studbooks would be available on a printout basis and would be kept updated through coordination from this office.

With regard to the more formal publication, ie. pictures, graphs, other data of interest, taxonomic backgrounds, etc., this is another problem which does require funds and I suspect it might well be considered on the merits and needs of each studbook kept, and, of course, on the availability of funds and interest on the part of the keeper to coordinate such.

In summary, there would be available regularly and updated printouts of studbooks through the AAZPA - ISIS program.

Item 3, procedures for establishment of changing studbook keepers should be included as part of the overall policy or management statement. I can think of no other item to add here.

Item 4, on standardized format, hopefully this is what we can achieve through a universalized ISIS studbook system.

Item 5, with regard to evaluating or qualifying studbook keepers, it would seem that this could be accomplished by application and review through the AAZPA - ISIS Studbook Committee.

Your recommendations here seem to be somewhat a mixed bag in that (a) proof of expertise is related to the personal qualifications of the keeper. Item (b) however, is related to criteria for qualification of a species candidate for studbooks. Items (c) and (e) are perhaps related and would require a statement from the institution supporting the project, indicating permission

AHS -2- 3/10/76

for the interested keeper to take sufficient time to complete the project and that the institution would provide adequate support costs. This, in some cases, might involve an institution in one place and a keeper in another.

I have some questions about (d) the examination of systematics and proper conclusions. I suspect that this again should be part of an application for qualifying studbook candidate species.

In brief summary, item 5 appears to deal both with (1) the expertise of the keeper, (2) the suitability of the species, and (3) proof of time and support sufficient to continue the project. All of these could be handled by the studbook committee.

Regarding item (6), here I would think that arbitration committees should be appointed by the chairman of the studbook committee on the basis of the individual case. This would certainly include representation by the owner, the studbook keeper, perhaps members of the committee, and, in some cases, a request for someone on the outside to serve, such as a mammalian taxonomy expert, dealers involved in the transfer, etc.

In summary, I think you have done an excellent job in outlining the studbook problem and in a rather disjointed way we have available to us an early system and mechanisms to expedite these recommendations. I would recommend that the AAZPA -ISIS Studbook Committee should be the official integrating body and that our objective would be to come to the AAZPA Board at our annual meeting in September with a proposal for operating procedures and a system to handle items raised in your letter.

Best regards.

Sincerely,

DDB vc

Donald D. Bridgwater, Chairman
AAZPA - ISIS COMMITTEE

cc: Members of AAZPA ISIS STUBBOOK COMM.
John Wehrler, President, AAZPA
Rober Wagner, Executive Director, AAZPA

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

18 February, 1976

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Mr. Donald Bridgewater
Minnesota Zoological Gardens
Wentworth Office Center
33 E. Wentworth Ave.
West St. Paul, Minn.

Dear Don:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

In preparing studbooks for inclusion into ISIS, we are of course interested in the status and suitability of the other studbook held by Americans. The Orang book is in the process of transfer as you are aware; the others, Goeldi's Monkey, Golden-Lion Marmoset, Clouded Leopard, Mountain Tapir, and Snow Leopard appear to be in various but somewhat vague stages of repair. Of the five keepers involved, I am acquainted with two, Saul Kitchner and Jim Fouts but I don't think the lack of acquaintance with the others is a problem.

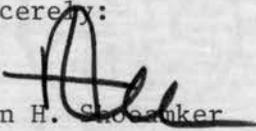
With your authorization I will contact the five keepers for a status report and an indication of suitability for ISIS. Although I am not overly optimistic about any except the Marmoset, we should make ourselves aware of the others present stage.

Have you or Ulie contacted the European studbook keepers. Although it may be somewhat premature until all the bugs are worked out and funding found, I gathered some overtures had been made and received prior to your Wheeling workshop.

We have found the microfiche very useful and are optimistic about pairing a few of our single individuals. As you know we have been looking for a female Baird's Tapir for over a year now. Our permit has been amended several times now. A solitary female is listed on microfiche at Norfolk Zoo, Va. A telephone conversation with them however revealed it as a hybrid (bairdii X terrestris) and entered into ISIS as such. For such a rare species this might be worth correcting.

We of course went over the leopards placed into microfiche. For Chinese Leopards, a full 50 % were impure and unregistered, and some of these impure individuals are carrying only 50 % japonensis ancestry. I have seen some of the latter types and they look nothing like the real thing.

Sincerely:


Alan H. Shoemaker
Zoologist



Budgewater

COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

1 March 1976

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
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PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Geoffrey H. Bourne, D. Sc., D. Phil.
Yerkes Regional Primate Research Center
Emory University
Atlanta, Georgia 30322

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Dear Dr. Bourne:

GEORGE R. DAVIS
BUSINESS MANAGER

Thank you for your letter of 13 January 1976, concerning the Orang Studbook.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

I conveyed copies of your letter together with pertinent commentary to AAZPA Officers, Board of Directors and pertinent San Diego officials. I further discussed the Orang Studbook at some length with the above indicated individuals at the AAZPA Board Meetings which took place in Wheeling, West Virginia the week of 2 February 1976.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

Before commenting further on the Orang Studbook the following activities may be of some interest to you . . .

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

The AAZPA - ISIS project (originally conceived and funded by AAZPA with the support of USDI/OES and the Minnesota State Zoological Gardens) is now developing a standard policy regarding international studbook systems. Further meetings are planned in the very near future with International Yearbook officials and the IUCN.

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

IUDZG has also been contacted about this at the Annual Meeting which took place in Colorado last year and asked for their support in developing a truly international system with appropriate European and American coordinators. The object of all this activity, of course, is to develop an organized approach to studbooks and their continuance in addition to the all important and critical necessity of incorporating all studbooks into the ISIS System. All concerned, support the concept that such an approach has far reaching ramifications in the conservation of wild animals and/or their continued captive maintenance.

San Diego Zoological Society Director, Mr. Charles Bieler, has indicated that, although his Board is most emphatically willing to support the Orang Studbook, they will do so only if the Studbook is maintained at San Diego. Thus, the San Diego Board has refused



Dr. Geoffrey H. Bourne
Page two
1 March 1976

to finance the studbook at another institution. The AAZPA Officers and Directors have requested that I advise you of this decision and to again request your cooperation in transferring the studbook to San Diego. I would add that I feel, as Chairman of the AAZPA Conservation Committee, that studbooks should be maintained at those institutions where financial resources and expertise allow for continued development and maintenance on a current basis.

On the basis of my knowledge of your international reputation as a primatologist, I am sure you will agree to this. If per chance you would be concerned about the accuracy of the studbook insofar as taxonomic matters are concerned, I feel certain that the San Diego facility would be more than pleased to receive technical input by either you or your organization.

Obviously, the current status of the Orang in the wild is such that the captive breeding population is becoming of ever increasing importance, thus underscoring the critical need for an up-dated and ultimately computerized studbook system.

I would appreciate your affirmative commentary at your earliest convenience.

Respectfully yours,


John J. Mehrtens
Executive Director

JMM:ss

cc Robert O. Wagner
John E. Werler
Don Bridgwater
Alan Shoemaker

COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

29 January, 1976

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Mr. John E. Werler
Houtson Zoological Gardens
P.O. Box 1562
Houston, Texas 77001

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Dear John:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

This is to notify you that studcards have been issued for Persian, Amur, and Chinese Leopards and are in the hands of their owners. We will prepare a synopsis of living individuals and their present owners, background, etc. as soon as sufficient time has lapsed for additional comment.

ALAN H. SHOEMAKER
ZOOLOGIST

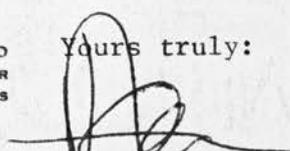
DENNIS S. DECOURCEY
CURATOR, BIRDS

There may be occasional comments regarding parentage, as is usually the case with studbooks, and your office will be kept informed. We will also begin processing this data for ISIS to smooth the technique for others books.

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

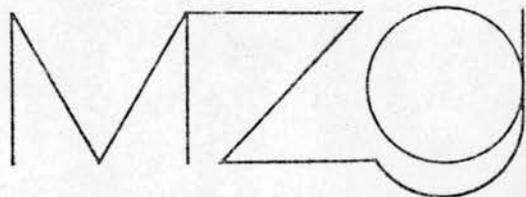
RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Yours truly:


Alan H. Shoemaker
Presidential Advisor for Studbooks

cc: Robert O. Wagner
Donald Bridgewater
Director, Fish & Wildlife Service

MINNESOTA ZOOLOGICAL GARDEN



February 24, 1976

Mr. John M. Mehrtens
Executive Director
Columbia Zoological Park
Columbia, South Carolina 29202

Dear John:

I have reviewed your letter to Dr. Bourne requesting transmission of the Orang Studbook data to the San Diego Zoo for further development of the studbook there.

I concur in all aspects and hope that the people in Yerkes will see the logic of this move and follow through efficiently.

Sincerely,

DDB vc Donald D. Bridgwater, Chairman
AAZPA - ISIS Committee

cc: Robert O. Wagner
John E. Werler

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202

~~TELEPHONE: 256-7419 FAX: 803-772-6823~~
(803) 779-8717

18 February 1976

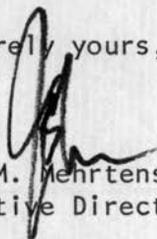
Mr. Donald D. Bridgwater
Minnesota Zoological Garden
Wentworth Office Center
33 E. Wentworth Avenue
West St. Paul, Minnesota 55118

Dear Don:

I retained the original without a date pending your approval of the attached. On the basis of my previous conversations with Bourne and discussion concerning same with Marvin Jones and Chuck Bieler, I am reasonably confident that the attached letter, as is, will get the job done.

Please advise as soon as possible.

Sincerely yours,


John M. Mehtens
Executive Director

JMM:ss

cc Robert O. Wagner
John E. Werler

Brodywater

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

Geoffrey H. Bourne, D.Sc., D. Phil.
Yerkes Regional Primate Research Center
Emory University
Atlanta, Georgia 30322

Dear Dr. Bourne:

Thank you for your letter of 13 January 1976, concerning the Orang Studbook.

I conveyed copies of your letter together with pertinent commentary to AAZPA Officers, Board of Directors and pertinent San Diego officials. I further discussed the Orang Studbook at some length with the above indicated individuals at the AAZPA Board Meetings which took place in Wheeling, West Virginia the week of 2 February 1976.

Before commenting further on the Orang Studbook, the following activities may be of some interest to you. . .

AAZPA is now working closely with the ISIS project (which, as you know was originally funded by USDI/OES, the Minnesota State Zoological Park, etc.) in developing a standard policy regarding international studbook systems. Further meetings are planned in the very near future with International Zoo Yearbook officials and the IUCN.

IUDZG has also been contacted about this at the Annual Meeting which took place in Colorado late last year and asked for their support in developing a truly international system with appropriate European and American coordinators. The object of all this activity, of course, is to develop an organized approach to studbooks and their continuance in addition to the all important and critical necessity of incorporating all studbooks into the ISIS System. All concerned, support the concept that such an approach has far reaching ramifications in the conservation of wild animals and/or their continued captive maintenance.

San Diego Zoological Gardens Director, Mr. Charles Bieler, has indicated that, although his Board is most emphatically willing to support the Orang Studbook, they will do so only if the Studbook is maintained at San Diego. Thus, the San Diego Board has refused



Dr. Geoffrey H. Bourne
Page two
18 February 1976

to finance the studbook at another institution. The AAZPA Officers and Directors have requested that I advise you of this decision and to again request your cooperation in transferring the studbook to San Diego. I would add that I feel, as Chairman of the AAZPA Conservation Committee, that studbooks should be maintained at those institutions where financial resources and expertise allow for continued development and maintenance on a current basis.

On the basis of my knowledge of your international reputation as a primatologist, I am sure you will agree to this. If per chance you would be concerned about the accuracy of the studbook insofar as taxonomic matters are concerned, I feel certain that the San Diego facility would be more than pleased to receive technical input by either you or your organization.

Obviously, the current status of the Orang in the wild is such that the captive breeding population is becoming of ever increasing importance, thus underscoring the critical need for an up-dated and ultimately computerized studbook system.

I would appreciate your affirmative commentary at your earliest convenience.

Respectfully yours,

John M. Mehrtens
Executive Director

JMM:ss

COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

18 February, 1976

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Mr. John E. Werler
Houston Zoological Gardens
P.O. Box 1562
Houston, Texas 77001

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Dear John:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Within the scope of the International Studbook System and coordinated by the Editor, International Zoo Yearbook, are in excess of thirty studbooks in varying degrees of completion. Of those most recently listed, seven are held by Americans. These projects have in the past been dependent on keeper initiative and have not been subject to official policy or recognition. Studbook surveys and publications are independent of IZY surveys and often include animals not covered by professional organizations.

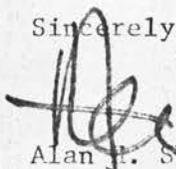
It has become apparent that there should be a statement of policy by AAZPA involving studbooks. In the past, studbooks have been discontinued or placed into limbo because of fading interest, lack of financial support, and insufficient time or expertise. Ideally, the studbook keeper should become a leading authority on his species and coordinate with leading workers in the field.

In view of the above, it is felt that the following suggestions be adopted in the future:

1. Studbooks presently held by American keepers be officially endorsed as current and active. A polling of these keepers for a status report can solve this. If the above studbook are inactive or discontinued, a search for suitable sponsoring institutions and and new keepers can then be initiated. This may well be the case for Clouded and Snow Leopard, Goeldi's Monkey, and Mountain Tapir. This action could be undertaken by your office or delegated to the Conservation Committee, Studbook Committee, etc., as authorized by the President, AAZPA.
2. Criterion for publication of extant and proposed studbooks should be formally designated.
 - a. A maximum time interval between publications should be designated.

