

# NEWSLETTER

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## THE HALL'S ISLAND GIBBON PROJECT

In July 1975, the International Primate Protection League learned that the U.S. Department of State had sent the following telegram to the American Embassy in Bangkok, Thailand.

George Nagle, Deputy Director for Administration, Rockland Research Institute of Orangeburg, New York, and Dr. Aristide Esser, Research Associate, will arrive in Bangkok on or around July 21 to discuss with Thai officials export of gibbons for breeding purposes to be used in cancer research. Please extend appropriate assistance and courtesies.

IPPL responded with interest to this telegram on three counts:

1. The gibbon, the small Southeast Asian ape, has enjoyed complete legal protection in Thailand since 1965.
2. In spite of this protection, Thai gibbons have been obtained by laboratories in the United States through irregular channels.
3. Rockland Research Institute (Center), with which Esser and Nagle are affiliated, is an internal suborganization of Rockland State Hospital, a mental institution. Superficial investigation sufficed to establish that neither man had any experience or training in cancer research.

In order to understand the full implications of the mission to Thailand announced in the State Department telegram, IPPL began an investigation of the proposed gibbon acquisitions and the two men involved in the transaction, Aristide Esser and George Nagle. In skeletal outline, the following chronology of events was uncovered.

In 1966, sixteen juvenile gibbons were shipped from Thailand to Hawaii for a project supported by the Rockland Research Institute (Center) of Rockland State Hospital, Orangeburg, New York, and carried out by Aristide Esser. The final destination of these gibbons is unknown, but some probably went to the laboratory of Jose Delgado at Yale University, New Haven, Connecticut. In March 1970, ten young gibbons were shipped from Thailand to Yale University. These animals were added to an unknown number of gibbons (at least 17) already in the possession of Delgado. In December 1971, ten adult gibbons were shipped from Bangkok to Yale University. Over a period of five years, then, a total of 36 gibbons was imported to various locations by the personnel of an interlocking set of projects and institutions. In June 1970, these interlocking projects culminated in the establishment of a free-ranging gibbon colony on Hall's Island, Bermuda, the popular island resort in the Atlantic Ocean.

By September 1970, seven gibbons had died at Yale University, five due to illness and two due to being sacrificed by Delgado. By the same date, two gibbons had died on Bermuda. During the period May 1970 - February 1972, three more gibbons died on Bermuda. Between February and April 1972, one gibbon was removed from Bermuda and sacrificed. Thus, of the 36 imported gibbons, at least 13 are known to have died between 1966 and 1972. More to the point, of nine gibbons released on Hall's Island, Bermuda between 1970 and 1972, six (or 66%) were dead within approximately two years. Most of these deaths remain unexplained in medical terms.

The following sections describe in more detail certain aspects of the Hall's Island, Bermuda gibbon project.

### PRINCIPAL INVESTIGATORS

In the April 1975 issue of Laboratory Primate Newsletter, the project on Hall's Island, Bermuda is described as a study on "Experimental Modification of Behavior in an Open-Field Situation using Gibbons." The principal investigators are identified as N. S. Kline, A. H. Esser, J. M. R. Delgado, C. R. Carpenter, and J. S. Newkirk.

Nathan S. Kline is director of the Research Foundation for Mental Hygiene at Rockland State Hospital. He is a psychiatrist who specializes in the experimental use of psychoactive drugs to modify behavior. It appears that he was interested in assessing the effects of various new drugs such as lithium and meprobramate, a powerful tranquilizer, on the response of the Hall's Island gibbons to brain stimuli. Kline even proposed starting narcotics studies on the gibbons, but this research was opposed by Carpenter (and his students) and never implemented, as far as IPPL knows.

Aristide H. Esser is a psychiatrist affiliated with the Rockland State Hospital. He currently serves as director of the Central Bergen Community Mental Health Center in Paramus, New Jersey. In 1966 he studied the behavior of a group of 16 gibbons imported to Hawaii for a project supported by the Rockland Research Institute of Rockland State Hospital. Much of his research has been on the utilization of space and dominance relationships in psychiatric patients.

