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NEWSLETTER

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MORE ON ILLEGAL GIBBON TRAFFIC

Dr. Frances D. Burton
IPPL Field Representative, Toronto

In the November 1974 issue of the Newsletter appeared an article titled "Illegal Traffic in Gibbons." The Toronto branch of the IPPL continued researching the mystery of the permits and procedures surrounding the case. We have checked with Air Canada, who conveyed the animals to California, with the Departments of Agriculture and Customs and the Humane Society. The carrier accepts no responsibility, I was told by Mr. Stewart, its public relations spokesman, for the injury or health of the animal cargo. The "onus" is on the shipper, for permits, health and legal responsibility. Indeed, the carrier will not usually check a shipment unless the agent is "suspicious" of the cargo--and this fact was verified by Customs. Customs awaits the verdict of the Department of Agriculture; the former's only interest is in whether or not some additional materials are accompanying the animals. Should the animals be known to be smuggled, Customs might become involved. The Department of Agriculture is clearly committed to the health and well being of the animals, but their major concern is of course agricultural stock and produce. There are no special regulations for nonhuman primates or any exotic animals. Indeed, there are no quarantine regulations *per se*. The structure is such that no specific or particular checks will have been made at any point on the itinerary of the animals. But this is changing. The Department of Agriculture has helped create an Act that will go before Parliament shortly relating to the importation of all animals. We have no information on whether there will be specific regulations covering endangered species or exotic animals in general, but have written to Ottawa for further clarification.

Mr. Hughes, Vice President of the Humane Society in Ottawa, tells us the Act may indeed severely curtail the pet shop trade and restrict movement of exotic animals into the country to zoos and research centers holding proper licenses. We have also requested specific information concerning the shipment of gibbons into Canada, giving documentation received from Dr. McGreal in order that the procedure at port of entry (Montreal) may be known to us. Kenneth Clare, Director of Ark Animal Exchange, has written a lengthy letter to Dr. McGreal in response; he hopes his information will be helpful and urges us not to quote

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NEWS FLASH: SMUGGLED ORANGS TRACED

The four smuggled orang-utans which left Thailand last August have all been traced by the Frankfurt Zoo people--one is in Moscow, another in Germany, and the remaining two are in Austria at a dealer's (the Zoo-Boeck in Wels).

Also, Field Representative Charles Shuttleworth has found three orangs at a medicine shop in Taiwan--with their faces painted blue. He sent photos of the unfortunate animals to our Bangkok office.

THE RSPCA HOSTEL IN LONDON: A MODEL FOR THE USA?

By Shirley McGreal

The Royal Society for the Prevention of Cruelty to Animals established a hostel for traveling animals in 1952 at Heathrow Airport, London. Today over a million animals (including birds and fish) pass through the hostel each year. Most of the wild animals are primates.

The hostel has one large room for African primates and one for Asian and South American primates. In each room are several large cages (about 12' x 12' x 12'); small cages are also available.

On arrival at the hostel most primates in transit are released into cages; they are recaptured shortly before flight time. Appropriate diets are available.

On the day of my visit, large groups of stumptails and rhesus were playing in gang cages. On the other side of the room were a group of South American primates: an infant woolly monkey, two capuchins and six marmosets. Destined for Amsterdam, they had been sent in error to Manchester, England, and were sent down to stay at the hostel while the mess was being sorted out. They had already been at the hostel a week; one dreads thinking about what would have happened had there been no hostel. Probably they would have been left around indefinitely in the December cold, with no skilled attention available (as is the case at 99% of the world's airports).

Also in the hostel were a group of twelve slow lorises shipped by the Friendship Animal Farm, of Bangkok, to a Florida dealer, Charles Chase. Neville Whittaker, the hostel manager, pointed out that it had been impossible to get the lorises out without removing the top of the wooden crate. He stressed the desirability of having doors on all traveling crates for ease of handling and insertion of provisions.

In August 1974, the hostel had a two-year-old orang-utan as a guest. He had been smuggled out of Borneo on a German vessel. When the Sabah Game Department notified the World Wildlife Fund last December that an orang had been smuggled out, an international search began. The Frankfurt Zoological Society learned the name of the ship, and on its arrival were able to arrange with the responsible officer to hand over the orang, in return for no charges being filed against him. The orang was given the name of Hein and cared for at the Frankfurt Zoo. In August, he left Frankfurt for London and, after a rest at the hostel, was sent on to Borneo for rehabilitation in the wild.

1974 saw two gorillas pass through the hostel en route to the USA, one in May and another in October.

Mr. Whittaker has stacks of photographs of animals mishandled in the course of transportation, many of which illustrate the problems of the traveling primate.