- b. Periodic census required of the keeper.
 - c. This has been two years, per the Editor, IZY.
 - d. Publication should be required in AAZPA Newsletter yearly even if the book also appears in other journals.
3. Procedures should be established for changing keepers. This would include:
 - a. Death of a keeper.
 - b. Voluntary surrendering of a studbook for any reason.
 - c. Mandatory cessation and surrendering of a studbook for reasons deemed necessary by President, Conservation Committee, etc.
 4. A standardized format for studcards should be officially designated,
 - a. Official languages, probably English and German.
 - b. A standardized numeral system.
 - c. Suitable headings for easy inclusion of all pertinent data.
 5. Prospective studbook keepers should submit themselves to a controlling committee prior to official endorsement. This would allow for examination of necessary credentials.
 - a. Proof of expertise or its availability.
 - b. Evidence of suitability of the proposed species for a studbook.
 - c. Guarantees of continued interest and involvement and the allocation of sufficient time necessary to complete such a project.
 - d. Examination of systematics and proper conclusions, based on both written evidence and cooboration with leading experts in the pertinent field.
 - e. Proof of financial support from the sponsoring institution.
 1. Printing for studcards.
 2. Publication of periodic works, surveys, and a formal work.
 3. Postage costs sufficient for international correspondence by AIR.
 4. Literature search, interlibrary loans. etc.
 6. An arbitration committee should be established to oversee studbook decisions held in dispute. After presentation of data by both owner and keeper, this body can then render a final decision.
 7. Finally, the committee directly involved with such activities should be officially designated. In the absence of a complete Studbook committee, the ISIS studbook committee (in consort with the Conservation committee) is probably most appropriate for approving prospective keepers, arbitrating disputes, contacting present keepers, and initiating searches for new studbook keepers and other species of potential use to the system.

Sincerely:



Alan P. Shoemaker
Zoologist

cc: Robert O Wagner
Donald E. Bridgewater

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

16 February, 1976

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Mr. Donald D. Bridgewater
Minnesota State Zoological Gardens
Wentworth Office Center
33 E. Wentworth Ave.
West St. Paul, Minn. 55118

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Don:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

We recently received the ISIS Committee's Mid-Year report and have carefully examined the studbook data sheet's format which used the Golden Lion Marmoset as its example. We are enclosing a sample Studbook Data form, using the Siberian Tiger as the example, which we feel may better enter studbook data into the data bank.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

Important differences to the report's sample pedigree form begin at (3) where we have placed the Studbook number higher in importance than the Spec. ID(18). Many European and foreign zoos are without an accurate numbering system. Although we hope most of these join ISIS, it may be some time before the Russians et al do. Most of these institutions however do cooperate with studbook programs regardless of their country's politics. The same goes for private collections abroad. A block for Breeder Number(4) is also considered important. We have placed the Sire's Studbook number(7) before the Dam's(8) as this is the universal approach to numerical sexing.

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

The number of blocks allocated to the actual studbook number could be shortened if desired. Long term projects already in existence like Wisent may reach 5 digits, if they have not already done so, and require additional space.

The Ancestry of Sire(14) and Dam(15) is similar to the format on an actual studcard, as is the section for Owner(16) and Since(17). Other data could be mandatory for Americans in some areas, Spec. ID(18), V/R Recip.(19), and optional for others. We think it should be kept in mind however that not only are most studbooks not kept

Mr. Donald D. Bridgewater
Page two

by Americans but most studbook animals are also not in this country. To some extent, the foreign studbook keepers may think they are doing us a favor. It goes without saying that many zoos apparently prefer not to disclose the dealer, price, type of transaction, etc.

We hope this may be of use in developing the format.

Yours sincerely:

A handwritten signature in black ink, appearing to read 'A. Shoemaker', with a large loop at the end.

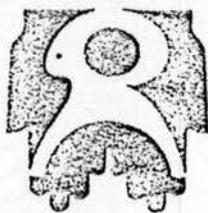
Alan H. Shoemaker
Zoologist

A handwritten signature in black ink, appearing to read 'J. Mehtens', with a large loop at the end.

John L. Mehtens
Director

cc: U.S.Seal
Linda Murdtfeldt

U.S.S.R. International Species Inventory System



Minnesota Zoological Garden
Wentworth Office Center
33 East Wentworth Avenue
West Saint Paul, Minnesota 55118
Telephone (612) 227-9216

UPDATE: 1 FEBRUARY, 1976

ACQUISITION OF STUBBOOKS/HISTORICAL DATA: PROGRESS TO DATE

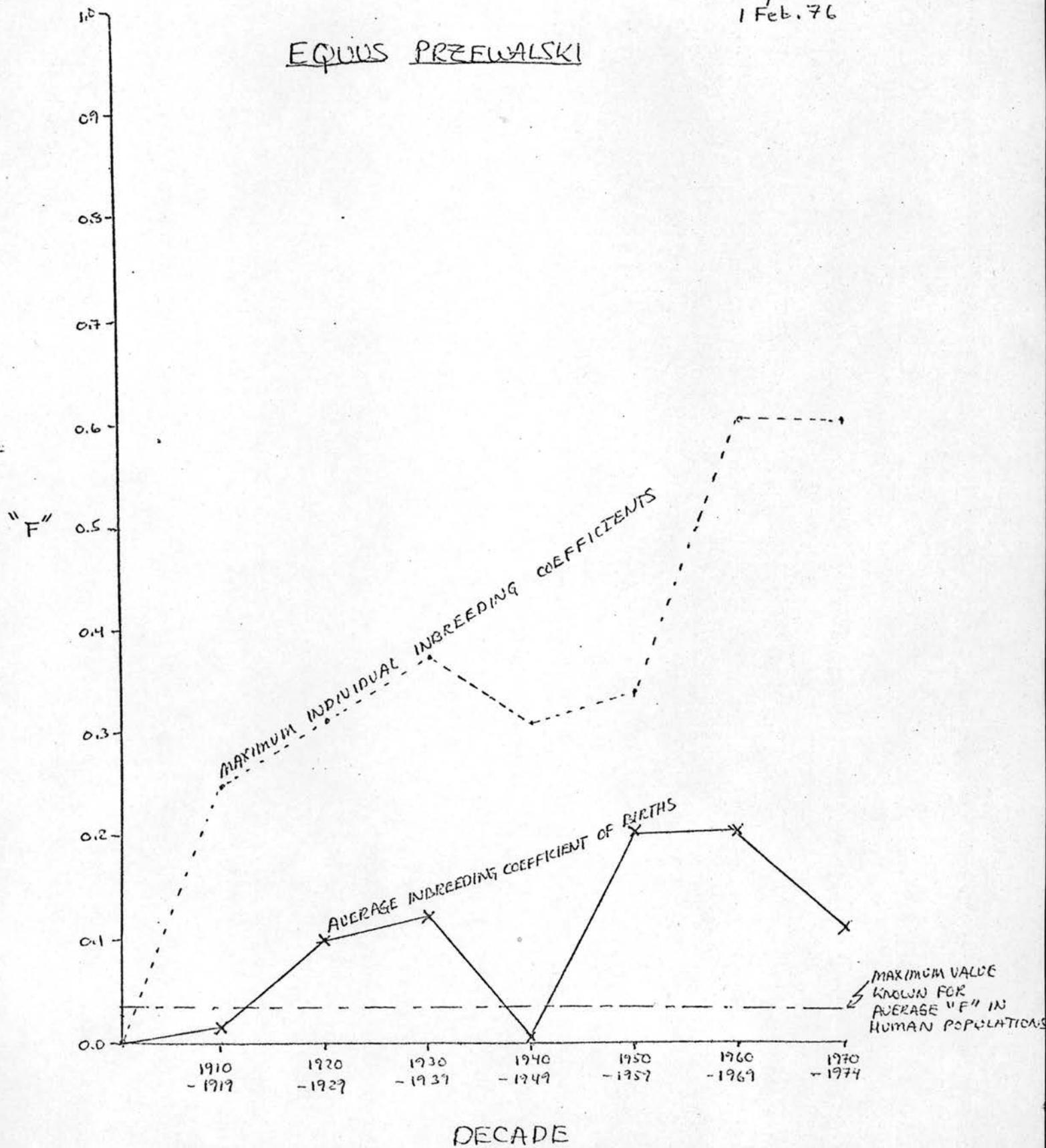
<u>ANIMAL</u>	<u>STDBK KEEPER</u>	<u>REQUESTED</u>	<u>RECEIVED</u>	<u>CONTAINS PEDIGREE INFO?</u>	<u>PEDIGREE INFO. PROB. AVAILABLE</u>
Gorilla	Kirchshofer	X	promised		
Orang	Bourne	X	X	Yes	
Wht. Ear Pheasant	Durrell	X	X	No	No
Jap. Serow	Komori	X	X	No	No
Pere Davids Deer	Whipsnade	X	X	No	
Eld's Deer	Nouvel	X			
Vicuna	Schmidt	X	X	Yes	
Wht. Rhino	Klos	X	X	Yes	(data up to 1970)
Blk. Rhino	Klos	X	X	Yes	(data up to 1970)
Gaur	Klos	X	promised		
Ind. Rhino	Lang	X	X	Yes	
Pyg. Hip.	Lang	X	ordered		
As. Ass	Pohle	X	promised		
Sc. Oryx	Dolan	X	X	Yes	(Defunct, data upto 1966)
Okapi	Gijzen	X	X	No	Yes
Prz. Hrs.	Volf	obtained from Bronx		Yes	
Wisent	Raczynski	X	X	Yes	
Gld. Marm.	Kleiman	X	X	Yes	

All studbooks listed in IZYrbk 15 not listed above I will request.

Nate
Nate Flesness

Math
1 Feb. 76

EQUUS PRZEWALSKI



STUDBOOK I.D.	NUMBER	INBRD COEFF	RISK
	1	0	0
	2	0	0
	3	0	0
	4	0	0
	5	0	0
	6	0	0
	7	0	0
	8	0	0
	9	0	0
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STUDBOOK I.D. NUMBER INBRD COEFF RISK

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53	0	0	2
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56	0	0	16
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58	0	.0000	—
59	0	0	—
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67	.1250000	.0625	31
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79	0	0	—
2.50 80	.2968750	.0340	14
81	.2656250	.0329	8
82	.2187500	.0341	—
83	.2187500	.0341	4
84	.2968750	.0340	16
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88	.2187500	.0341	—
89	.2968750	.0340	—
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91	.2187500	.0341	—
92	.2656250	.0329	2
93	0	0	—
94	.3203125	.0318	1
95	.2656250	.0329	—
96	.2968750	.0340	7
97	.3203125	.0318	1
98	.3203125	.0318	1
99	0	0	—
100	0	0	17

STUDBOOK I.D. NUMBER INBRD COEF RISK

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STUDBOOK T.D.

NUMBER

INBRD COFF

RTSK

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159	0	0	—
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178	0	0	1
179	0	0	5
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182	0	0	16
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195	0	0	5
196	0	0	7
197	.31250000	.0713	13
198	.31250000	.0713	14
199	.31250000	.0713	—
200	.31250000	.0713	2

STUDBOOK I.D.	NUMBER	TNBRD COEF	RISK
---------------	--------	------------	------

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	202	.31250000	.0713
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	204	0	0
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	242	0	0
	243	.29687500	.0340
	244	0	0
	245	.32031250	.0318
	246	.34375000	.0314
	247	.26562500	.0329
	248	.31640625	.0474
	249	.15625000	.0299
	250	.41796875	.0380

STUDBOOK I.D.	NUMBER	IMBRD COEFF	RISK
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	252	0	0
	253	.25195313	.0447
	254	0	0
	255	.32031250	.0318
	256	0	0
	257	.50390625	.0301
	258	.00000000	0
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	260	.29687500	.0340
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	262	.27294922	.0348
	263	.31445313	.0476
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	265	.15625000	.0299
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	272	.50390625	.0301
	273	.41796875	.0380
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STUDBOOK I.D. NUMBER INBRD COEFF RISK

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317	0	0	1
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319	.31445313	.0476	1
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322	.33789063	.0533	1
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325	0	0	1
326	.34375000	.0307	1
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341	.27294922	.0348	1
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343	0	0	3
344	0	0	1
345	.34375000	.0307	1
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STUDBOOK I.D.	NUMRER	INBRD COEF	RISK	
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STUDBOOK I.D.	NUMBER	INBRD COEF	RISK
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STUDBOOK I.D.	NUMBER	INBRD COEF	RISK
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	553	.04647500	.0069
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	555	0	0
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RELEASE,ALL

FET,FLESNESS,POP6,2000,,,

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CLOSE,17

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CLOSE,18

RELEASE,ALL

FET,FLESNESS,POP10,1200,,,

CLOSE,19

RELEASE,ALL

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

23 January 1976

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Mr. Robert O. Wagner, Executive Director
AAZPA
Oglebay Park
Wheeling, West Virginia 26003

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Dear Bob:

GEORGE R. DAVIS
BUSINESS MANAGER

Further to my recent correspondence concerning the Orang Studbook transferred from Yerkes to San Diego

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

Marvin will soon be sending pertinent individuals a letter reflecting a conversation which took place yesterday. Marvin advises that San Diego under no circumstances will fund the maintenance of an Orang Studbook at Yerkes.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

Further, Marvin feels that it would be a redundant effort to establish a new studbook from scratch; and therefore, he suggests that the matter be dropped. He feels that a few more years of Orang Studbook inactivity by Yerkes would not be detrimental to captive stocks.