Jose M. R. Delgado has been studying the effects of brain implants on the behavior of man and other animals for over 25 years. He is the author of the book Physical control of the mind; towards a psychocivilization. Formerly at the Yale University Medical School, he is now on the Medical Faculty of the New Autonomous University of Madrid. Earlier in Spain, Delgado had succeeded in eliminating aggressive behavior in fighting bulls through the use of brain implants. Through the use of brain implants to stimulate and inhibit aggression in gibbons both in his laboratory and on Hall's Island, Delgado appears to have hoped to develop techniques to control aggression in humans through brain implantation. IPPL contacted Yale University in order to clarify a report that Delgado's departure from Yale, along with the gibbons in his laboratory, was the result of a dispute with the trustees of the Medical School over the use of human subjects for brain implantation. To date, we do not feel that we have received a satisfactory answer to our questions about Delgado's activities at the Yale University Medical School.

The late Clarence Ray Carpenter was a psychologist well-known for his research on the behavior of wild primates, including gibbons. Dr. Carpenter's role on Hall's Island was to define normal gibbon behavior in terms of which the observations made by Delgado and Kline could be correctly interpreted. Geza Teleki and Lori Baldwin, two of Carpenter's graduate students, were hired on the project as research assistants to conduct the baseline behavioral observations on the gibbons and advise the principal investigators on such things as observational methods and research protocols. Carpenter visited Hall's Island periodically, and Teleki and Baldwin spent the summer of 1971 there.

J. S. Newkirk worked in the capacity of a research assistant in the Hall's Island project.

#### GIBBON SHIPMENTS

The fact that during the past two years IPPL has discovered considerable illegal trafficking in gibbons, including suspect shipments to laboratories in the United States, suggested the importance of attempting to determine the origin of the Hall's Island gibbons. We were able to obtain details of two definite shipments, and a possible third shipment.

On March 10, 1970, ten gibbons from Thailand arrived at the laboratory of Jose Delgado at the Yale University Medical School. Apparently, this shipment was arranged by a Thai neurologist, Dr. Prasop Ratanakorn. He reportedly had a close personal relationship with General Prapass, one of the military strongmen driven out of Thailand after the student protests of 1973. No authorization for this shipment was obtained from Thai Wildlife Conservation authorities however. In a different context Pong Leng-EE, Chief of Wildlife Conservation in Thailand, has explained the pertinent law: "In 1965, the Committee for Wildlife Reservation and Protection decided to ban the capture, trade and export of gibbons; any gibbons shipped after this date would be illegally obtained."

In a memo dated June 3, 1971, to other staff members of the Hall's Island project, Esser reported an anticipated shipment of 20 gibbons from Thailand. The memo describes the following plans for these gibbons:

When these 20 animals from Thailand come, their fate will be as follows: one pair will be sent off to Yerkes. The remaining 18 will go to Yale for an initial quarantine, then around 10 or 12 will be shipped to Ossabaw (an island off the coast of Georgia) to initiate breeding colonies there, while the others will go to Bermuda. The group of new animals will consist of 3 implanted and 3 non-implanted animals (only transdermal implantation will be executed because of the dangers possible through the skullcap).

It is not known whether this shipment ever materialized. In December 1971, however, ten gibbons arrived from Bangkok and were placed in quarantine at the Yale University Medical School.

IPPL contacted Dr. Daniel Snyder, head of the primate facilities at Yale University, in order to clarify the role of the Yale University Medical School in the acquisition and holding of these gibbons. In a letter dated September 24, 1975, Dr. Snyder replied that Yale University never actually owned the gibbons since the financing for the project came from the International Psychiatric Research Foundation of New York and the project was administered by the Rockland Research Institute. Dr. Snyder commented:

We had no reason, then or now, to suspect that the animals had not been properly obtained....our role was to house the animals for Dr. Delgado while they were here and to provide veterinary certification for transport to Bermuda or Spain....Dr. Delgado was billed on a fee-for-service basis.  
Dr. Snyder assured IPPL that, henceforth, the Yale University School of Medicine would request information about the origin of animals similarly handled.