One photograph shows five baby stumptail macaques from

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MORE ON ILLEGAL GIBBON TRAFFIC (cont'd)

him out of context since press releases have "had a disastrous effect on this business, as we have not received many phone calls from our customers in the USA during the last month." Rather than quote "out of context," I itemize his information:

1. This was the only time AAE has had contact with any research labs, "as we feel it is a great deal of work to provide these animals just to have them destroyed." His acceptance of the contract was because "we were most anxious to obtain any business we could."
2. He doubts the animals were only one month old "as I would really like to have seen the parents of these animals which would produce a month-old gibbon which would weigh from three to five pounds..."
3. AAE is always at hand when a shipment arrives, with "food and crates to recreate the animals," and always has the animals released immediately. "The gibbons were moved in a specially heated vehicle and given one whole section for themselves, maintained at 80-90 degrees."
4. The animals were checked by AAE's veterinarian approximately twice a week.
5. The animals were accompanied to their Air Canada flight, and "we waited...until we were assured that they were safely loaded..." Contrary to expectations, however, the flight did not go directly to Los Angeles but stopped over in Toronto. "At the time the animals were shipped none of them showed any cold or sickness of any type, as it would have been rather senseless for us to ship out animals for which we would not be payed (sic)."
6. In answer to why the animals were not shipped directly from Thailand to the US, Mr. Clare replies that "...on a previous shipment...these (sic) animals were not properly cared for on arrival, and therefore (we) wanted to be sure that the animals we sent and were guaranteeing had received our personal attention..."
7. Regarding documentation: "At no time did we have any knowledge that they were not being exported legally, as you are no doubt aware we could have lost the entire shipment to the US Department of the Interior if they had thought that these animals were not properly documented." Indeed, "...at no time did we even try to deceive anybody as to where these animals were coming from."
8. Mr. Clare feels that the death of the animals "was probably due to the fact that the plane stopped in Toronto..."
9. Vis-a-vis the shooting of the mothers: "We have been led to believe...that animals... caught and not sold, are usually eaten..."
10. Zoos to which Clare has sent gibbons "all did well with them" and he feels that "...these animals at Davis were not properly cared for." In addition, Mr. Clare invites the IPPL to visit him, and check through his file concerning these shipments: "...if you wish to come down any time we would be pleased to let you review the entire situation, and also inspect the facilities in which these animals were kept." However, he feels that providing copies of the correspondence from the University of California would "just give them reason to try to find other ways of placing more blame on me." He rather hopes that the "incident would be dropped." Furthermore, he announces his intention to restrict his business to zoos.

Perhaps the pressure put on by Dr. McGreal in her visit here will have helped to change the behavior of at least one animal broker, and also have served to foster legislation that will preclude this kind of deplorable dealing in primates.

Editor's postscript: We have recently learned that Dr. McGreal's letters to Dr. Gunter Voss (Toronto Zoo director) dealing with the gibbon shipment are being thoroughly studied by the American Association of Zoological Parks and Aquariums. We hear its Committee on Wildlife Conservation is planning to submit a report on this matter to the public.

REPORT ON IPPL LEADER SHIRLEY MCGREAL'S WORLD TOUR

Dr. Shirley McGreal, Chairperson of IPPL, took advantage of a 4½-month home leave from Thailand to promote primate conservation and protection, and to spread the word about IPPL's program.

At Hong Kong Airport she discussed trade in endangered primates with Mike Webster of the Conservancy Association, and in Taiwan discussed the status of the Taiwan macaque with our representative, Charles Shuttleworth, had a look at the Taipei Zoo, and discussed with US Ambassador Unger his role in the export of US Army gibbons from Thailand to the USA. Readers might be interested to learn that the US Navy has a laboratory at Taipei which uses the indigenous Taiwan macaque as its main research animal.

In Japan, Ms. McGreal presented the IPPL paper as part of the Conservation Seminar during the Fifth Congress of the International Primatological Society at Nagoya.

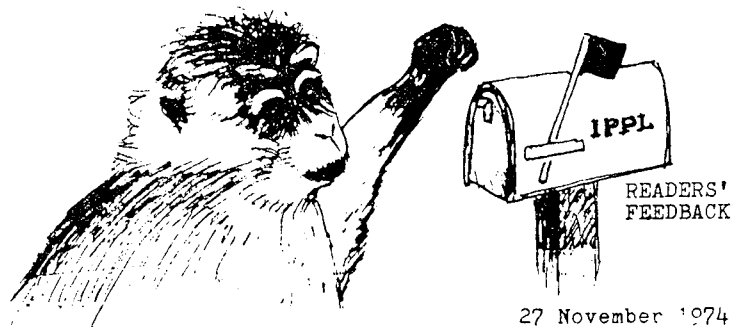
In Seattle, the problem of primate transportation was discussed with Peter Okicich, an airline pilot IPPL member. A visit was also made to the University of Washington's Regional Primate Research Center.

In California, accompanied by Advisory Board Member Arduith Eudey, Ms. McGreal visited zoos, laboratories, pet shops, Friends of the Earth, the Sierra Club and the Fund for Animals. In San Diego they discussed problems arising from county legislation banning private ownership of primates with affected individuals, and talked about their field work with Dr. Lois Lippold and Ms. Diane Brockman who have been making field observations of the endangered Douc langur in Vietnam. They gave a seminar on primate conservation and protection to the Stanford University Primate Research Group.

In Atlanta, Ms. McGreal visited the Yerkes Primate Center as the guest of Drs. Bourne and Nadler.

Thanks to the help of Lewis Regenstein of the Fund for Animals' Washington Office, she met with officials of the US Customs Department and the Office of Endangered Species of the US Department of the Interior, with Nancy Ross of the Washington Post (who wrote an article on IPPL and primate-smuggling, published Nov. 17) and with representatives of a variety of animal welfare organizations. Dr. Goodwin of the National Institutes of Health was generous with his time and arranged several other meetings at NIH

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27 November 1974

The IPPL Newsletter of November 1974 was interesting but I would like to make a few comments. You placed a great emphasis on defoliants and herbicides plus bombing as one of the major reasons for the demise of primates in Vietnam, especially South Vietnam. There is another cause, one in the long run probably much more serious. Thousands of primates, as well as other wildlife, were killed and eaten by Viet Cong guerillas. Since the country is now inundated with firearms, and the people continuously hungry for animal protein, there is little chance for much of the wildlife. It's an old story that became especially evident after World War II in those wilderness areas penetrated by active military.