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

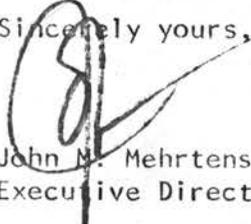
RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Further, he indicates that he will discuss the problem with sundry European directors within the next few months. Although personalities should not enter into such matters, in my opinion, it apparently has here. Bourne was appointed studbook keeper by the IUCN, and apparently he has a negative reaction to Marvin my god!

Please advise the decision of the Officers and Directors as soon as possible so the matter can be handled.

Best regards.

Sincerely yours,


John M. Mehrtens
Executive Director

JMM:ss

cc Don Bridgwater
John Werler



COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
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PALMER E. KRANTZ, III
GENERAL CURATOR

12 January 1976

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Geoffrey H. Bourne, D. Sc., D. Phil.
Director
Yerkes Regional Primate Research Center
Emory University
Atlanta, Georgia 30322

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Dr. Bourne:

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

Per our recent correspondence concerning the International Studbook for Orangs, I am pleased to inform you that the appropriate authorities within the AAZPA have approved Marvin Jones of San Diego, California as the official AAZPA/ISIS recognized Orang Studbook Keeper.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

Mr. Bieler, Director of the San Diego Zoological Gardens, has also advised AAZPA that their institution will provide the necessary finances to assure the current update of the studbook and to provide for its continued development and maintenance over the years.

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

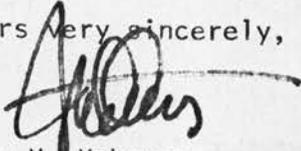
Mr. Jones is leaving for Europe in March of this year, and thus will be in a position to check on and discuss any problems with European zoological park stock personally. It would, therefore, be greatly appreciated if you would arrange to transfer all pertinent files and related data to Mr. Marvin Jones at your earliest convenience. I would suggest that the material be sent directly to him at the San Diego Zoological Gardens, Post Office Box 551, San Diego, California, 92112.

Once the studbook keeper has studied the material, if any problems or questions concerning it arise, he will be in touch with you directly.

Dr. Geoffrey H. Bourne
Page two
12 January 1976

The cooperation of yourself and your institution in this matter is greatly appreciated by all concerned; and needless to say, if either myself personally or others involved can be of service to you in the future, do not hesitate to let us know.

Yours very sincerely,



John M. Mehrtens
Executive Director

JMM:ss

cc Marvin Jones
John Werler
Robert Wagner
Charles Bieler
Don Bridgwater
U. S. Seal
Alan Shoemaker

COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
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Studbook Report

Mid-Year Report of the Advisor

9 January, 1976

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

To: Officers and Directors of the American Association of Zoological Parks and Aquariums.

From: Alan H. Shoemaker, Presidential Advisor on Studbooks.
(Zoologist, Columbia Zoological Park; Columbia, South Carolina)

Included herein is the mid-year report of the Presidential Advisor on Studbooks. Since little time has lapsed after formation of said position and other persons are not directly involved, events and opinions are necessarily restricted to this past fall and the immediate future. In most cases, this involves studbook-related activities or on-going projects to be completed this winter. The following are specific areas of activity now in progress:

1. Rare Leopard Studbooks.

Issuance of studcards officially registering living pure individuals of all three subspecies involved will transpire this month. In addition, a master file of all living and deceased individuals dating back to the time of original importation to the respective institutions has been completed. The studcards themselves are similar to those presently utilized for other species/subspecies and a sample will be sent to the President and Executive Director. Registration data included on the studcards is in English and German. Accompanying the cards to the recipient institution for clarification if necessary is an instruction sheet, a sample of which is enclosed. Languages utilized are English, German, and Russian.



The numbering system adopted is in four digits for inclusion into ISIS. If necessary, additional remarks are made specific to the institution for data needed. Studcards will be mailed in the following order: Persian Leopard, Amur Leopard, Chinese Leopard.

2. Studbook Synopsis.

Although funds are not now present for publication of an indepth work concerning the subspecies concerned(systematics, geneology, successful husbandry, photographs, etc.), a synopsis of all living registered leopards will be compiled. This will be done after the studcards are issued in order to give sufficient time for responses or modifications by participating institutions. Where possible, German and Russian will be included for increased utilization by recipients. In addition to studcard holders, the synopsis will be furnished to interested persons, ISIS, pertinent AAZPA offices, involved governmental agencies, International Zoo Yearbook, and those animal dealers requesting them. Notice of completion will be published and copies furnished to those zoos so desiring.

3. Brown Hyenas.

Interest by the Editor, International Zoo Yearbook, has been shown regarding a husbandry/reproduction study concerning the Brown Hyena. Recent data however involves only biology and population dynamics of wild populatons; precious little is known relative to captive behavior and dependable husbandry techiques. Captive populations are sparsely scattered throughout this country and Europe, and reproduction very low. In view of the ratification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, this office feels it is critical for new emphasis to be placed on their successful propagation as replacement individuals from the wild become unobtainable. Although not a studbook as such, a register will accompany said publication. The questionnaire will be furnished the Executive Director and President when ready.

4. Communications.

During the fall, various communications have been received relative to the geneology of individual leopards held at several institutions. Other communications from zoological parks and animal dealers have been received pertaining to the potential source of or market for surplus animals, usually Chinese Leopards. Advice was given in all cases.

Assistance was requested by the Studbook Keeper for Siberian Tigers in locating a registered individual "lost" during commercial transactions. This office was able to locate said individual and supplied data to Leipzig.

The selection of Marvin Jones as Orang Utan studbook keeper is acknowledged and the President and Officeres of AAZPA are urged to give prompt consideration and approval for this position. Marvin has proven expertise in registration projects of this nature and extensive contacts within the international zoological park community. In as much as the data presently extant is woefully out of date, the work required for such an update is extensive

and needs to begin at once for completion even by late fall.

5. Coordinations.

A. ISIS.

An initial attempt was made by Linda Murdfeldt, Systems Manager, ISIS to begin including registered Amur Leopards into the ISIS system. Although somewhat premature since permanent stud numbers had not been assigned, it would appear that many details requested on the ISIS New Inventory Data forms are known only to the studbook keeper and pertinent zoos. This is especially true for Vendor, Recipient, Price, and Transaction data. Moreover, many zoos, especially those in Europe, do not want this data made public. Now that permanent numbers and cards have been assigned to living and deceased individuals, coordination of these studbooks for inclusion into ISIS will be proposed, with leopard to be utilized as the prototype. This in turn will allow time to solve problems, develop a new data sheet if necessary, and gain an experience factor prior to adopting other studbooks not suitably numbered for ISIS.

B. Other Species.

International Zoo Yearbook, Volume 14, lists 31 studbooks in varying degrees of completion. Within this country, five studbooks other than Leopards are recognized but many are not up to date and none probably suitable for computerization. In addition to the Orang Utan studbook, already mentioned, studbooks for Gouldi's Monkey, Snow Leopard, and Mountain Tapir are in all probability not current or ready for ISIS. The Advisor will then be in contact with the keepers of extant studbooks (Gouldi's Monkey and Mountain Tapir) to ascertain their state of organization and possible adaptation into ISIS. The Snow Leopard data, originally obtained by Marvin Jones, has been more recently taken over by Saul Kitchener. He, in turn, has changed institutions and positions. No publication or interim report has been seen and in view of his new and increased duties, may not be forthcoming for some time. The state of this studbook will be requested and opinions discussed relative to its progress or future.

The majority of species (21) are maintained by studbook keepers associated with European zoos or universities. All the zoos maintaining studbooks have been consistent contributors to the Advisor's three studbooks. With relations thus established and the ISIS project now accepted or under consideration by seven major zoological parks in Europe, the addition of these studbooks into ISIS will be broached once the leopards have been included and computerization technique finalized. Many of the species concerned would be relatively easy as the number is less than twenty individuals. Others, like the Gorilla, Tiger, and Wisent, would be far more complex and very time consuming. The White Rhinoceros Studbook (C.s.simum)

appears to be discontinued due to the present availability of wild specimens.

Studbook keepers in Japan, India, and Chile will also be approached for their interest and cooperation.

6. Summary.

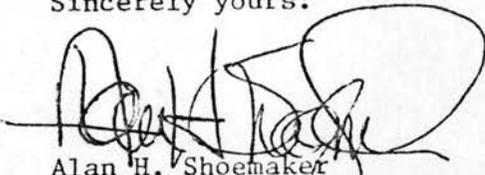
Studcards for all three races of Leopards should be finished and submitted to participants this month. The synopses will follow, going to all interested parties as well as the animals' owners. The questionnaire involving Brown Hyenas will be sent out and data compiled as they are returned. Completion of this is anticipated by 1 April.

Inclusion into ISIS will be sought for studbooks, using the Leopards as a prototype in finalizing the data introduction technique. Once complete, other studbook keepers will be queried for adaptation of their studbooks into a computer system. American studbook keepers with out of date projects or unfinished data will be contacted for an analysis of progress.

It would appear that the need for studbooks is becoming increasingly recognized by zoological parks in this country. Similarly, the studbook keepers themselves are being drawn upon to a greater degree for geneological assistance for animal selection and location as more parks become aware of the need to maintain gene pools of pure bred stock. Cooperation between studbook keepers in different continents is encouraging.

The Advisor looks forward to a successful year and will provide assistance to your office as possible.

Sincerely yours:



Alan H. Shoemaker
Presidential Advisor on Studbooks.

cc:

COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

PALMER E. KRANTZ, III
GENERAL CURATOR

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D. V. M., VETERINARIAN

DALFORD W. MANESS
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GEORGE R. DAVIS
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DENNIS S. DECOURCEY
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SUPERVISOR
ART AND EXHIBITS

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
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Enclosed are studcard(s) documenting the geneology of your animal(s) and linking them to wild born ancestors. Only pure-bred individuals have been included for registration. The studbook number, beginning with the chronologically earliest (oldest) animal, is peculiar to the individual and follows it through life regardless of subsequent ownership. Designed with several digits for computerization, these studbooks will be entered into ISIS (International Species Inventory System), Minnesota Zoological Gardens, St. Paul, Minnesota, USA, for indefinite maintenance. Printouts for participants of a particular subspecies' current status in captivity can therefore be obtained on demand. Studbook names will derive from the original owner or first institution to assign a name and hopefully be utilized by subsequent owners.

The breeder number is assigned chronologically by the owner (males, females, and then unknown sex) to all members of a litter to identify the breeding center. The breeder number then also follows the individual through life.

New individuals acceptable for registration from the wild should be accompanied by documentation of origin, date of arrival, age (if known), and sex. Captive born individuals to be considered for registration should be accompanied by information of place and date of birth, sex, parent's studbook/breeder number, etc. Similar data should accompany registration inquiries concerning one's own litters. In the case of death, the studbook keeper should be informed and studcard returned. Supplementary data (where possible) is requested concerning post-mortem findings and disposition of carcass. Data concerning gestation, weight at birth, artificial or natural rearing, notable characteristics would be appreciated. Leopard owners are asked to send pictures for establishment of a long term reference collection.

If registered leopards are transferred from the owning institution (sale, exchange, loan, etc.), the studbook keeper should be notified. The studcard should be sent directly to the receiving institution where possible instead of to the animal dealer (if involved) to avoid confusion among individuals. In addition to particular changes in an owner's stock, a questionnaire will be sent regularly (once a year) requesting an update of current inventory. A subsequent synopsis will be sent to all owners of current stock.

Alan H. Shoemaker
Columbia Zoological Park
Columbia, S.C. 29202 USA



COLUMBIA ZOOLOGICAL PARK

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Прилагаются свидетельства, подтверждающие родословную ваших животных и их отношение к диким предкам. Только чистокровные экземпляры животных представлены в указанной регистрации. Номера свидетельств, начинающие свой счет с самого старого животного, принадлежат каждому животному в отдельности и следуют за ним на протяжении всей его жизни, независимо от места нахождения и отношения к конкретному владельцу. Свидетельства сопровождаются специальными номерами для удобства при обработке их на счетно-вычислительных машинах, поскольку им предстоит быть зачисленными в ISIS (International Species Inventory System), Minnesota Zoological Gardens, St. Paul, Minnesota, USA на постоянное хранение. Данные, полученные со счетно-вычислительных машин и относящиеся к животным определенной подгруппы, находящейся в неволе, могут быть выданы по первому требованию. Предполагается, что кличка, данная животному при рождении, обычно следует за ним при перемене места пребывания.

Регистрационный номер специалиста по разведению назначается в хронологическом порядке их владельцем и дается всем членам потомства для того, чтобы определить центр разведения. Этот номер также следует за животным в течение всей его жизни.

Каждое новое животное, пойманное с воли и признанное годным для регистрации, заносится на учет. Регистрируется место рождения, время прибытия, возраст /если известен/ и пол. Животное, рожденное в неволе и пригодное для регистрации, должно иметь при себе данные о месте и дате рождения, пола, а также родословную и регистрационный номер случки. Регистрационные карточки на новое потомство заполняются в обычном порядке. В случае падежа животного следует известить регистрационный центр и направить туда регистрационную карточку. Обычно запрашиваются данные патолого-анатомического исследования /в тех случаях, когда это возможно/, и сведения о ликвидации трупа животного. Данные, относящиеся к периоду беременности, веса при рождении, естественного или искусственного вскармливания, желательны. Владельцев леопардов запрашивают послать фотографии для организации справочной коллекции.

В случае каких-либо изменений /продажа, обмен, заем и т.д./ владельца зарегистрированных леопардов просят известить об этом центр регистрации. Во избежание путаницы регистрационное свидетельство данного животного должно быть направлено в место, куда направляется это животное. Анкеты должны рассылаться раз в год, чтобы определить изменения в составе животных на текущий год. Результаты анкет отсылаются всем владельцам настоящего состава животных.