#### INTRODUCTION OF GIBBONS ON HALL'S ISLAND

In June 1970, six gibbons (1 male, 5 females) from the laboratory of Delgado at Yale University were released on Hall's Island. These were part of the shipment of ten gibbons which had been obtained from Thailand in March 1970. By September 1970, two of the female gibbons, Necke and Rita, were dead. A second group of four gibbons (3 males, 1 female) was introduced during May 1971. Three more deaths followed on Hall's Island, those of the female Daki during May 1971, the male Fritz during October 1971, and the female Tina by February 1972. Between February and April 1972, another male gibbon, Helmut, was removed from Hall's Island and sacrificed.

All of the gibbons released on Hall's Island originally had been at the Yale University Medical School. At Yale, Jose Delgado surgically implanted electrodes in the brains of many gibbons. The three surviving gibbons from the second shipment released on Hall's Island had all undergone extended laboratory confinement as well as brain surgery with electrode implantation and stimulation at Yale University. One of the animals, Helmut, the only mature male in the colony, remained "behaviorally aberrant" during the summer of 1971, during which time behavioral observations were made by Teleki and Baldwin. This aberrant behavior resulted in his removal from Hall's Island and subsequent sacrifice.

#### DEATHS OF GIBBONS ON HALL'S ISLAND

From the start, as indicated above, the entire gibbon project experienced problems with animals dying. By September 1970, five gibbons at Yale University Medical School had died from illness and two additional animals had been sacrificed. By the same date, two of the gibbons, Necke and Rita, released on Hall's Island had also died. One body was never recovered, and the other showed no apparent pathology. A grant proposal dated December 20, 1971 suggests that these gibbons probably died of "bee sting and consequent allergic reaction." However, the absence of evidence to support this contention suggests that it may have been an attempt by the principal investigators to absolve themselves of responsibility for the deaths of the gibbons.

Delgado saw these unexplained deaths as no reason to discontinue the Hall's Island project but rather as reason to stockpile more gibbons. In a memo dated September 14, 1970 he writes:

This double accident, though unfortunate, should not handicap the future of the project, but emphasizes the need of having a backup of animals at Yale, where some losses of gibbons should also be anticipated.

This stockpiling was, in fact, achieved by 1972-1973, at which time according to Lane Carpenter, the son of C.R. Carpenter, four additional gibbons were being housed in outdoor cages at the Bermuda Aquarium, which also doubles as a small zoo for animals such as dispossessed pets. These four gibbons were ostensibly given to Bermuda for exhibition to the public, possibly for publicity reasons, but the animals were, in fact, backup gibbons which could immediately be taken out to Hall's Island when any resident gibbon died.

In June 1971, another gibbon, Daki, who was brain-implanted and may also have been on a drug program, died after a prolonged "stimulation session" by Delgado, from which she was released without supervision and disappeared over a hill. The next day she was found in the bay, and the necropsy indicated death from drowning and shock. At the May 1971 meeting of the Hall's Island project members, Dr. Esser noted:

I feel we lost Daki because of insufficient supervision of her behavior after a prolonged period of stimulation....the necessity of this procedure could not, of course, have been anticipated, since in the laboratory the animals could not get into dangerous situations.

Given the same facts, others might have reached an entirely different conclusion; namely, that since the effects of brain stimulation were NOT known, supervision of stimulated animals was absolutely essential. The absence of proper supervision does appear negligent and irresponsible to IPPL.