Sincerely,
Clyde A. Hill
Curator of Mammals
San Diego Zoological Garden

IPPL NETWORK STRENGTHENED

Dr. Jane Van Lawick-Goodall has joined the IPPL Advisory Board. Well-known for her studies of the chimpanzees in East Africa, she has shown her concern for the laboratory primate as well by her intervention when an automobile company in Detroit planned to sacrifice young chimpanzees in crash-testing.

Another new member of the Advisory Board is Colin Groves, best known for his taxonomic work (see article, page 4), who has conducted field surveys of colobus monkeys and mangabeys in connection with conservation work.

Duane M. Rumbaugh of the Yerkes Regional Primate Research Center in Atlanta has also joined IPPL's Advisory Board. Dr. Rumbaugh is director of the project which is successfully teaching "Lana" the chimpanzee to communicate via a computerized panel of symbols.

Barbara Harrisson is well-known for her pioneering work in the rehabilitation to jungle living of captive orangs. Active for many years in primate conservation, she is now active in IPPL. Her book, "Conservation of Nonhuman Primates in 1970," is essential reading for those concerned about worldwide depletion of primates. (Primates in Medicine, Vol. 5, S. Karger, Basel.)

Dr. Frances Burton, who has studied barbary macaques and currently teaches in the Anthropology Department of the University of Toronto, has been appointed IPPL representative for Canada. She reports on investigations into the illegal gibbon trade via Canada--see page 1.

Another recently appointed representative is noted ecologist John D. Skinner, Director of the Mammal Research Institute of the University of Pretoria, South Africa. A biographical sketch of Dr. Skinner appears on page 4. He is the IPPL field representative for southern Africa.

Finally, we welcome Señor Carlos Ponce del Prado as the IPPL representative in Peru. He is the Director of Jungle Fauna in the Peruvian Ministry of Agriculture.

THE SINGAPORE CONNECTION

Under the terms of the USA's Lacey Act, it is illegal to deliver, transport to, or sell in the USA animals taken, transported or sold in violation of any law or regulation of any state or foreign country. The spirit behind such legislation is admirable and sets a precedent in international cooperation.

However, a look at the booklet "Mammals Imported into the USA in 1971" (Publication No. 2410-00375, US Gov't Printing Office, Washington, D.C.) shows inadequate enforcement of this law in primate admissions, especially in the case of admissions from Singapore.

The only primate indigenous to Singapore is the crab-eating macaque (*Macaca fascicularis*), of which Singapore exported only seven in 1971. However, it did export to the US two white-cheeked gibbons (Indochina), 13 white-handed gibbons (Thailand and Malaysia), 42 siamangs (Malaysia and Indonesia), six moor macaques and five Celebes black "apes" (Indonesia). All these animals are protected in their home countries.

The role of Singapore in the illicit animal trade from Asia merits further investigation. Singapore dealers offer for sale orang-utans, proboscis monkeys, siamangs and gibbons, even gorillas. Yet none are indigenous to the island. According to latest reports, Singapore does not plan to ratify the Convention on Trade in Endangered Species.

Dealers in Singapore appear to specialize in wildlife presumably smuggled in from Indonesia, Thailand and Malaysia. One Singapore dealer was caught bringing in wildlife in false bottoms of trucks. Other animals arrive by sea. Singapore zoos do not report the recent births of any of these species in the International Zoo Yearbook, so the "captive breeding" excuse may be viewed with suspicion. Certificates from the true country of origin should be sought.

IPPL is contacting Singapore authorities, and urges members to correspond with Singapore diplomatic representatives in their countries about this matter.

RSPCA HOSTEL IN LONDON (cont'd)

a dealer in Thailand, all of which were dead when the box was opened at the hostel. They were tiny, unweaned and far too young to travel. That same month, a whole shipment of 50 tree shrews arrived dead--due to inadequate ventilation of their crate.

Another photograph shows a dead gibbon. Bangkok Wild life Company shipped four gibbons, two in each of two snake boxes 36" x 18" x 5". Unable to sit up, the gibbon were forced to travel lying on their backs, stomachs, or sides. One was dead on arrival and two more died. The species of the animals was not identified on the box.

In another shocking case, monkeys were packed in wire mesh containers. When weight was put on the container they tightened round the monkeys, which arrived as if in metal strait jackets.

Mr. Whittaker remembers the terrible sufferings undergone by primates during the early days of polio vaccine development. (Large numbers of primates are sacrificed in the production and testing of polio vaccine.) Tens of thousands of monkeys passed through the hostel and the losses were enormous. Many shipments arrived in appalling condition.

Mr. Whittaker, a dedicated animal-lover, remarked as he looked at the monkeys happily playing in their cages that he sometimes wonders in the case of primates just what destiny he is saving them for.

For the animals, however, the hostel is the one point in their travels where they are sure to come into contact with people concerned with their well-being.

We recommend that IPPL members and friends support the activities of the hostel by sending contributions for primate food and facilities to Neville Whittaker, manager, RSPCA Hostel, Heathrow Airport, London, England.