Alan H. Shoemaker
Columbia Zoological Park
Columbia, S. C. 29202 USA



COLUMBIA ZOOLOGICAL PARK

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EXECUTIVE DIRECTOR

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Internationales Zuchtbuch Für Leoparden Seltener Unterart

Mit diesem Schreiben erhalten Sie Zuchtkarten(Studcards), die die Genealogie Ihrer Tiere dokumentieren und deren Verbindung zu in der Wildnis geborenen Vorfahren herstellen. Jedes einzelne Tier hat eine Zuchtbuchnummer und behält diese Nummer auf Lebenszeit, unabhängig davon, wer der jeweilige Besitzer ist. Die Numerierung beginnt mit dem chronologisch frühesten(ältesten) Tier. Diese Zuchtbücher, die eine zum Zwecke elektronischer Datenerfassung nehrziffrige Nummer haben, werden auf unbegrenzte Zeit aufgenommen in das International Species Inventory System(ISIS), Minnesota Zoological Gardens, St. Paul, Minnesota, USA. De dort über die jeweiligen Tiere geseicherte Information wird Interessenten auf Verlangen zugänglich gemacht. Was den Namen der Tiere in den Zuchtbüchern an betrifft, so wird die Namengebung des ursprünglichen privaten Besitzers bzw. der ersten Institution beibehalten, und es ist zu hoffen, dass dieser Name bei Besitzerwechsel von den nachfolgenden Besitzern beibehalten wird.

Eine Züchtnummer(breeder number) wird allen Tieren eines Wurfes chronologisch von dem jeweiligen Besitzer verliehen(in der Reihenfolge: männlich, weiblich, Geschlecht unbekannt), um die jeweilige Zuchtstätte zu kennzeichnen. Das einzelne Tier behält auch die Züchtnummer auf lebenszeit.

Bei aus der Wildnis stammenden Tieren, die für eine Registrierung in Frage kommen, sollte Information über die Herkunft, das Ankunftsdatum, das Alter(sofern bekannt) und das Geschlecht übermittelt werden. Bei in der Gefangenschaft geborenen Tieren, die für die Registrierung in Frage kommen, sollte der Geburtsort, das Geburtsdatum, das Geschlecht, die Zuchtbuch- und Züchtnummer der Eltern usw. mitgeteilt werden. Ähnliche Angaben sollten bei der Registrierung eines Wurfs gemacht werden. Im Todesfall sollte der Bewahrer des Zuchtbuchs benachrichtigt und die Zuchtkarte zurückgeschickt werden. Sofern möglich sollten zusätzliche Angaben über den Autopsiebefund sowie über die Beseitigung des Kadavers gemacht werden. Informationen über Trächtigkeit, Geburtsgewicht, künstliche oder natürliche Aufzucht sowie über besondere Merkmale sind erwünscht. Besitzer von Leoparden werden gebeten, Bilder mitzuschicken. Diese Bilder sollen in eine noch einzurichtende Bilderkartei aufgenommen werden.



Wenn Leoparden die besitzende Institution verlassen (bei Verkauf, Tausch, Leihgabe, usw.) sollte der Bewahrer des Zuchtbuches benachrichtigt werden. Die Zuchtkarte sollte wenn möglich direkt an die neue Institution geschickt Tiere zu vermeiden. Zusätzlich zu den gewünschten Mitteilungen über einzelne Veränderungen im Tierbestand im Tierbestand wird darum gebeten, dass einmal jährlich ein Formular ausgefüllt wird, indem der neuste Tierbestand erfasst wird. Die Gesamtergebnisse dieser werden allen Betwiligten in tabellarischer Form zugänglich gemacht.

INTERNATIONAL STUDBOOK FOR RARE LEOPARD SUBSPECIES
INTERNATIONALES ZUCHTBUCH FÜR LEOPARDEN SELTENER UNTERART

Species: *Panthera pardus* Linnaeus, 1758

Art:

Subspecies: _____ Int-Studbook No.: _____
Unterart: _____ Int-Zuchtbuch-Nr. _____

Sex: _____ Studbook Name: _____
Geschlecht: _____ Zuchtbuch - Name: _____

Name: _____ Breeder No.: _____
Name: _____ Zücher Nr.: _____

Date of Birth: _____ Place of Birth: _____
Geburtsdatum: _____ Geburtsort: _____

Owner: _____ Since: _____
Besitzer: 1. _____ Seit: _____
2. _____
3. _____
4. _____
5. _____

Date of death: _____ Place of death: _____
Todesdatum: _____ Todesort: _____

Post-Mortem findings: _____
Sektionsbefund: _____

Disposition of Carcass: _____
Verbleib des Tierkörper: _____

Characteristics: _____
Körperliche Merkmale: _____

Remarks: _____
Bemerkungen: _____

Descendants/Nachkommen						Father / Vater Studbook-No. and Name Zuchtbuch-Nr. und Name		
	Sex Geschl.	Date of birth Geburts- datum	Father/Mother Vater/Mutter	Studbook-and Breeder-No. Zuchtbuch-und Züchter-Nr.	Fate Verbleib			
1.						Breeder-No. Züchter-Nr.		
2.								
3.								
4.								
5.						Mother / Mutter Studbook-No. and Name Zuchtbuch-Nr. und Name		
6.								
7.								
8.								
9.						Breeder-No. Züchter-Nr.		
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								
20.								

Guaranteed by: _____
 Für die Richtigkeit: Studbook-Keeper/Zuchtbuchführer

Columbia Zoological Park (USA)

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

5 January 1976

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
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RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Mr. Robert O. Wagner, Executive Director, AAZPA
Oglebay Park
Wheeling, West Virginia 26003

Dear Bob:

I believe I have copied you with various previous correspondence concerning Yerkes willingness to transfer its Orang studbook data to an AAZPA approved studbook keeper.

Further, I have notified all pertinent individuals, e.g. President, Committee members, ISIS Committee, etc. that Marvin Jones has volunteered his services as studbook keeper and that San Diego will provide the necessary funds for bringing the studbook up to date, continuing it, etc.

I feel that a considerable amount of time has elapsed since I requested approval of Marvin as the studbook keeper. I would like to notify Yerkes of Marvin's appointment and arrange for the transfer of records, etc. as soon as possible.

As AAZPA Conservation Committee Chairman, I would like to culminate the arrangements. Several months have gone by since the original contact, which I feel is letting the interest wither on the vine. Please advise.

You are also undoubtedly aware that Marvin is to go to Europe in March of this year. It would be advantageous for him to have all pertinent studbook information prior to his departure. A foreknowledge of current data would allow Marvin to stabilize any information concerning European zoos.

All best regards for a prosperous New Year.

Sincerely yours,


John M. Mehtens
Executive Director

JMM:ss

cc Don Bridgwater
Alan Shoemaker



NATIONAL ZOOLOGICAL PARK



SMITHSONIAN INSTITUTION · WASHINGTON, D.C. 20009

Dear Don,

December 30, 1975

Enclosed are lists of Golden Marmosets living as of June 1, 1975, and births between July 1, 1974, and June 30, 1975. I have given studbook numbers to the latter, which you might note for your records.

~~I hope shortly to send you a list of your own animals for an update to be returned to me.~~

Yours sincerely,

Happy New Year, Devra

D. G. Kleiman

Reproduction Zoologist

Register of Golden Marmosets, *Leontopithecus rosalia rosalia* births July 1, 1974 - June 30, 1975

STUDBOOK NUMBER	SEX	STUDBOOK NAME/ HOUSE NAME HOUSE NUMBER	DATE OF ARRIVAL OR BIRTH	SITE	MALE PARENT	FEMALE PARENT	DATE OF DEATH
75-1a	M	Brookfield 12/	11 I 75	Brookfield	66-AH	66-H	12 I 75
75-1b	M	Brookfield 13/	11 I 75	Brookfield	66-AH	66-H	13 I 75
74-16a	M	Fort Worth 1	21 XI 74	Fort Worth	70-14b	67-AF	Stillborn
74-16b	F	Fort Worth 2	21 XI 74	Fort Worth	70-14b	67-AF	Stillborn
75-10a	M	Fort Worth 3	26 IV 75	Fort Worth	70-14b	67-AF	27 IV 75
75-10b	F	Fort Worth 4	26 IV 75	Fort Worth	70-14b	67-AF	27 IV 75
75-3a	M	Los Angeles 27/	12 II 75	Los Angeles	71-12a	71-13b	Stillborn
75-3b	F	Los Angeles 28/93351	12 II 75	Los Angeles	71-12a	71-13b	
75-5	M	Los Angeles 29/93355	23 III 75	Los Angeles	72-9b	71-19c	Stillborn
75-13a	U	Los Angeles 30/	10 VI 75	Los Angeles	67-6b	71-19b	Abortion
75-13b	U	Los Angeles 31/	10 VI 75	Los Angeles	67-6b	71-19b	Abortion
75-13c	U	Los Angeles 32/	10 VI 75	Los Angeles	67-6b	71-19b	Abortion
	M	Los Angeles 33/	6 VIII 75	Los Angeles	72-9b	71-19c	
	M	Los Angeles 34/	6 VIII 75	Los Angeles	72-9b	71-19c	
74-17	M	MoJ 19/	14 IV 74	MoJ	71-6a	69-11b	30 VII 75
75-6a	M	MoJ 20/	22 III 75	MoJ	71-6a	69-11b	26 III 75
75-6b	U	MoJ 21/	22 III 75	MoJ	71-6a	69-11b	Stillborn

Register of Golden Marmosets, *Leontopithecus rosalia rosalia* births July 1, 1974 - June 30, 1975

STUDBOOK NUMBER	SEX	STUDBOOK NAME/ HOUSE NAME HOUSE NUMBER	DATE OF ARRIVAL OR BIRTH	SITE	MALE PARENT	FEMALE PARENT	DATE OF DEATH
	M	MoJ 22/	6 VIII 75	MoJ	71-6a	69-11b	Premature
	M	MoJ 23/	6 VIII 75	MoJ	71-6a	69-11b	Premature
74-14a	M	Oklahoma 30/	9 XI 74	Oklahoma	64-B	70-12	8 VIII 75
74-14b	F	Oklahoma 31/	9 XI 74	Oklahoma	64-B	70-12	
75-4	M	Oklahoma 32/	15 III 75	Oklahoma	70-9b	69-15b	18 VIII 75
74-15a	M	Pretoria 1/M5	15 XI 74	Pretoria	73-13	73-16	15 XI 75
74-15b	F	Pretoria 2/F8	15 XI 74	Pretoria	73-13	73-16	15 XI 75
75-8a	M	San Antonio 6	31 III 75	San Antonio	67-8	73-2b	7 IV 75
75-8b	F	San Antonio 7	31 III 75	San Antonio	67-8	73-2b	
74-12a	M	Tijuca 1/BB17	20 X 74	Tijuca	72-14	74-G	
74-12b	?	Tijuca 2/BB36	20 X 74	Tijuca	72-14	74-G	
74-10a	M	Wash 30/MO0996	16 VIII 74	DC	65-N	67-M	
74-10b	F	Wash 31/MO0997	16 VIII 74	DC	65-N	67-M	
74-11a	M	Wash 32/MO1006	3 IX 74	DC	67-H	68-3b	
74-11b	F	Wash 33/MO1007	3 IX 74	DC	67-H	68-3b	
75-2a	U	Wash 34/MO1116	7 II 75	DC	72-1a	72-6b	Abortion, 30 days premature

Register of Golden Marmosets, Leontopithecus rosalia rosalia births July 1, 1974-June 30, 1975

STUDBOOK NUMBER	SEX	STUDBOOK NAME/ HOUSE NAME HOUSE NUMBER	DATE OF ARRIVAL OR BIRTH	SITE	MALE PARENT	FEMALE PARENT	DATE OF DEATH
75-2b	U	Wash 35/MO1117	7 II 75	DC	72-1a	72-6b	Abortion, 30 days premature
75-7a	M	Wash 36/MO1186	26 III 75	DC	65-N	67-M	
75-7b	F	Wash 37/MO1187	26 III 75	DC	65-N	67-M	
75-7c	F	Wash 38/MO1188	26 III 75	DC	65-N	67-M	Stillborn
75-9a	F	Wash 39/MO1210	23 IV 75	DC	72-6a	73-6b	Stillborn
75-9b	F	Wash 40/MO1211	23 IV 75	DC	72-6a	73-6b	Stillborn
75-11a	M	Wash 41/MO1248	15 V 75	DC	71-7a	72-1b	17 V 75
75-11b	F	Wash 42/MO1249	15 V 75	DC	71-7a	72-1b	16 V 75
75-12	M	Wash 43/MO1253	19 V 75	DC	73-8b	73-7b	
75-13a	U	Wash 44/MO1268	30 V 75	DC	67-H	68-3b	Stillborn
75-13b	F	Wash 45/MO1269	30 V 75	DC	67-H	68-3b	Stillborn
75-13c	M	Wash 46/MO1270	30 V 75	DC	67-H	68-3b	Stillborn
	M	Wash 47/MO1327	30 VII 75	DC	65-N	67-M	Stillborn
	F	Wash 48/MO1328	30 VII 75	DC	65-N	67-M	30 VII 75

Register of Golden Marmosets, *Leontopithecus rosalia rosalia*, living as of June 1, 1975