And still another gibbon, Fritz, died of unexplained brain injuries in October 1971. In a letter to Geza Teleki dated October 8, 1971, George Nagle wrote the following:

As in all the previous situations, the circumstances surrounding this latest gibbon death also remain something of a mystery...we shall miss Fritzi...it is sort of sad that of all the animals it had to be Fritzi, but I guess that's the breaks of the game.

One of the major setbacks to the project in 1970-71 was the realization that stray radio frequencies from the military airport on Bermuda were randomly tripping various electronic gear being used on Hall's Island. A technician from the military base worked for months trying to set the receivers on Hall's Island to frequencies which would not be affected by military and commercial transmissions. During the summer of 1971 when Teleki and Baldwin were making behavioral observations on the gibbon colony, technical problems involved only electronic gear that was to be strapped onto the gibbons' backs to measure activity rhythms. But these two research assistants suspected, based upon the series of random deaths of gibbons for which necropsies invariably showed nothing and on Helmut's erratic behavior, that there may well have been random radio frequency interference with the brain stimulating equipment, at least during experiments if not at other times. Teleki and Baldwin raised this point with Delgado during one of his two-day site visits, but they were, in effect, ignored for worrying about an irrelevant matter. The only official mention of the frequency problem is in a September 14, 1970 memo from Delgado to Kline, Esser, and Nagle, in which Delgado says:

Bermuda has by far more radio interference than anticipated and it will be necessary to use a frequency analyzer in order to determine trouble free sections of the radio spectrum.

The decision to undertake this analysis was made after the project had begun on Hall's Island, not in anticipation of the release of animals on the island.

#### CONCERN OVER THE QUALITY OF RESEARCH

Dr. Carpenter early became concerned about the quality of the research being conducted on Hall's Island. At the May 1971 meeting of the project members, he complained of the "lack of planning and protocol in the execution of Dr. Delgado's experiments on the island." In a 1972 memo, he again complained:

...another essential procedure that cannot be longer neglected is the development of complete and chronologically up-to-date protocols for each gibbon. Especially is it desirable to have full records both historical and contemporary on all operative and stimulation actions whether done at Yale or Bermuda.

At the same meeting in May 1971, Dr. Esser also complained about the lack of feedback from Yale:

I voiced my concern about the lack of data coming from Yale...I think in general we should all keep each other abreast of position statements or developments in this project so that we are not unaware of the directions of our thinking...

It is difficult to believe that a responsible researcher at a university of the caliber of Yale would fail to make such records available to the fellow members of his research team.

In what became a final attempt to prevail upon the principal investigators to rectify the situation on Hall's Island, Geza Teleki and Lori Baldwin on February 8, 1972 compiled a list of seven points which they, and C. R. Carpenter, considered to be the bare minimum required to make some sense out of the gibbon project. The seven points are as follows:

1. Colony size and composition must be determined.
2. Release procedures and dates must be settled, and careful controls established.
3. Stabilization times should be allowed, with minimal human interference. Potential misfits and maladaptive individuals should be removed and perhaps replaced by others.
4. Observations on release behavior, adaptive behavior, colony stabilization, group formation, and socialization should be made for the general background files on the colony, as these data will affect all future experimental work.
5. Improvements of caging facilities and capturing procedures must be made and tested. Current methods are far too disruptive.
6. Operates (possibly excepting Kodi) should not be part of the basic colony. Operates should be introduced, with time allowed for assimilation, before particular experiments are conducted. Having brain operates as full members of the basic colony will interfere with and limit research on other topics in the long run.
7. Experimental protocols must be specified, giving dates and individuals. Experiments should not overlap, and procedures must allow time for inbetween stabilization.

With the exception of C. R. Carpenter, none of the principal investigators gave serious consideration to any of these points, and, as a consequence, on February 20, 1972, Teleki and Baldwin submitted a joint letter of resignation.

In a letter to Ardith Eudey dated September 4, 1975, Teleki narrated an incident which seems to sum up everything wrong with the Hall's Island project.