IPPL also feels that all airports which receive numbers of animals should have similar facilities. In particular, Miami's airport needs such a service. Miami and New York are the major US points of entry for primates.

MAKE EVERY NEWSLETTER COUNT! PASS THIS COPY AROUND!!

IPPL URGES BAN ON SHIPMENT OF UNWEANED PRIMATES

We were informed by a Russian contact that only six of a substantial shipment of stump-tail macaques sent by Bangkok dealer Suphin Pets reached their destination in the USSR alive. A Thai newspaperman reported in June 1974 seeing 74 tiny unweaned stump-tails (4 already dead, several moribund) at Suphin's. We wonder if they are the same animals.

IPPL states emphatically that no unweaned infant primates should be accepted for shipment without their mothers. Such a ban would end the practice of shooting mothers to obtain their babies.

Currently, airline cargo representatives tend to blame such situations on the vets stationed at the airport to make health checks on departing animals; the vets tend to say that their job is not to determine fitness in regard to the proposed travel but merely fitness at time of departure; and the dealers, claiming they are not experts in such matters, tend to blame the vets.

We feel all countries should follow the example of India in banning the shipment of primates under the age of one year.

Although it is apparent that a large proportion of these young animals will die, dealers persist in shipping them in order to minimize shipping charges and in some cases to satisfy demands for infant primates made by researchers unwilling or unable to pay the higher price of colony-bred monkeys.

Needless to say, IPPL feels that researchers should under no circumstances order infant, wild-born primates.

This month's award for "outstanding research" goes to Ger- shon Berkson, of the University of Illinois, for a series of three experiments involving the blinding of infant mon- keys.

The first (Travel Vision in Infant Monkeys, Developmental Psychology, 1(3), 170-174, 1968) describes the blinding of three monkeys at birth; it is concluded that "surgery affected acuity of the experimental animals to the extent that significant aspects of the behavior repertoire were altered." The work was funded by the Illinois Psychia- tric Training and Research Fund.

The second experiment (Defective Infants in a Feral Mon- key Group, Folia primatologica 17, 284-289, 1970) was fi- nanced by the National Institutes of Health while the au- thor was with the Delta Primate Center. In association with the US Army's primate research program in Thailand, infant macaques were captured on an island in the Gulf of Thailand, blinded at the Army's Bangkok labs, and returned to the wild with their mothers. Since the island was for- ested, observations were difficult--a point which possi- bly should have led to the conclusion that the work would be wasteful of time, money and animals. However, Berk- son did learn that "they did not escape as efficiently as a normal animal of the same age." Unfortunately, Berkson notes, "a monitor lizard lives on the island and there are arid periods in which no water is available." At about even months of age, the blind monkeys disappeared during the dry season, but we are told that it is not clear whether they died of thirst or were eaten by the lizard. To resolve such ambiguities, an "essential repetition" of the experiment was made on seven monkeys from the free- ranging colony at La Cueva, an island off Puerto Rico (Social Responses to Abnormal Monkeys, American Journal of Physical Anthropology 38, 583-586, 1973), funded by the Il- linois Department of Mental Health, the University of Illi- nois Research Board, and the Caribbean Primate Research Center. Seven infant monkeys were blinded. One died and its mother carried it for two days after its death. When the survivors were about four months old, "the effects of the visual deficit were apparent. The experimental ani- mals made their way slowly in the mangrove, groping for roots as they went." In addition, "in social play, they are clumsy."

It is deplorable to IPPL that work of this nature should have found funding not once but three times, and should have found journals ready to publish it. We feel some- thing is wrong in the granting system which permits such work to proceed unquestioned. Blinding of normal, healthy monkeys to see what happens ignores the need to conserve primates and funds for work whose findings are less pre- dictable and more vitally needed.

Many of our members have reported hearing part of this work presented at the 1972 Congress of the International Pri- matological Society and have expressed regret for not hav- ing raised objections on the spot. Let's be braver next time!

Editor's postscript: Advisory Board member Vernon Rey- olds of Oxford University has written us giving permis- sion to quote him: "...I cannot see the scientific value of Berkson's research. It seems particularly inhumane and I do not think permission for such research would have been granted in Britain." Another advisor, Ardith Eudey, writes, "In respect to...Berkson's work...the results were self-evident and could clearly have been anticipated.... Animals were needlessly (and inhumanely) sacrificed.... I could say that IPPL members should speak up in the future and be critical at the moment of presentation."

Meanwhile, non-members who would like to raise questions about this sort of research but are similarly timid about doing so can put their money where our mouth is by join- ing IPPL. Use the coupon on the back page.

INFORMATION WANTED

For our reference files we are seeking catalogs and bro- chures or other advertising materials for the sale of pri- mates, published by laboratory suppliers, animal deal- ers, and pet shops in the USA or overseas. Send them to IPPL, 774 Euclid Avenue, Berkeley, California 94708.

On visiting a pet shop in the Los Angeles area in Septem- ber 1974, Ms. Eudey and Dr. McGreal observed four young agilis gibbons for sale at \$650 each. Since these gib- bons are protected in their homelands (Indonesia and Ma- laysia), it is possible the dealer acquired them in vio- lation of the Lacey Act, which makes it illegal to im- port animals protected in their country of origin without valid export permits from that country.

We have requested federal authorities to take action and would like Los Angeles members interested in following up to contact headquarters in Berkeley (774 Euclid, Berkeley, CA94708).