STUDBOOK NUMBER	SEX	STUDBOOK NAME/ HOUSE NAME HOUSE NUMBER	DATE OF ARRIVAL OR BIRTH	SITE	MALE PARENT	FEMALE PARENT	DATE OF DEATH
66-D	M	Brookfield/ D/159	23 VI 66	Brookfield	WB	WB	
66-G	F	Brookfield/ G/160	23 VI 66	Brookfield	WB	WB	
66-H	F	Brookfield/ H/158	23 VI 66	Brookfield	WB	WB	
66-AH	M	Topeka/ A/157	1 IX 66	Brookfield	WB	WB	
73-4b	F	Los Angeles 18/93275	14 V 73	Brookfield	71-12b	71-13b	
67-AF	F	Fort Worth A	17 X 67	Fort Worth	WB	WB	
70-14b	M	Los Angeles 10	24 IX 70	Fort Worth	67-AC	67-AE	
67-AA	F	Fukuoka B	25 IX 67	Fukuoka	WB	WB	
69-2a	M	Fukuoka 5	25 II 69	Fukuoka	67-Z	67-AA	
67-U	M	Houston A	8 IV 67	Houston	WB	WB	
67-V	F	Houston B	8 IV 67	Houston	WB	WB	
66-Y	M	Japan Monkey Centre A/Anja	9 VIII 66	Japan Mo Cen	WB	WB	
67-AG	M	Japan Monkey Centre B/Ancr	12 XI 67	Japan Mo Cen	WB	WB	
67-AJ	F	Japan Monkey Centre D/Bae	12 XI 67	Japan Mo Cen	WB	WB	
65-A	M	Nuffield A	7 V 65	London	WB	WB	
71-12a	M	Los Angeles 11/93191	7 V 65	Los Angeles	67-AC	67-AE	
71-19b	M	Los Angeles 15/93219	19 XII 71	Los Angeles	67-AC	67-AE	

Register of Golden Marmosets, Leontopithecus rosalia rosalia, living as of June 1, 1975

STUDEBOOK NUMBER	SEX	STUDEBOOK NAME/ HOUSE NAME HOUSE NUMBER	DATE OF ARRIVAL OR BIRTH	SITE	MALE PARENT	FEMALE PARENT	DATE OF DEATH
70-9a	M	Oklahoma 9/Cantor 1178-03	11 Iv 70	Oklahoma	64-B	64-D	
70-9b	M	Oklahoma 10/Lucky 1179-04	11 IV 70	Oklahoma	64-B	64-D	
70-12	F	Shadow 10/Nona 2539-13	11 VIII 70	Oklahoma	66-A	66-B	
71-15a	M	Oklahoma 12/Tinker 1619-06	16 VI 71	Oklahoma	64-B	64-D	
71-15b	M	Oklahoma 13/Ought 1620-05	16 VI 71	Oklahoma	64-B	64-D	
72-13a	M	Oklahoma 22/Oedipus 2537-11	19 XII 72	Oklahoma	64-B	64-D	
73-12a	F	Oklahoma 25/Alpha 3300-14	23 XI 73	Oklahoma	64-B	70-12	
73-12b	F	Oklahoma 26/Beta 3301-15	23 XI 73	Oklahoma	64-B	70-12	
74-5b	F	Oklahoma 28/Eftu 3588-16	25 III 74	Oklahoma	70-9b	69-15b	
74-13a	M	Oklahoma 30/4119-19	9 XI 74	Oklahoma	64-B	70-12	
74-13b	F	Oklahoma 31/4120-20	9 XI 74	Oklahoma	64-B	70-12	
64-C	F	Oklahoma C/Linda 3752-17	22 VI 64	Oklahoma	WB	WB	
75-	U	Oklahoma 32/4379	15 III 75	Oklahoma	70-9b	69-15b	
73-1b	M	Omaha 14/1SIS 1670	3 III 73	Omaha	69-17b	70-8b	
74-8b	F	Omaha 17/1SIS 1962	25 V 74	Omaha	69-17b	70-8b	
68-A	M	Roskilly A/	1968	Roskilly	WB	WB	
67-8	M	Houston 1/Houston	17 X 67	San Antonio	67-U	67-V	

Register of Golden Marmosets, *Leontopithecus rosalia rosalia*, living as of June 1, 1975

STUDBOOK NUMBER	SEX	STUDBOOK NAME/ HOUSE NAME HOUSE NUMBER	DATE OF ARRIVAL OR BIRTH	SITE	MALE PARENT	FEMALE PARENT	DATE OF DEATH
71-19c	F	Los Angeles 16/93220	19 XII 71	Los Angeles	67-AC	67-AE	
73-4a	M	Los Angeles 17/07030	14 V 73	Los Angeles	71-12b	71-13b	
72-9b	M	Washington 20/M00341	1 VI 72	Los Angeles	67-H	68-3b	
67-6b	M	San Diego 26/red tag C	3 VIII 67	Los Angeles	?	?	
75-	F	Los Angeles 28/93351	12 II 75	Los Angeles	71-12a	71-13b	
67-K	M	Monkey Jungle D	5 V 67	Mo J	WB	WB	
69-11a	M	Monkey Jungle 4	25 IV 69	Mo J	67-K	67-N	
69-11b	F	Monkey Jungle 5	25 IV 69	Mo J	67-K	67-N	
71-6a	M	Monkey Jungle 11	19 III 71	Mo J	67-K	67-N	
71-6b	M	Monkey Jungle 12	19 III 71	Mo J	67-K	67-N	
71-8a	M	Monkey Jungle 13	29 III 71	Mo J	69-11a	67-P	
71-8b	M	Monkey Jungle 14	29 III 71	Mo J	69-11a	67-P	
73-3a	M	Monkey Jungle 15	12 V 73	Mo J	69-11a	67-P	
73-3b	M	Monkey Jungle 16	12 V 73	Mo J	69-11a	67-P	
74-16	M	Monkey Jungle 19	14 IV 74	Mo J	71-6a	69-11b	
64-B	M	Oklahoma B/Chico 0068-01	22 VI 64	Oklahoma	WB	WB	
69-15b	F	Shadow 8/Misty 1759-07	1 VIII 69	Oklahoma	66-A	66-B	

Register of Golden Marmosets, Leontopithecus rosalia rosalia, living as of June 1, 1975

STUDBOOK NUMBER	SEX	STUDBOOK NAME/ HOUSE NAME HOUSE NUMBER	DATE OF ARRIVAL OR BIRTH	SITE	MALE PARENT	FEMALE PARENT	DATE OF DEATH
73-2b	F	San Antonio 4/Jinx	13 III 73	San Antonio	67-8	67-11	
75-	F	San Antonio 7	31 III 75	San Antonio	67-8	73-2b	
69-4a	M	San Diego 29/red tag E	5 III 69	San Diego	?	?	
72-5a	M	San Diego 35/red tag B	23 III 72	San Diego	67-6b	69-16B	
72-5b	M	San Diego 36/red tag D	23 III 72	San Diego	67-6b	69-16b	
67-Q	M	Tokyo-Ueno A	3 VI 67	Tokyo-Ueno	WB	WB	
65-N	M	Washington C/30571 A	21 IX 65	DC	WB	WB	
68-3b	F	Washington 5/32721 B	16 II 68	DC	65-N	65-B	
67-H	M	Monkey Jungle B/NZP33691	5 V 67	DC	WB	WB	
67-M	F	Monkey Jungle F/NZP33692	5 V 67	DC	WB	WB	
71-7a	M	Washington 11/M00068	19 III 71	DC	67-H	68-3b	
72-1a	M	Washington 15/Moo276	15 I 72	DC	67-H	68-3b	
72-1b	F	Washington 16/M00277	15 I 72	DC	67-H	68-3b	
72-6a	M	Washington 17/M00319	17 IV 72	DC	65-N	67-M	
73-7b	F	Washington 22/M00709	11 VI 73	DC	65-N	67-M	
73-8a	M	Washington 23/M00715	16 VI 73	DC	67-H	68-3b	
73-8b	M	Washington 24/M00716	16 VI 73	DC	67-H	68-3b	

Register of Golden Marmosets, Leontopithecus rosalia rosalia, living as of June 1, 1975

STUDBOOK NUMBER	SEX	STUDBOOK NAME/ HOUSE NAME HOUSE NUMBER	DATE OF ARRIVAL OR BIRTH	SITE	MALE PARENT	FEMALE PARENT	DATE OF DEATH
74-2b	M	Washington 26/M00863	11 II 74	DC	67-H	68-3b	
74-3	F	Washington 27/M00872	15 III 74	DC	65-N	67-M	
74-6a	M	Washington 28/M00885	5 IV 74	DC	72-1a	72-6b	
74-6b	F	Washington 29/M00886	5 IV 74	DC	72-1a	72-6b	
73-6b	F	Los Angeles 20/M00940	10 VI 73	DC	71-7b	71-19c	
74-10a	M	Washington 30/M00996	16 VIII 74	DC	65-N	67-M	
74-10b	F	Washington 31/M00997	16 VIII 74	DC	65-N	67-M	
74-11a	M	Washington 32/M01006	3 IX 74	DC	67-H	68-3b	
74-11b	F	Washington 33/M01007	3 IX 74	DC	67-H	68-3b	
75-	M	Washington 36/M01186	26 III 75	DC	65-N	67-M	
75-	F	Washington 37/M01187	26 III 75	DC	65-N	67-M	

COLUMBIA ZOOLOGICAL PARK



JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

9 December 1975

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Mr. Donald D. Bridgwater
Minnesota State Zoological Gardens
Veterans Service Building
Columbus Circle
St. Paul, Minnesota 55155

Dear Don:

Please see enclosed copy of a letter received from President Werler on 4 December 1975. It is self-explanatory. My input concerning Marvin doing the orang studbook from the Conservation Committee so far to date supports this approach.

Apparently the AAZPA President has asked your Committee to make the decision. I already have a firm commitment from Marvin as well as a financial commitment from Chuck Bieler at the San Diego Zoo.

I would appreciate your expediting this formally as I feel I should be the one to get back in touch with Geoffrey Bourne at Yerkes in order to effect the transfer.

Thank you also for the additional data recently provided - more later.

Best regards.

Sincerely yours,

John M. Mehtens
Executive Director

JMM:ss

Enc.



American Association of Zoological Parks and Aquariums

EXECUTIVE OFFICES AT OGLEBAY PARK, WHEELING, W. VA. 26003 AREA CODE 304 - 242-2160

December 4, 1975

President
JOHN E. WERLER
Director
Houston Zoological Gardens
Houston, Texas 77002

President-Elect
GORDON HUBBELL, D.V.M.
Director
Crandon Park Zoo
Key Biscayne, Florida 33149

Vice-President
LARRY O. CALVIN
Director
Dallas Zoo and Aquarium
Dallas, Texas 75203

Past President
RONALD L. BLAKELY
Director
Sedgwick County Zoo
Wichita, Kansas 67212

Executive Director
ROBERT O. WAGNER
Oglebay Park
Wheeling, West Virginia 26003

DIRECTORS

WILLIAM E. MEEKER
Director
Sacramento Zoo
Sacramento, California 95822

DANIEL H. MORENO
Director
Cleveland Aquarium
Cleveland, Ohio 44103

DANIEL R. MICHALOWSKI
Director
Seneca Park Zoo
Rochester, New York 14621

EDWARD J. MARUSKA
Director
Cincinnati Zoo
Cincinnati, Ohio 45220

PAUL N. LINGER
Assistant Director
Denver Zoological Gardens
Denver, Colorado 80205

DENNIS A. MERITT
General Curator
Lincoln Park Zoological Gardens
Chicago, Illinois 60614

Mr. John M. Merhtens
Executive Director
Columbia Zoological Park
Post Office Box 1143
Columbia, South Carolina 29202

Dear John:

Thank you for your recommendation to ask Marvin Jones to fill the void left when Yerkes abandoned their orangutan studbook program.

Although this seems like the most logical approach to keep the studbook viable, I have asked the ISIS Committee, through Chairman Don Bridgwater, to make the final decision. If the committee is in agreement, Don will then ask for a firm commitment from Marvin to assume the studbook responsibility and will ask for a financial commitment from the San Diego Zoo.

Sincerely,

John E. Werler
President

JEW:avb
cc: AAZPA Officers & Directors



Minnesota Zoological Garden
Wentworth Office Center
33 East Wentworth Avenue
West Saint Paul, Minnesota 55118
Telephone (612) 227-9216

December 5, 1975

John Mehrtens, Chairman
AAZPA Wildlife Conservation Committee
Columbia Zoological Park
Box 1143
Columbia, South Carolina 29202

Dear John:

As I now understand it, President Werler has designated a Stud Book Planning Committee as a planning committee under the AAZPA ISIS Committee. With your help and with Allan's help as Presidential Advisor on Stud Books, we shall forge ahead and see if we can accomplish our goals within the next year. I think by now you should have received a general communication concerning the submission of the initial C/P downgrading request.

With regard to your letter concerning specific acknowledgment of currently existing stud books, I do not believe it is nit-picking and will forward an addendum to Washington indicating the specific information. Actually, the decision was that this could come as a supporting document during the review period but it certainly can't hurt to provide you with that information now.

Thanks for sending the editorial comment that you had published in the "Natural Resources" Magazine. I read it the other evening at a particularly down time and it helped to make life seem worthwhile again.

Sincerely,

Donald D. Bridgwater, Chairman
AAZPA ISIS Committee

DDB/je



Minnesota Zoological Garden
Wentworth Office Center
33 East Wentworth Avenue
West Saint Paul, Minnesota 55118
Telephone (612) 227-9216

December 5, 1975

John Mehrtens, Chairman
AAZPA Wildlife Conservation Committee
Columbia Zoological Park
Box 1143
Columbia, South Carolina 29202

Dear John:

After conversation with Chuck Bieler and with President Werler as well as discussions in San Diego between Ulie Seal and Marvin Jones, it is my strong recommendation that John Werler appoint the San Diego Zoo as the home base and supporting facility for the orangutan stud book and that Marvin be placed in charge of this program. He has already begun to put his historical data on gorillas and orangutans into the ISIS program and I think would do a superb job in updating, evaluating and continuing Uakaris stud book. I have also indicated this to President Werler by telephone and forward a copy of this letter to him.