We (Baldwin and Teleki) were ostensibly hired to conduct behavioral and baseline studies of the gibbons so that other studies could be built on a solid understanding of gibbon behavior and organization. We eventually discovered, much to our consternation, that we were as much publicity figures as anything functional. A single episode will illustrate my point: when Delgado came out to try his equipment, we noticed that he wrote down successful stimulation on the AGGRESSIVE brain centers when, in fact, the gibbons' response was a FEAR grimace. Possibly thinking that gibbons are simply more complex dogs and cats, Delgado was convinced that this amounted to an aggressive snarl. When we pointed out to him that primates show fear and aggression in much the same way as humans, and not like dogs or cats, he completely ignored us and kept on taking notes as he saw fit. This showed us two things. One, that Delgado's scientific results, both at Bermuda and elsewhere, were highly suspect because he knew nothing about his subjects; two, that he was not about to listen to anyone, even if they had been hired as experts in primate behavior, if the results conflicted with his convictions. This episode exemplifies the quality of the research that we saw conducted out there, and made our participation in doing baseline studies a farce.

Teleki's impression that Delgado was ignorant of his subjects finds support in a draft proposal for research on gibbons which Delgado and Esser prepared in 1969. The proposal describes the gibbon as an appropriate model for the study of "dominance relations." Since the primary social group of the gibbon is a monogamous family and there is no clear-cut dominance pattern between adult male and female, it seems inappropriate, therefore, to select a rare animal like the gibbon as a model for this kind of study. Another bizarre concept about gibbon behavior is revealed in an unsigned 1971 proposal draft. It is suggested that a brain-implanted pair of adult gibbons recently imported from Thailand be added to the four younger gibbons already on Hall's Island; "After the new pair has been introduced to the group, we expect a family formation, i.e., the adult pair will "adopt" the four gibbons presently on the island." The researchers seemed well-pleased with the quality of the "research" however. In the abovementioned draft they note that "ours is one of the few interdisciplinary groups working on an experiment of this sophistication and complexity."

No one spent all year working on the island. Esser, Nagle, and Kline were in the United States most of the time, and Delgado's visits to "stimulate" the gibbons were both rare and brief (e.g., a visit of only six days during 1970). Perhaps this was fortunate for the gibbons! The gibbons were left alone for months at a time. A local resident was hired to take food to the island three times a week. This caretaker was supposed to report any sick gibbons to Dr. Robert Steele, a Bermudian veterinarian on retainer to the project. However, it is difficult to tell a gibbon's state of health by visual inspection, and, in any case, the Bermuda vet was used to dealing with cats and dogs, not brain-operated apes. Teleki feels however, that the well-being of the gibbons was not the principal investigators' primary concern. In the letter dated September 4, 1975 to Ardith Eudey, he states:

The entire operation (appeared to be) geared primarily towards personal interests, leaving the welfare of the gibbons at the bottom of the priority list...there was no need, for example, to have a 60 horsepower engine on a Boston whaler motor-boat, equipped with water-skis, to carry researchers 100 yards from the main island to Hall's island. When we requested that the boat be traded in for a small rowboat, and that the maintenance funds be used for buying more fresh fruit for the gibbons, we were ignored. Yet the vitamin content of the monkey chow used on the island had often deteriorated by the time it was used...

When the request to purchase more fresh fruit for the gibbons was turned down, Teleki and Baldwin made arrangements with several supermarkets to collect from them discarded produce, e.g., wilted lettuce, that was considered unsellable to humans but was perfectly fit for gibbon consumption. Teleki and Baldwin reported this procedure to the principal investigators and received enthusiastic encouragement from them, but nothing was done to continue the process once the two research assistants had left the project.