DR. J. D. SKINNER TO REPRESENT IPPL IN SOUTHERN AFRICA

Professor John Dawson Skinner, director of the Mammal Re- search Institute of the University of Pretoria, has been appointed the IPPL representative for southern Africa.

In between his studies at the universities of Natal, Pre- toria and Cambridge, U.K., John Skinner was already work- ing as an ecologist in the bushveld areas of the northern Transvaal, concentrating on animal breeding.

Since 1964 his research has dealt mainly with game farm- ing and reproductive physiology. Author of over 100 sci- entific papers, he has received several national and in- ternational awards including that of one of the Outstand- ing Men of the Year in South Africa in 1972.

In January 1972 he was appointed Professor of Zoology at the University of Pretoria, when he also assumed the of- fice of Director of the Mammal Research Institute. The Institute has made notable contributions to the field of primatology; research into the re-release of captive mon- keys into wild areas, as well as on the ecology of certain prosimians, is planned.

In 1973 Dr. Skinner was appointed to the Steering Commit- tee of Professor G. Doyle's Primate Behaviour Research Group at the University of the Witwatersrand in Johannes- burg. He is also the president of the Biological Soci- ety of South Africa.

ATTENTION VETERINARIANS

The IPPL has taken the position that no primate listed in the Red Data book or on Appendix 1 of the Convention on Trade in Endangered Species should be used in work of a terminal nature or such as would have an adverse effect on its health, well-being, or reproductive capacity.

We would like to see veterinary groups all over the world endorse this position and request their members to refuse to participate in such work. We should like to hear from veterinarians willing to take action on this and shall put them in touch with each other.

COLIN GROVES JOINS IPPL ADVISORY BOARD

IPPL is pleased to welcome Dr. Colin Peter Groves to the Advisory Board, and to introduce him to its members with this brief biographical sketch.

Born in 1942, London-educated, he worked for two years at U.C. Berkeley's Anthropology Department and spent a sea- son at the Smithsonian Institution before becoming an An- thropology Demonstrator at Cambridge, U.K. Since 1974 he has been a Lecturer at the Australian National Universi- ty in Canberra, in the Prehistory Department, where he is now offering a course in primate studies.

A primate taxonomist, Dr. Groves has published his find- ings on many primate genera--gorillas, gibbons (and si- mangs), "odd-nosed" monkeys and slow lorises; in process are studies on galagos, red colobus and mangabeys.

His field work has provided important data for conserva- tion work on black-and-white colobus, red colobus and the Tana River mangabey; he is now preparing a four-month sur- vey of Macaca species on Celebes, with an eye on taxono- my as well as on conservation needs.

BOOK REVIEW

Christine Stevens

Nonhuman Primates—Standards and Guidelines for the breeding, care and management of laboratory animals. Second Edition—Revised, National Academy of Sciences, 1973.

The preparation of this 61-page booklet involved no less than seven agencies of government all of which had grants for the work and included contributions from pharmaceutical companies and other industry. It begins with the word NOTICE: in capital letters and announces sternly, "The project which is the subject of this report was approved by the Governing Board of the National Research Council, acting in behalf of the National Academy of Sciences. Such approval reflects the Board's judgment that the project is of national importance and appropriate with respect to both the purposes and resources of the National Research Council." The "review process" and "scholarly competence" of the authors is then detailed. By this time only a very cautious and cynical reader could fail to be impressed with the combined wisdom and expertise, the best that science and government have to offer, on apes and monkeys distilled in this modest-looking little booklet.

How distressing then to find that although "Conservation of Rare and Endangered Species of Primates" very properly leads the list of chapters, the actual indications of degree of endangerment fail to match the Department of Interior Endangered Species List and fail to note the major action taken after 92 nations met for three weeks in Washington D.C. and concluded a treaty, The International Convention on Trade in Endangered Species of Wild Fauna and Flora. Signed by 25 nations, the treaty was ratified by the United States Senate. It contains three appendices. Species and subspecies listed on Appendix I are known in common parlance as "basket cases." There is serious question whether Appendix I species can be saved from extinction even if the best efforts are put forward to protect them. No such impression is created by this handbook which is an open invitation to scientists to order primates.

In Chapter II, "Taxonomy and Abbreviated Profiles of the Order Primates," an asterisk appears from time to time, and the corresponding footnote reads "Some species endangered." For example, the genus Cacajao (Uakaris Monkeys) is listed with the casual comment that they are "rare," yet the entire genus appears on the U.S. Department of the Interior's Endangered Species List and on Appendix I of the treaty. There is no asterisk at all for Alouatta (Howler Monkeys) although Alouatta palliata (villosa) is on Appendix I.

As for "Callitrichidae (marmosets and tamarins)," they do have an asterisk, but without any indication of which of the genera are on the brink of extinction. Nonhuman Primates calmly states, "the genera Leontideus or Leontopithecus and Saguinus are called tamarins." Not the faintest hint of the desperate status of the lion marmosets is given. But to quote Laboratory Primate Newsletter, Vol. 12, No. 3, July, 1973, "The lion marmosets of the genus Leontopithecus are among the rarest and most endangered mammals in the world." After reporting on an international conference held in February, 1972 and a notation on financing of a breeding project by the World Wildlife Fund, the authors urge readers to join them in the "Save the Lion Marmoset Campaign," Museum of Comparative Zoology, Harvard University, emphasizing the need to publicize the plight of these creatures.