I have also received a copy of the letter from President Werler indicating that the stud book committee will be considered a single subcommittee under the AAZPA ISIS committee and have indicated to him that we will be willing to take this on and make it work.

Enclosed please find a copy of the current committee structure.

Sincerely,

Donald D. Bridgwater, Chairman
AAZPA ISIS Committee

DDB/je

Enclosure

cc: John Werler

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

28 November 1975

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

Mr. Donald D. Bridgwater
Minnesota State Zoological Gardens
Veterans Service Building
Columbus Circle
St. Paul, Minnesota 55155

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

Dear Don:

GEORGE R. DAVIS
BUSINESS MANAGER

I would offer two comments concerning your recent letter; specifically the proposals presented to FWS/OES dated 7 November, relative to the captive, self-sustaining population status of both tigers and leopards.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

I understand, of course, that the comment, "development of a studbook and history pedigree program" reflects the inclusion of the extant rare tiger subspecies status into the ISIS program. However, I would comment that the wording would seem to indicate to FWS/OES that no such rare tiger subspecies studbook now exists. Inasmuch as the commentary indicates that the development of such program was authorized by AAZPA at Calgary, I am concerned that, if the statement were misconstrued, it might create problems with IUDZG and their involvement with the ISIS Studbook Program.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Concerning the proposal involving leopards, no mention is made of the fact that studbooks are maintained on three subspecies. While the proposal obviously deals only with the species, I feel rather strongly that mention of studbook registry systems for those subspecific races known to be rare, in short supply, or whatever, would underscore the concern of professional zoological parks for such subspecies; and thus, further underscore the concept that zoological parks, of themselves and through AAZPA, are capable of self-control.

I may be nit picking, and, if you are so inclined, I will accept three "expletives deleted" comments. Best regards.

Sincerely yours,


John M. Mehtens
Executive Director

JMM:ss

cc Robert O. Wagner
John E. Werler



COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

27 November 1975

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
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PALMER E. KRANTZ, III
GENERAL CURATOR

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DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Mr. Donald D. Bridgwater, Director
Minnesota State Zoological Gardens
Veterans Service Building
Columbus Circle
St. Paul, Minnesota 55155

Dear Don:

Apparently, there will be no sub-committee of either the ISIS Committee or the Conservation Committee relative to studbooks, at least as far as the November issue of the Newsletter would indicate. Nevertheless, since Shoemaker was appointed Presidential Advisor on Studbooks and works here, and inasmuch as the Conservation Committee and the Computer Data Committee concern themselves with, amongst other things, endangered species, I feel I should provide you with data pertinent to studbooks.

The copy enclosed is self-explanatory. If you have any comments, let me know. I am not certain and I have not had the files checked, but I think I may have commented on this before to you. If I have, you haven't answered.

Sincerely yours,



John M. Mehtens
Executive Director

JMM:ss

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

27 November 1975

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

MARK D. PYRITZ
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ALAN H. SHOEMAKER
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DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Mr. John Werler, President
American Association of Zoological Parks & Aquariums
Houston Zoological Gardens
P. O. Box 1562
Houston, Texas 77001

Dear John:

Be advised that per the various commentary developed at a number of ISIS - Conservation Committee meetings at Calgary, I followed up on the status of the studbook for oranges. This apparently was being maintained by Yerkes in Atlanta.

The Director of Yerkes, Geoffrey Bourne, has advised that the studbook is now inactive and further, that, Yerkes is in no financial position nor expertise position to continue the studbook. Dr. Bourne is most anxious to provide all accumulated data to a studbook keeper named by AAZPA.

Marvin Jones has indicated that he would be most amenable to maintaining the orang studbook. Chuck Bieler has advised that San Diego will be more than happy to provide the financing necessary to bring the studbook up to date and maintain it thereafter, provided Marvin is in fact the studbook keeper.

With this letter, I am advising you, the Conservation Committee, as well as the ISIS Committee Chairman and will anticipate any return commentary felt necessary promptly.

I feel that Marvin's demonstrated interest in oranges, his knowledge of systematics, as well as his international contacts make him a logical choice. San Diego's financial backing assures a proper job. I feel strongly that Marvin should be appointed orang studbook keeper.

Inasmuch as per the November issue of the Newsletter, it would appear that no studbook sub-committees are to be named either under the Conservation Committee or the ISIS Committee, I would appreciate some advice from you concerning

Mr. John Werler
Page two
27 November 1975

who actually makes the decision and appoints the studbook keeper. I would like to act promptly on this while the ball is rolling. Please advise.

Sincerely yours,

A handwritten signature in dark ink, appearing to be 'JMM', written over the words 'Sincerely yours,'.

John M. Mehtens
Executive Director

JMM:ss

cc AAZPA Wildlife Conservation Committee
Don Bridgwater
Alan Shoemaker

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

25 November, 1975

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Mr. John Werler
Houston Zoological Gardens
P.O.Box 1562
Houston, Texas 77001

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Dear John:

I appreciate being named "Presidential Advisor for Studbooks."
I will be glad to assist your office in such matters involving
studbooks and related matters, and look forward to working with
you in the coming year. We expect to issue studcards for leo-
pards shortly after Christmas and will notify you upon completion.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

Sincerely:

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS


Alan H. Shoemaker
Zoologist

cc: Don Bridgwater

① Agency to maintain orang
studbook - San Diego -

Marvin has suggested
idea to Chuck Bieler

② Yerkes has been requested
to join 1515 + signed
up in Oct. 1974. Then
upon receiving data forms
they decided against
participating.

Signup sheet signed
by Kuhro ^{sr.}, Chief, Veterinary
Dept.

③ Marvin is giving us
current ^{with friends} info on orangs
& gorillas (on 1515 forms)
for \$20/day.

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

27 October 1975

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
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ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Mr. Don Bridgwater
Minnesota State Zoological Gardens
Veterans Service Building
Columbus Circle
St. Paul, Minnesota 55155

Mr. Marvin Jones
4070 Kansas Street
#113
San Diego, California 92104

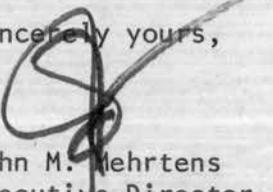
Dear Don and Marvin:

Enclosed find copies of a letter from Jeffrey Bourne of Yerkes concerning the current status of the Orang studbook. Also, find copy of my immediate response to him.

Obviously, the immediate problem is to determine a list of individuals whose expertise as well as institutional finances allow for an update of the studbook, proper coalition of Bourne's material, and the continued technically accurate maintenance of the studbook.

If you will both let me have your thoughts on the matter, I will proceed from there.

Sincerely yours,


John M. Mehtens
Executive Director
Chairman, AAZPA Wildlife Conservation Committee

JMM:ss

Encs.

YERKES REGIONAL PRIMATE RESEARCH CENTER
EMORY UNIVERSITY
ATLANTA, GEORGIA 30322

October 21, 1975

Mr. John M. Mehrtens, Chairman
AAZPA Wildlife Conservation Committee
Columbia Zoological Park
P. O. Box 1143
Columbia, South Carolina 29202

Dear Mr. Mehrtens:

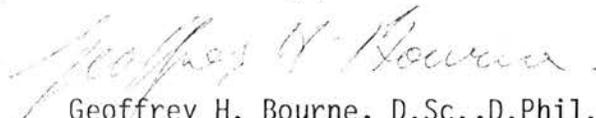
In response to your letter of October 9th, the Yerkes Primate Center does maintain records on the International Orangutan Studbook. I agreed to assume this responsibility in 1967 since there was no other agency willing to undertake this work.

The Yerkes Primate Center receives no reimbursement from any source for the time, materials, postage and effort devoted to this task. Funds for this purpose are taken from the operating budget of the Center. In as much as support funds are not sufficient to meet our operational needs, we have recently reduced money and time for the studbook project. As a result, we are only able to collect questionnaire information and hold it, rather than distribute studcards and compile the studbook.

We have never been requested to submit data to the ISIS Program. We do submit data to the gorilla studbook keeper in Germany.

As a part of your undertaking, it would be most helpful if you find an agency capable of maintaining the Orangutan Studbook and financially able to support this project to which we could transfer this responsibility. With the prospect of declining support for Primate Centers from the federal government, it appears that we will not have the funds available to increase our studbook activity for the next few years.

Yours sincerely,


Geoffrey H. Bourne, D.Sc., D.Phil.
Director

GHB/gc

COLUMBIA ZOOLOGICAL PARK

JOHN M. MEHRTENS
EXECUTIVE DIRECTOR

RIVERBANKS PARK COMMISSION
POST OFFICE BOX 1143
COLUMBIA, SOUTH CAROLINA 29202
(803) 779-8717

27 October 1975

PALMER E. KRANTZ, III
GENERAL CURATOR

E. R. VAN DE GRIFT, III
D. V. M., VETERINARIAN

Dr. Geoffrey H. Bourne, D.Sc., D.Phil.
Director
Yerkes Regional Primate Research Center
Emory University
Atlanta, Georgia 30322

DALFORD W. MANESS
SUPERINTENDENT
GENERAL OPERATIONS

GEORGE R. DAVIS
BUSINESS MANAGER

Dear Dr. Bourne:

Thank you for your prompt response to my letter of 9 October concerning the International Orangutan Studbook and its maintenance.

MARK D. PYRITZ
HEAD KEEPER, MAMMALS

This letter is primarily to acknowledge receipt. There are a number of zoological institutions available that would be in a position to maintain these studbooks both from a financial and technical standpoint. These institutions are now in the process of being contacted by the AAZPA committees involved and I will be back in touch with you concerning same in the very near future.

ALAN H. SHOEMAKER
ZOOLOGIST

DENNIS S. DECOURCEY
CURATOR, BIRDS

ROBERT E. SEIBELS
HEAD KEEPER, BIRDS

I am most appreciative of your spirit of cooperation concerning the studbooks. We feel they are of critical importance for the continued maintenance and reproduction of captive populations.

RALPH E. HUTTO
SUPERVISOR
ART AND EXHIBITS

Sincerely yours,



John M. Mehtens
Executive Director
Chairman, AAZPA Wildlife Conservation Committee
JMM:ss

cc Don Bridgwater
Marvin Jones



I S I S - INTERNATIONAL SPECIES INVENTORY SYSTEM

Participation Response Form

PLEASE PRINT

1. Our institution, Yerkes Regional Primate Research Center,
(address) Emory University, Atlanta, Georgia 30322,
will participate in the AAZPA census and vital statistics program,
ISIS, for captive native, exotic, and endangered species.

W. L. Kuhn Chief, Veterinary Dept.
Signature Title

2. (a) We have approximately 1175 specimens of mammals,
(b) " " " 0 " " birds,
(c) " " " 0 " " reptiles and
amphibians.

3. The person in our institution who will have responsibility for
completing the data forms is Mrs. Mary Ellen Barnes, and
the phone number is 377-2411 ext. 7972.

4. I need another copy of the presentation on zoo animal census and
inventory made at the 1973 annual AAZPA meeting in Houston.
(Yes) X, (No) _____

5. Comments or queries: _____

6. Please return this form to:

ISIS
Minnesota Zoological Garden
Veterans Service Bldg.
Columbus Circle
St. Paul, Minnesota 55155

CC-PL
MD
WK
LS
DB
US

Sent
10-8-74

PEDIGREE ANALYSIS SUBSYSTEM

International Species Inventory System

July 22, 1975

ISIS (International Species Inventory System) was officially adopted by the American Association of Zoological Parks and Aquariums in October of 1973, with official headquarters at the Minnesota Zoological Garden. ISIS was charged with the responsibility of developing and maintaining vital statistics data for all captive species, beginning with the mammals.

The development of the computer system necessary for ISIS was begun in January of 1974 on the IBM 370-155 computer system located at the Information System Division (ISD) of the State of Minnesota. Eight subsystems were designed to edit data received from the participating zoos (now totaling 176 in the U.S. and Canada), build data files, and generate several types of reports about these mammals. The three input subsystems are currently running on a production basis at ISD. The five report generating subsystems will be under production status by the latter part of August 1975.

The original purpose of ISIS was to collect, tabulate, and report vital statistics data as individual zoo inventories and a national census of all the mammals. Such reports are essential for local management and are also providing a major information source for zoos in their efforts to wisely maintain self-sustaining populations of exotic and endangered species in captivity over many generations. However, the vital statistics data already collected offers much broader opportunities for intelligent management than simple inventory reports.

To take an important case: in animals as well as in humans, marriages of convenience are usually not the best kind. Yet, most zoo mates are chosen from whomever is close at hand. Of course, readily available mates are often relatives and inbreeding is the result.

Already underway is a study, supported by the Minnesota Zoological Garden, evaluating the risks associated with inbreeding and developing computer-based methods to measure and to minimize them. Considerable effort has gone into the development of computer programs to evaluate the consequences of various mating systems.

ISIS Pedigree Analysis Subsystem (cont.)

To study past inbreeding, a large FORTRAN program designed for human pedigree analysis (MacLean, 1969, in Computer Applications in Genetics) has been acquired and modified for use with historical breeding data (called studbooks). This will produce a measure of the inbreeding in the history of today's animals, an important consideration for future mating choices. As yet incomplete is a portion of this program which will tabulate all ancestors and descendants of a given animal. This will be of real value in finding, tracing, and eliminating specific genetic defects.

Just begun is another pedigree analysis option which will allow estimates of the relative risk of inbreeding-caused defects (sterility, death, etc.), for particular animals. This option is based on calculations by H. M. Slatis ("An analysis of inbreeding in the European bison," *Genetics* 45:275, 1960). This risk estimation requires elaborate computations feasible only by computer.