The fact that much, if not most, of the time there was no professional staff member on Hall's Island could only have aggravated the problems with illness in the gibbons, as well as invalidating long-term evaluation of the effects of brain stimulation. It also encouraged acts of vandalism. For example, Helmut was knocked into the bay with an oar by a boatload of young people. Inevitably he would have drowned if this incident had not been observed by some responsible people who leaped into a boat and fished him out. It is entirely possible that several of the non-implanted gibbons, and perhaps even some of the implanted gibbons, may have died as a consequence of comparable acts of vandalism.

#### FUNDING FOR THE HALL'S ISLAND PROJECT

An obvious question is how any group of researchers would be able to secure funding for a project apparently so disorganized and unsupervised. IPPL has sought an answer to this complex question, and our preliminary findings reveal a tangle of

interlocking foundations and institutes under the apparent control of the principal investigators themselves. The Rockland Research Center is affiliated with the Research Foundation for Mental Hygiene, Inc., a foundation which financed Esser's work on gibbons in Hawaii and currently has a contract from the National Cancer Institute for the procurement of at least 30 gibbons. Nathan Kline is the Director of the Rockland Research Center, and George Nagle is the Center's Director of Administration. Aristide Esser is currently Director of the Central Bergen Community Mental Health Center, Inc., New Jersey, of which Kline is a trustee. However, the organization where all the characters in this extraordinary drama come together is the International Psychiatric Research Foundation in New York. The Foundation's stationery identifies Esser as Director of Research, Nagle as Treasurer, and Kline and Delgado as Trustees. Perhaps the most interesting aspect of all is that three new members were added to the Board of Trustees between 1971 and 1972. These are Miles Outerbridge, a Bermuda businessman who, in fact, owns Hall's Island and rents it to the gibbon project for a nominal sum, and Commander and Mrs. Geoffrey Kitson. Commander Kitson is a retired Navy officer who is now involved in local politics and business in Bermuda, and his wife is active in Bermuda social circles. It seems that their addition to the Board was more for reasons of mutual convenience rather than a reflection of their professional accomplishments. The Foundation is not listed in any major directory of foundations, and it is not known, therefore, whether grants are available for projects of non-affiliated researchers. A grant proposal authored by Esser and Delgado in December 1971 states that the Foundation exists to support controversial areas of research. Brain implants, psychosurgery, and administration of psychoactive drugs would fall within this category. The proposal notes the following:

The fact that early investigators with drugs had a real struggle to convince even their colleagues of the value of such treatment has led the International Psychiatric Research Foundation to give special consideration to approaches which might not so easily receive sponsorship from the average institution, medical school or hospitals.

It is possible that the International Psychiatric Research Foundation is a genuine foundation, giving grants to support research only after a careful review procedure has determined the excellence and promise of the work. It is also possible that the Foundation is a "front" through which researchers can funnel funds to award themselves grants to pursue their "pet" projects with no, or minimal, outside review, thus possibly avoiding income taxes.

#### ENDORSEMENT OF THE PROJECT

Strangely enough, this questionable project managed to avoid any conflict with Bermuda law or citizenry. Bermuda law requires that all importations of animals must be cleared in advance and an import permit secured. IPPL is awaiting a reply from Bermuda officials on whether this formality was performed for the various shipments of gibbons. Under Bermuda law, it is an offense to "ill-treat" or "torture" an animal or to "fail to exercise reasonable care and supervision" or to "administer an injurious drug without reasonable excuse." Jail terms, fines, and confiscation of animals are among the prescribed punishments for such offenses.

It is evident that the Hall's Island project was anxious to avoid public criticism from the residents of Bermuda. In an undated memo circulated in 1971, Carpenter recommended that brain operations NOT be performed on Hall's Island itself.

All operations on gibbons should be done, wherever possible, at the Bermuda biological station, or in a special room at "The Cottage," not on Hall's Island. Work there is under scrutiny by telescope from two sides of the shores of Barrington Sound and nothing is private. There is strong sentiment on Bermuda against "vivisection". Friends of this Program advise against doing brain operations on the island. Public opinion is sensitive and could easily become hostile thus blocking support for the Program and even causing the Program to terminate.