The reader of Nonhuman Primates could without being aware of what he was doing perform a terminal experiment on one of these animals in the belief that he was following the best advice that government and industry money could buy.

To note other errors, no asterisk appears for the Cebus or capuchin monkeys though C. capuchin appears on Appendix II of the treaty.

"Nasalis (proboscis monkeys)" have no asterisk, though N. larvatus is listed on Appendix I.

The greatest shock of all comes when the great apes are reached. It might be supposed that every schoolboy who can read a newspaper knows that orang-utans are in extreme danger of extinction. Here is the heading in Nonhuman

Primates: "Pongo (orang-utans)*" with the inevitable note "Some species endangered." What can the authors possibly mean by this strange description? Orang-utans are, of course, listed on Appendix I of the treaty and on the Department of Interior's Endangered Species List. There are two subspecies of orangs, Pongo pygmaeus pygmaeus and Pongo pygmaeus abelii, but only one species. All orangs are endangered.

The only three animals that Nonhuman Primates clearly and unmistakably marks with a dagger (corresponding footnote "Endangered Species") are the Central American red-backed squirrel monkey, the lion-tailed macaque and the gorilla. The rest serve to provide a kind of guessing game if they are fortunate enough to belong to a genus which is given an asterisk by the authors. The chimpanzees have no mark at all, though both Pan troglodytes and Pan paniscus appear on Appendix II of the treaty.

According to the most recent edition of Animals for Research (8th ed., Nat. Acad. of Sciences, 1971), there are fourteen animal dealers who supply chimpanzees to laboratories. One is Michael A. Nolan, head of Primate Imports Corp. of Port Washington, N.Y. Mr. Nolan is also one of the six members of the Subcommittee on Revision of Nonhuman Primate Standards for the Institute of Laboratory Animal Resources, responsible for the writing of Nonhuman Primates. He also supplies a variety of other primates for experimental use as noted in Animals for Research.

The chairman of the committee, David A. Valerio, was until recently with Bionetics, a commercial primate laboratory in Maryland whose business consists largely of government contracts. In mentioning these affiliations, there is no intention to impute motives to the compilers of the booklet, but rather an intention to throw as much light as can be brought to bear on their general point of view.¹ To be expected are recommendations for the usual small cages.² Extreme timidity in suggesting even the possibility that it might be more practical to purchase larger ones seems to be built into the whole commercial laboratory primate situation. Two quotations will give the flavor. "Unless space is at a premium or long-term projects with the smaller primates are planned, it is probably advisable to purchase larger cages to provide greater flexibility in accommodating animals" (p. 19, emphasis supplied). Or this candidate for the Department of Understatement: "When disease, odors, or condensation become a problem in spite of adequate routine care and sanitation, the area is probably overcrowded" (p. 15).

To give them credit, the authors are not unaware of some of the disadvantages of close confinement, and they refer to "fighting because of an unstable social order, and the confined space" when group breeding is attempted in cages. They recognize, too, in speaking of semi-natural breeding colonies, "The system provides maximum opportunity for exercise and social development, which are important to breeding efficiency and normal infant development."

However, the scientist who follows this booklet's guidance may nevertheless try to buy an endangered species, put it in a small monkey cage, and feed it monkey chow.

The combination of the National Institutes of Health, the Atomic Energy Commission, the Army, Navy and Air Force, Department of Agriculture, National Science Foundation, American Cancer Society, the pharmaceutical and other industries should have been able to do better than that, and we suggest they withdraw the booklet from circulation and try again.

1. Other members of the committee were two primate center veterinarians, a representative from Sinclair Laboratories and a representative from the Dep't of Laboratory Animal Medicine at Bowman-Grey School of Medicine.

2. For example, here are sizes used for Old World monkeys: 0-4 kilograms

2. e.g., for Old World monkeys:

monkey's wt. (kg)	height of cage (in.)	floor area (in. ²)
0-4	22-24	250 (≈ 16" x 16")
4-8	30-32	400 (20" x 20")
8-15	34-36	600 (≈ 24" x 25")

THE USE OF PRIMATES IN TRAUMA STUDIES

Magazines such as the Journal of Trauma frequently carry conspicuously-illustrated reports of experimentally-produced injuries resulting in the deaths of all animals involved. Some of the areas in which primates have been used for the study of trauma are

- a) burns
- b) gunshot wounds
- c) severe shock
- d) effects of acceleration
- e) injuries caused by crashes, etc.

Alternatives to such destructive use of primates are available. No longer does the sandbag serve as a dummy. Highly refined models of the human body are available in all sizes with bone, muscle and body fluids. Skillfully designed models of the human head have also been produced. Volkswagen relies entirely on models for its crash-testing program. Nonphysical models are also available to compute the biodynamics of accidents and the interaction between the organism and the environment.

Man, however, is his own best model in accident research. Most of the articles in the Journal of Trauma deal with real injuries which happen to real people in both war and peace. Better emergency communications and coordination make a wide variety of trauma injuries available to medical specialists. And when it comes to testing of therapeutic procedures, Bruce Pince in his article "Simulations of the Human Body for the Study of Trauma" (Journal of Trauma, vol. 10, no. 3 (1970), pp. 232-239) rates human accident victims as .9 on a scale of 1, while non-human primates are given a rating of only .1.

Some examples of the use of primates in trauma research follow.