Thus overall, the pedigree analysis subsystem of ISIS will facilitate genetic management, provide detection of inbreeding-caused problems, and suggest solutions when such problems appear.

ISIS Pedigree Analysis Subsystem (cont.)

SYSTEMS ANALYSIS: PEDIGREE ANALYSIS SUBSYSTEM

Doing these things will require substantial additions to ISIS programing. It will be necessary to produce specific data records which will contain all the data necessary to produce the pedigrees. This involves utilizing the data from two other subsystems, physiological norms and life history, both for making mating choices when this is feasible and for correlating with extent of inbreeding when enough data is in hand. Historical data as well as that from animals currently living will be involved.

From the specific data records a pedigree file will be constructed. Analyzing the inbreeding of a particular family tree built from the pedigree file will require the data records to contain parents' identification, the individual's lifespan dates, and its locations throughout its life.

The pedigree analysis subsystem will be divided into four separate operating segments to accomplish the above goals.

- (1) The ISIS history data file must be scanned and pedigree records produced for the pedigree data file.
- (2) The pedigree data file must be maintained on an annual basis from the current inventory data file. This will add new records to the pedigree data file as animals are born and will update existing pedigree records as the status of the animal changes.
- (3) The pedigree analysis will be performed annually on the data records in the pedigree file to evaluate the species breeding in general and to search for particular inbreeding-linked problems.
- (4) When special inbreeding-linked problems are encountered, a report will be produced on demand, containing a listing of possible matings found suitable from vital statistics, physiological and life history data, and which would substantially lower the inbreeding of the next generation.

COST ESTIMATES

ISIS Pedigree Analysis Subsystem

Segment 1

120 hrs Systems Analysis (\$13.75/hr)	\$1650	
150 hrs Programing (\$11.50/hr)	1725	
Computer & Equipment	<u>340</u>	
		\$3715.00

Segment 2

50 hrs Systems Analysis	\$ 687	
80 hrs Programing	920	
Computer & Equipment	<u>240</u>	
		\$1847.00

Segment 3

180 hrs Systems Analysis	\$2475	
50 hrs Programing	550	
Computer & Equipment	<u>200</u>	
		\$3225.00

Segment 4

40 hrs Systems Analysis	\$ 550	
120 hrs Programing	1380	
Computer & Equipment	<u>150</u>	
		\$2080.00

 \$10,867.00

PRELIMINARY ANALYSIS OF THE
ISIS NATIONAL INVENTORY AND ACQUISITION REPORT - 5/30/75

The first International Species Inventory System mammalian species distribution summary (our first national survey) was prepared May 5, 1975. It records data on 12,156 living specimens based on reports from 92 zoos, of whom 44 have completed their entire inventory reports. The report summarizes events occurring during the year 1974, thus, any births or deaths occurring during 1975 are not included. The report contains data on 12,156 living specimens of mammals, of which 1,944 were born in 1974, and 287 deaths were recorded. The 287 deaths represent only a proportion of the deaths occurring in 1974 since we did not begin collecting data until June 1974. Our instructions to the zoos requested they begin with their currently living collection and then report deaths and other changes as they occurred from their beginning date. This means that all animals born in 1974 and still living in the zoo would be recorded, whereas only about ¼th of the year's deaths are on record. We, therefore, estimate that the actual number of deaths is around 1,144. More accurate data will be available at the end of 1975. Thus, 16% of the 12,156 living specimens on record were born during 1974, and 9% of a total of 13,300 died during 1974. The total number of acquisitions during this period was 3,517 and includes 1,944 births, 784 purchases, 165 trades, 414 donations, and 155 loans. During the same period 760 specimens were released or removed from the individual collections. This included the 287 deaths mentioned above and 249 sales,

74 trades and 88 loans. At the time of reporting, 157 autopsies were recorded for the 287 deaths, yielding an autopsy rate of 55%. This rate would increase with later autopsy reports as these became available, but even at this percentage is higher than the nation-wide rate of human autopsies. Although it will be another six months before complete data are available to allow precise estimates of overall birth rates and death rates, it is already clear that the number of animals being born in zoo collections considerably exceeds the current death rate. This is the result of many successful breeding programs which are producing sufficient numbers of some species such that no additional space is available in qualified zoo collections for these animals. It also reflects the fact that the death rate for many species in captivity is considerably lower than that observed in the wild since zoo collections offer continuous adequate nutrition, treatment for disease and no predator pressure. Rather, a major consideration for future zoo breeding management policy will be carefully regulated breeding to maintain adequate genetic heterogeneity in the gene pools to be maintained in captivity primarily from captive stock. The data base provided by the ISIS program of the AAZPA will make a significant contribution to the achievement of these breeding policy objectives. An example of the kind of information available to the zoos may be illustrated with our available data on an endangered species, the jaguar, Panthera onca. This species is currently considered to contain eight subspecies of which three are currently identified as being held in captivity. The following data are the actual numbers based upon the animals reported, that is 12,156. It is estimated that this represents one-third of the animals held in collections

in North America. Since the sample size is so large and there are a wide spread of zoo exhibitors represented, we feel that a reasonable estimate of the actual numbers in each of the categories to be discussed can be obtained simply by multiplying by three. Thus, the total number of jaguars listed are 125, of which 111 are unidentified with respect to subspecies classification, and 24 are placed in either Panthera onca centralis or Panthera onca onca, or Panthera onca arizonensis. These 125 animals are held in 42 zoos. The sexes are as follows: 66 females, 58 males, and 1 of unknown sex. Eleven of the zoos held animals of one sex only, for a total of 13, yielding 31 zoos with 114 animals in a potentially paired situation. During the time of record, 35 baby jaguars were born and 30 currently remain in these collections. There appear then to have been 13 litters born in 12 zoos, with two deaths occurring during the first 60 days. Thus, the 114 animals minus 30 born during the year yields 84 animals that might potentially be breeders. However, an additional 13 are less than two years old, yielding 71 animals of approximately breeding age. A survey of the data indicated 30 zoos with pairs of animals older than two years that might potentially produce young. Twenty-three of these zoos had pairs between the age of two and ten years, which produced a total of nine litters in eight of the zoos. Seven of the zoos had pairs greater than 10 years of age, which produced three litters. Thus, eleven out of 30 zoos produced a total of 12 litters for a total of 34 animals born. If one multiplies these numbers by three to arrive at an estimate of the total captive jaguar population in North America, the data indicate the presence of 375 animals and

the probability that about 105 births occurred during the year of 1974. The effective breeding population would be in the vicinity of 210 animals, with adequate recruitment to maintain this population and produce a surplus. Consideration will need to be given to the age structure of this effective breeding population in order to insure that its composition will allow a long-term stability of the population and also assure the management of breeding in such a manner as to avoid substantial inbreeding and loss of genetic heterogeneity. This analysis of the ISIS data would indicate that these goals are easily obtainable given the development of explicit breeding management strategies, given the ability to exchange animals readily between qualified zoos, and given the continued development of this data base. The enthusiasm and cooperation of the North American zoos in developing this program represents a unique achievement in man's relationships to captive animals and ultimately to the benefit of these species in the wild. The accomplishment of these goals is clearly within the grasp of the zoos and has been accomplished by sustained cooperative effort between the zoos, private foundations, and several government agencies. It clearly signified the interest of all groups in the welfare of the species and the effort to make a significant contribution towards their ultimate continued survival in natural habitats.

GENE POOL CONSERVATION AND BREEDING STRATEGY FOR ZOOS

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INTRODUCTION:

It is clear that zoos will rely increasingly on captive breeding populations. Maintaining such breeding groups will probably become a major role and a major responsibility.

Whether or not wild populations survive, one expects that the captive breeding population will be nearly closed, in the sense that further introductions of wild stock will be infrequent. Most such groups will be maintained at the level of hundreds of animals or less. Over the long term, continued propagation of such small closed groups has major genetic consequences. The population loses most of its' genetic variability, and becomes highly inbred.

The rate and results of this inbreeding process are subject to control. What is required is partial or complete control of matings, and the use of a carefully chosen mating system.

IMPORTANCE OF GENETIC VARIATION:

Most fundamentally, genetic variation is the basis for future adaptation to changing environments. A basic theorem of evolutionary genetics is that the rate of adaptation is proportional to the genetic variance in fitness. A population with no genetic variation persists only as long as the environment stays within the tolerance limits of one individual. All members of the population have roughly the same tolerance; beyond this range they all fail. The global rate of environmental change is presumably increasing due to man, so populations with reduced potential rates of adaptation can be expected to vanish.

A relevant example of this is the relationship between genetic variation and disease resistance. Disease producing organisms are constantly evolving, new virulent strains appear sporadically. A population with normal genetic diversity has a good chance of including at least a few individuals who will happen to be resistant to the new, improved, pathogen. The risks of genetic uniformity were demonstrated a couple of years ago by a new form of corn blight which

swept across fields of genetically uniform hybrid corn. The new strain appeared late in the season, but the loss was still 6% of the U.S. corn crop. If the corn crop had stayed the same the next year, the loss would have been spectacular. However, the producers of corn seed had other genetically different strains at hand, and some were found to be resistant to the new blight. These were used; from the point of view of the blight, the corn made a sudden adaptation. Unfortunately, if the original genetic diversity of an animal population is lost, there may be no genetic insurance policy.

There is another possible role of genetic variation in natural populations. This is known as the Niche-Width Variation Hypothesis, and is still a subject of controversy in population biology. The idea is simple; genetically different individuals will utilize resources in slightly different ways, reducing the amount they compete. This means the population can be larger. As larger populations are thought more likely to persist, this effect may be important.

INBREEDING:

In most respects inbreeding is harmful. In animals, significant inbreeding usually causes a reduction in viability, growth rate, fertility, fecundity, lactation, and inter-species competitive ability. There are several reports of thresholds, where the effects suddenly become serious as a level of inbreeding is reached in the range 0.25 to 0.75 . To generalize much data of variable quality, small lines inbred rapidly by brother-sister mating have at best a 5% chance of surviving 20 generations. The rare line that survives this long will usually persist indefinitely. Apparently the founders were unusually low in harmful recessives, or selection during inbreeding was unusually effective in eliminating them. Many agricultural stations have intentionally tried to establish inbred lines of various animals in the hopes that recrossing them would be as productive as was the case with corn. The results of great efforts have been near universal extinction of the lines.

An important, but much ignored point is that the rate of inbreeding is crucial. Almost all literature data on the consequences of inbreeding is for the maximum possible rate, brother-sister mating. If animals are inbred more slowly, natural selection has a better chance to eliminate harmful recessives. It is very difficult to extrapolate the data to slower rates of inbreeding, but it is at least clear that the slower the rate of inbreeding, the less serious the consequences of reaching a given level of inbreeding.

There are two cases where minimizing the rate of inbreeding might not be desirable. One is the situation where an attempt is being made to domesticate an animal. Examples are musk oxen in Alaska, and eland in the Soviet Union. In this case, if useful genetic variation still exists in the population, selecting for it will involve intentional inbreeding. The other case is a paradox, and will be discussed below.

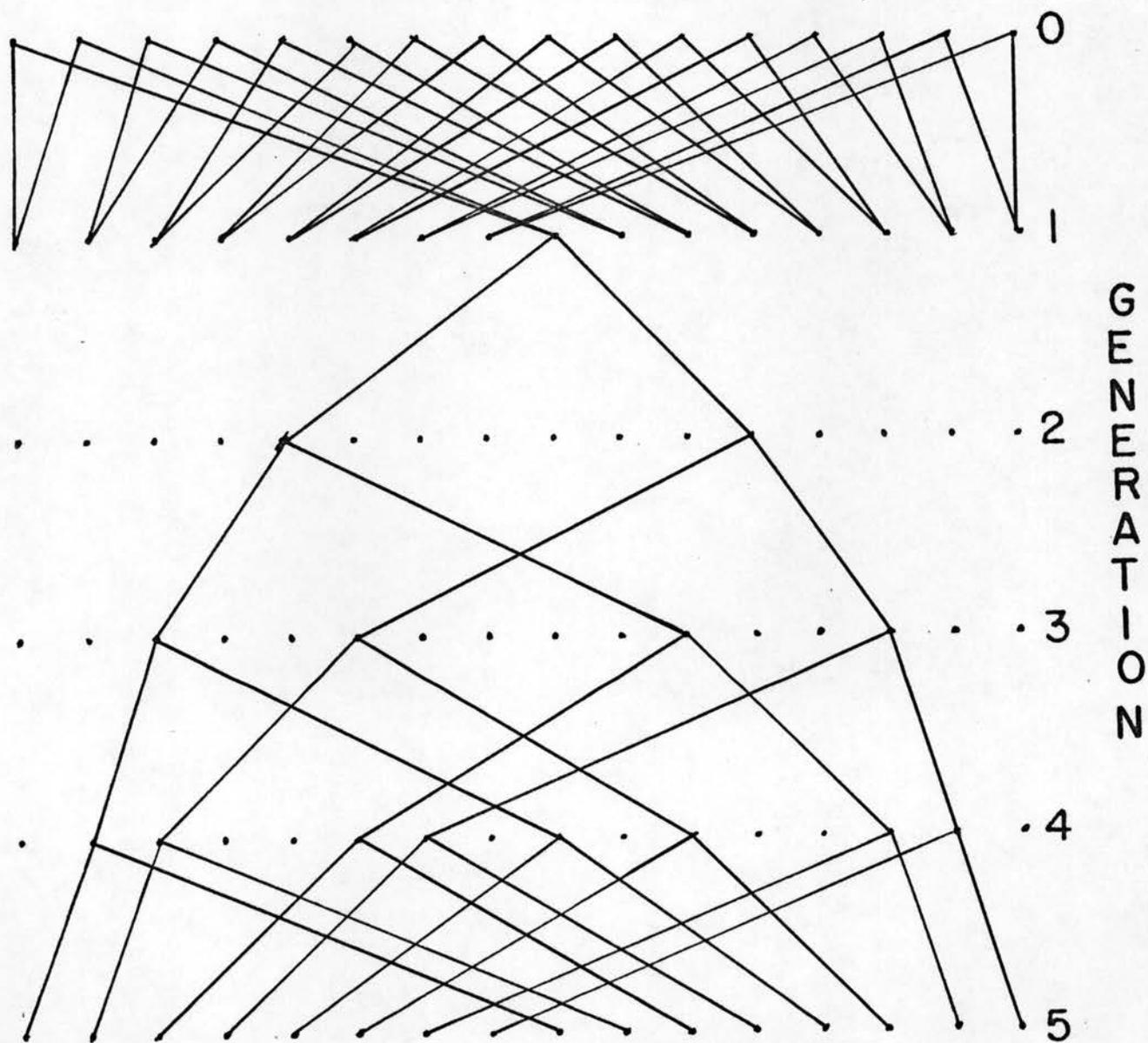
METHODS TO CONSERVE GENE POOLS:

There is an extensive literature on the subject of gene pool conservation. There have been several national and international symposia on the topic, and numerous publications. Unfortunately, almost all the work is on plants. Plants are a very much simpler problem, and there are now a considerable number of plant germ plasm collections, where plant genetic diversity preservation is the primary goal. The few publications which discuss this problem in animals are unanimous in the recommendation that something be done. I am unaware of any specific proposals as to just what.

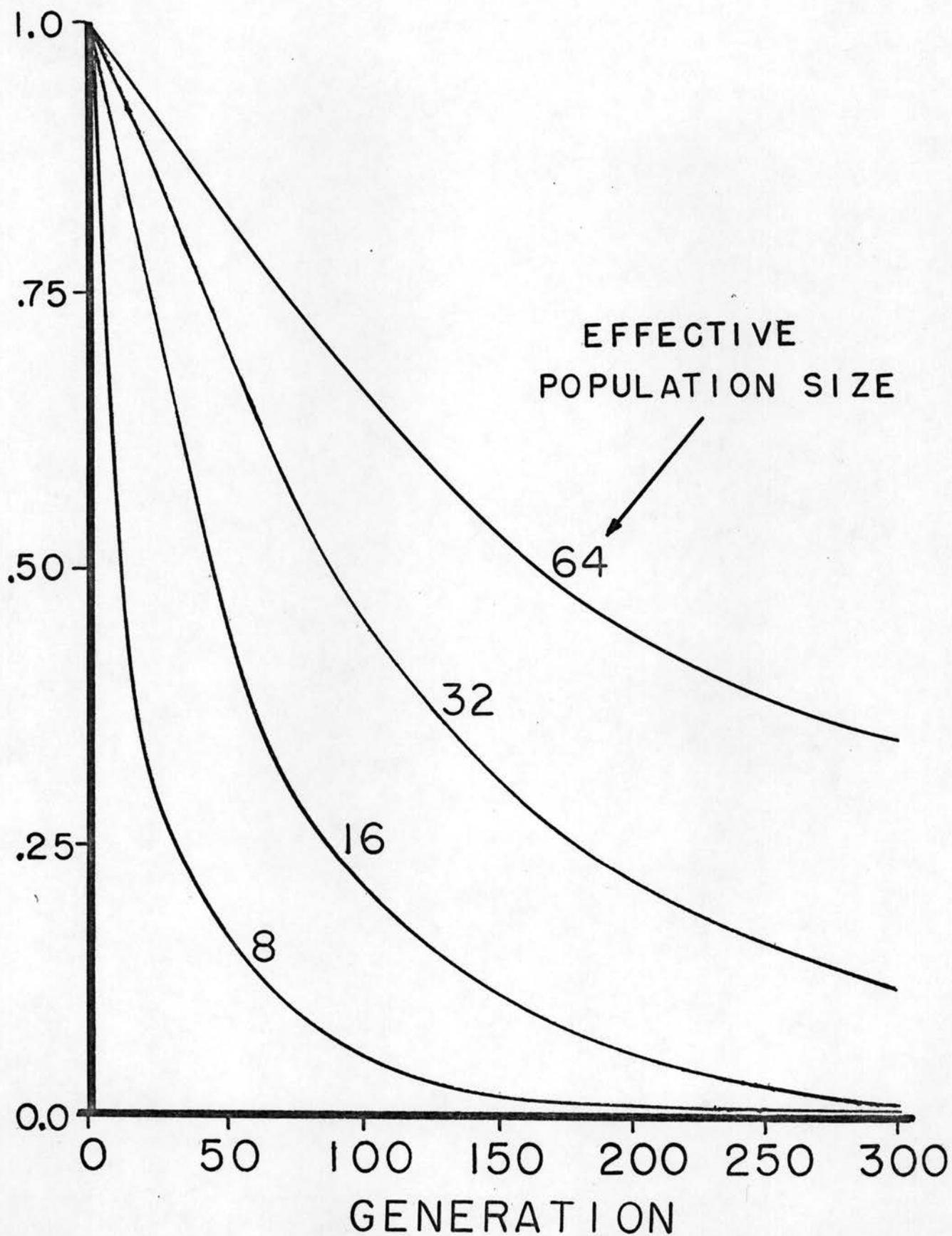
Actually, there are two breeding programs that are the optimal solution to the problem of animal gene pool conservation. They are very different, and possibly both should be used on each species. The first was proposed by Sewall Wright in 1921, and is known as "Maximum Avoidance of Inbreeding". It is the theoretically best answer to slowing the inbreeding process, and therefore slowing the loss of variation. It amounts to mating the least related animals with each other in each generation. The next page shows the scheme, and the following page shows its' effectiveness.

MAXIMUM AVOIDANCE
OF INBREEDING

$N = 16$



DECAY OF VARIABILITY;
MINIMUM INBREEDING

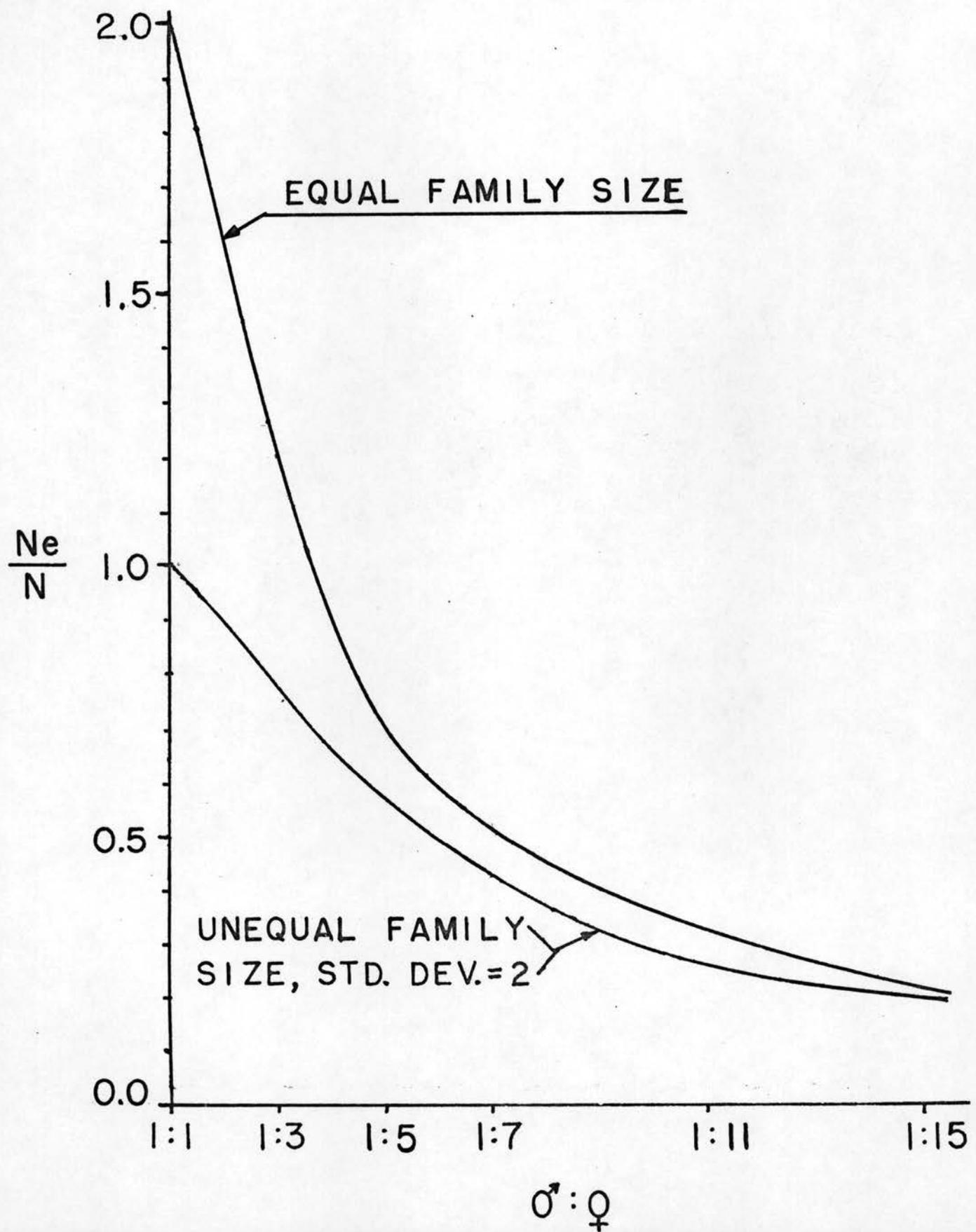


For population sizes in the range 50 to 100 or greater, this mating system is quite effective in preserving variation. Note that half of the variability should remain after more than 100 generations. Ultimately, of course, the population will reach equilibrium at a very low level of variation. The population size factor is called "effective population size", which bears explaining. This is a comparative term, and is based on the characteristics of a population which mates at random, and whose family sizes vary in such a way that the standard deviation of family size equals two. Normal zoo practice probably results in an effective population size substantially less than the actual number of breeding adults. In the future, the ISIS records will allow this to be measured. Adjusting two aspects of the population can give an effective population size equal to twice its' number of breeding adults, a profound improvement from the point of view of preserving genetic variation in a finite population of animals. The next page illustrates the effects of sex ratio and equality of family size. For equal numbers of males and females, and equal offspring number for each mating, the effective population number is twice the actual number. As the breeding program deviates from these conditions, the effective number, and thus the success in preserving variation, drops rapidly. Another way to say all this is that a population of 16 with 1:1 sex ratio, equal family size, mating most distant relatives, will preserve genetic diversity as effectively as a population of 64 with a 1:5 sex ratio and a standard deviation of family size equal to two.

The second optimal method to preserve genetic diversity is paradoxical, in that it involves establishing several inbred lines. Each should be roughly four to eight animals, and this group would be inbred. The use of a line size greater than two will reduce the risk of loss substantially. Each such inbred line would preserve indefinitely the genetic diversity of one wild animal. At some future date, the lines would be recrossed and the variation combined into one population for use in restocking, etc.

This method is the only one that preserves substantial variability indefinitely, but it is also the most risky. The consequences of its' use are still being worked on, but provisionally it might be worth doing using excess animals from a maximum avoidance scheme as described above.

SEX RATIO VERSUS EFFECTIVE POPULATION SIZE



WHAT DO WE WANT TO PRESERVE?

As a minimum I think we all agree that species should be preserved for aesthetic reasons, as examples of the diversity of the organic world. From this point of view, what is important is to absolutely minimize the chances of extinction. A breeding program with this goal would involve some selection for adaptation to zoo conditions. Animals would be bred, and especially successful individuals or pairs would be allowed to produce numerous offspring, who would thus make up a disproportionate part of the next generation. Their parents would have had a high "captive fitness". This kind of breeding program is currently nearly universal. As an example, the Bronx tigress mentioned by W. Conway in his presentation at the AAZPA Meetings last year, had thirty surviving offspring, most of whom are also highly successful. It's important to realize that this represents strong selection and considerable loss of genetic diversity. The results from continuing this program are substantial loss of diversity very quickly, and eventual partial domestication. This is not necessarily a bad result at all, but represents a choice to be made.

If this route is chosen with a given species, it's also important to realize that it curtails further options. The loss of variation would be very rapid, the possibility of recovery small. If a population with greatly reduced variability were expanded in size, one would have to wait hundreds to thousands of generations for substantial recovery of genetic diversity by mutation and recombination.

Alternatively, the goal of preservation can be to maximize the preservation of variation, and thus increase the still small chances of re-introduction. For multiple reasons, the success record of re-introductions is dismal, and significant genetic diversity of stock is certainly no guarantee of success. It is highly probable, however, that low genetic diversity nearly guarantees failure.

A breeding program with this goal would be an attempt to slow down adaptation to captivity. The most important rule would be to restrict family sizes equally. Evolution is differential reproductive success, and it would be desirable to stop evolution. Following one or both of the mating systems which maximize genetic diversity would also be critical.

This paper represents conclusions from the halfway point of this project, undertaken for the Minnesota Zoological Garden.

Yet to be completed are models which consider the effects of infrequent wild introductions, the level of interchange between various zoo populations, each of which is under a particular mating system, and further study of the possibility of using multiple inbred lines to conserve genetic variability.

Also underway is a computer program package which will evaluate the breeding history of those animals for which we have records. Inbreeding coefficients, and other pedigree data will be computed. Przewalski's horse is being done first. The program has the potential of monitoring breeding populations from ISIS record data at periodic intervals.