BURNS

In order to study tissue changes following burns, Dr. Leape from the University of Kansas Medical School dipped ten rhesus monkeys in water until 50% of their body weight was displaced. The animals were then immersed in water at 90° C. over this area for 15 seconds in order to produce a full-thickness burn. The changes over the next 240 minutes were studied. (Leape, L.D., Initial Changes in Burns, Journal of Trauma, vol. 10, no. 6 (1970), pp. 488-92.)

GUNSHOT WOUNDS

This work was performed at the University of Chicago Hospitals by Drs. Gerber and Moody. Ten rhesus monkeys were shot through the head with a Crossman Power Master 160 Air Rifle, which propelled a 0.17 BB at a muzzle velocity of 60 feet per second at a distance of 3 cm. from the skull. The monkeys' heads and bodies were fixed. All the control monkeys and three of the experimental ones died. Two animals survived the hemodilution therapy (diluting blood with a mixture of saline and dextran) for a while but were sacrificed. (Gerber, A. and R. Moody, An Evaluation of Hemodilution as Therapy for Craniofacial Gunshot Wounds, Journal of Surgical Research, vol. 12 (April, 1972), pp. 275-300.)

SEVERE SHOCK

Drs. Robert Rutherford and Richard Trow, of the University of Colorado Medical Center, under contract to the Army, used sixteen pigtail macaques in this experiment. A week prior to the experiment, various surgical procedures were performed. On the morning of the experiment, sedation but not anesthesia was administered and a variety of further surgical procedures were performed under local anesthetic. Blood was then withdrawn over a period of several hours until irreversible shock and death resulted. The doctors note that their laboratory has recently switched from dogs to primates for trauma research. (Rutherford, R. and R. Trow, The Pathology of Irreversible Hemorrhagic Shock in Monkeys, Journal of Surgical Research, vol. 14 (1973), pp. 538-550.)

See also Forsyth, R. and team, Normal Distribution of Cardiac Output in the Unanesthetized Rhesus Monkey, Journal of Applied Physiology, vol. 25, no. 6 (1968), pp. 736-740; Nineteen rhesus monkeys were killed in that study. In an earlier experiment by the same team (Redistribution of Car-

diac Output in the Unanesthetized Rhesus Monkey, Circulation Research, vol. 27 (1970) pp. 311-315), 10% of the twelve experimental monkeys' blood was withdrawn over a mean of 15 minutes, another 20% over a mean of 47 minutes, then a further 20% over a mean of 47 minutes; those monkeys still alive at the end of the experiment were sacrificed. The work was performed at the San Francisco Medical Center.

EFFECTS OF ACCELERATION

Dr. R. Degner of the Department of Mechanical Engineering, Stanford University, and associates from the Stanford University Medical School, devised a cyclic acceleration facility capable of producing nine different cyclic rides. The animals, six pigtailed and a rhesus, were in a fully conscious state during their series of rides, after which they were sacrificed for the assessment of skeletal damage. The work was performed under contract to NASA in relation to the development of a pogo-stick type lunar hopping transporter. (Degner, R. et al., Fat Embolism in Monkeys Exposed to Cyclic Acceleration, Journal of Trauma, vol. 13, no. 3 (1973), pp. 229-234.)

TRAUMATIC INJURIES

In an effort to produce a controlled, measurable injury in the cervical area, Dr. Coe and a team from the University of Texas, in a series of experiments, fixed unspecified numbers of rhesus monkeys in an injuring device which restrained the head while leaving the body free to move. All animals were sacrificed. Dr. Crawford Campbell commented "This paper showed a lot of ingenuity on the part of the author in the method of investigation. In the first place, he has used a primate, which is, of course, the best choice of animal. Secondly, he has an unusual method of fixing the head and moving the body whereas investigations of neck injuries usually fix the body and the

(Continued on page 7)

IPPL LEADER'S WORLD TOUR (cont'd)

as well as a comprehensive visit to Bionetics Laboratories with Dr. Clement Darrow as host. Ms. McGreal also met with Dr. Thorington, head of the International Union for the Conservation of Nature's Primate Specialist Group and with Dr. Clyde Jones and Ms. Jacquelyn Wolfheim from the Smithsonian, the latter having nearly finished her comprehensive survey of primate populations. Other visits in the US capital included meeting John Perry of the Washington Zoo, and Dr. Nancy Muckenhirn of the Institute for Laboratory Animal Resources. Ms. McGreal was especially pleased to have had the opportunity to meet Harold Coolidge, former president of the IUCN, who was extremely encouraging and joined the IPPL.

In view of the fact that it was a Canadian animal dealer who had supplied the Thai gibbons to the Comparative Oncology Lab at Davis, the role of Canada in the trade in endangered wildlife was the subject of press articles and of TV and radio interviews with Ms. McGreal while she was in Canada. She also gave a lecture at the University of Toronto and was a keynote speaker at a conference in Ottawa organized by the Animal Welfare Institute of Canada to propose legislation to curb the entry of exotic animals into Canada. She also met Mike Singleton of the Ontario Federation of Naturalists and Dr. Gunter Voss, Director of Toronto's new zoo which has unusually good facilities for gibbons and orangutans plus a lively group of drills.

On brief stopovers in London and Germany, Ms. McGreal had discussions with Nick Carter of the International Society for the Protection of Animals, Richard Fitter of the Fauna Preservation Society and Nicole Duplex Hall, Editor of the International Zoo Yearbook. While still in England, Ms. McGreal went to Oxford for discussions with Dr. Vernon Reynolds, who was the first person to join IPPL's Advisory Committee. In Frankfurt, she met Dr. Faust, who has replaced Dr. Grzimek as Director of the Frankfurt Zoo. Ms. McGreal wishes to thank all IPPL members and friends who provided such wonderful hospitality and invaluable assistance during her tour.

Another IPPL staff member and officer, Secretary Anne Denney Jones, recently spent two weeks in Australia spreading the IPPL idea--but space limitations force us to reserve her report for a later issue.

TRAUMA STUDIES (cont'd)

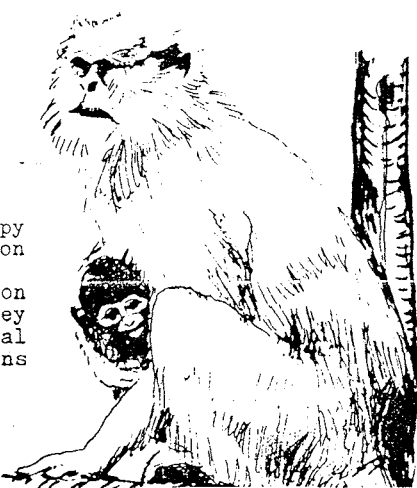
head moves. It is similar in principle to a head-on collision in which a person is placed upside-down with the head firmly fastened and the body hurtling forward." Dr. Crawford was concerned that the use of anesthesia might affect the results. Dr. Coe replied, "When the animal is wung, he is anesthetised but retains some response. If you clap your hands, he may open his eyes." Coe indicates that work of this nature will continue. (Coe, J. et al., Concussion-like State following Cervical Cord Injury in the Monkey, Journal of Trauma, vol. 12, no. 4 (1972), pp. 15-326.

See also Douglass, J. and team, Impedance Changes in Deep Brain Structures Following Experimental Head Impact in Primates, Journal of Trauma, vol. 12, no. 1 (1972), pp. 315-21. Fifteen pigtail monkeys were used; some died of the complicated preparatory brain surgery, some of infection and one of the knockout; two were sacrificed as a result of pulling the caps off their heads; one was paralysed from surgery, others sacrificed. Continuation of the work is planned. See also The Mechanism of Injury in Blunt Abdominal Trauma, Journal of Trauma, vol. 13, no. 11 (1973), pp. 62-970, for an account of the killing of 85 primates in simulated automobile crashes.

When satisfactory alternatives are available, why are primates still being used in trauma studies? They are the same as man neither in size and shape nor body functions and are quadrupedal. Applications to man of conclusions derived from primates have limited value in studies of injury, especially where the injuries are artificially induced. They are being used, as Pince notes in his aforementioned article, because "they possess life characteristics and can be destructively tested." Such an insensitive attitude toward the wastage and suffering of primate life is unacceptable to the IPPL. Destructive work, such as here described, runs completely contrary to the current emphasis on conservation, and on judicious, humane use of primates with alternative methods of research being used whenever practicable. In only one of these experiments as any therapy at all attempted for the primates and, even in that case, the animals were sacrificed. It is surprising that, in these circumstances, Certificates of Need or the rhesus monkeys involved should have been issued or that granting agencies should have supported the work. The nature of much of the work also raises the question of whether legal limits on the degree and duration of pain should not be defined in experimentation involving primates, as is the case in England.

Editor's postscript: Readers' comments about this kind of research are solicited. When Dr. McGreal showed this article to a group of Canadian vets, they felt that the burn work was ghastly and not severely enough condemned, although the animals were probably anesthetized while the burn was being administered they must have suffered atrocious pain upon waking up.

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PLEASE — SHARE YOUR NEWSLETTER WITH A FRIEND OR TWO

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THE VANISHING STUMPTAIL

By Ardith Eudey
(Ms. Eudey, an IPPL Advisory Board member, is currently involved in a study of macaques in the Huay Kha Khaeng Game Sanctuary, Uthaitani, Thailand.)

As early as 1970, Barbara Harrisson drew attention to the fact the stump-tail macaque (Macaca arctoides) is potentially endangered. The species is, in fact, poorly known, and its range which extends eastward from India into Southern China, is ill-defined. Much of its habitat throughout the area has been destroyed as a result of continuous military operations, including defoliation.

Elsewhere, especially in Thailand, the survival of the species is threatened by its increasing commercial exploitation for biomedical and other research in the United States and Europe. This situation provoked Ms. Harrisson in her book Conservation of Nonhuman Primates in 1970 to issue the following plea: "Non-Asian researchers should make every effort to originate or support ecological studies of stump-tail macaques and, simultaneously, reduce the use of this species and promote laboratory breeding." This plea, however, has been ignored, and the situation of the stump-tail has continued to deteriorate. Science Magazine reported (July 17, 1973) the case of a researcher who wanted to use the stump-tail for a long-term study of cardiac physiology but had to switch to another species as a supply of animals could not be guaranteed for the duration of the project.

In consideration of these facts, IPPL appeals to researchers in all countries for a moratorium on the purchase and use of wild-caught stump-tail macaques. We appeal to funding agencies to consider the threatened nature of the stump-tail before granting the means for projects involving its use. We appeal to animal dealers not to adopt aggressive sales policies with regard to this species but to suggest alternatives.

Finally, we appeal to all IPPL members and friends to put this appeal into wide circulation.