IPPL is investigating reports that local residents, hearing screams from the gibbons during Delgado's visits to Hall's Island, requested an investigation by the Society for the Prevention of Cruelty to Animals (SPCA), the results of which were hushed up.

The Hall's Island principal investigators were public relations conscious and did a lot of entertaining of Bermuda dignitaries. Various articles appeared in the press, publicizing the project as research on epilepsy, a subject not mentioned in a single document in IPPL's extensive file on the Hall's Island gibbon project. Some of the Bermudian associates of the project were taken on trips to the U.S.A., and even the Bermuda Audubon Society was reported as having been enlisted to spread goodwill for the project. The ultimate endorsement came from Sir Edwin Leather, Governor of Bermuda, in a letter to IPPL dated October 1, 1975.



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I am extremely surprised that anyone should have been giving alarming reports on the project that is being done here....those in charge of the project are Bermudians and Americans of the very highest scientific qualifications and well known to me.

The above report only begins to suggest the incredible events surrounding the Hall's Island gibbon project. We now return to the original event which triggered IPPL's investigation of this entire situation - the Esser-Nagle mission to Thailand to procure gibbons, for which the U.S. State Department requested the American embassy in Bangkok to offer assistance.

#### PROJECT SAFE HAVEN"

The Esser-Nagle mission to Bangkok did not materialize in July 1975, possibly as a consequence of adverse publicity about the forthcoming visit in the July 19, 1975 issue of the Bangkok Post. The arrival of Esser and Nagle was subsequently rescheduled for September. The fact that attempts by officials from the Thai Wildlife Conservation Division to contact the two men at several of the major hotels in Bangkok failed suggests that this trip was also cancelled. These Thai officials were anxious to learn how the gibbons, by then known to be on Hall's Island, had been acquired.

Subsequently, IPPL learned that the new project for which gibbons are being sought ironically is called "Project Safe Haven." Following the procedure established for the Hall's Island project, an attempt is being made to enroll well-known primate field workers to add legitimacy to this new project. Among others, David Chivers apparently was contacted.

Presumably the name "Safe Haven" implies that some of the gibbons in the project would be used for breeding, with offspring or non-breeders to be used in cancer research. Since the National Cancer Institute finances virtually all cancer research in the U.S.A., IPPL contacted this agency for information about the project in September 1975. To date no response has been received. We learned, however, that NCI had issued a contract to the Foundation for Mental Hygiene (#65319), which reportedly approves the procurement of 30 gibbons. The NCI should be well aware of the protected and endangered status of gibbons throughout Southeast Asia. At least one of its contractees (the Comparative Oncology Laboratory, University of California at Davis) has already been involved in the procurement of gibbons smuggled out of Thailand. Therefore, it is surprising that NCI would issue a contract for the use of gibbons at this time. Furthermore, IPPL feels that it is not appropriate for the U.S. State Department to instruct American embassies to assist in such transactions.

Even if it were possible for gibbons to be obtained for Project Safe Haven, IPPL seriously questions whether the researchers involved in the Hall's Island project have demonstrated themselves competent to conduct research on gibbons or maintain them in a captive environment.

It appears that Esser and Nagle were unsuccessful in getting gibbons out of Thailand. In November 1975 a Singapore animal dealer reported to IPPL that he had received an order for 300 gibbons for "cancer research" from a U.S. importer. It is not known if all or some of these gibbons are ultimately destined for Project Safe Haven. The latest news is that the Rockland team has their eyes on Indonesia as the source of the animals.

#### PYGMY CHIMPANZEE SITUATION

The October 1975 issue of the IPPL Newsletter carried a story about the acquisition of five pygmy chimpanzees from Zaire for use in studies at Yerkes Primate Research Center in Georgia. The pygmy chimpanzee is classified as being "vulnerable (to extinction)" by the International Union for the Conservation of Nature and Natural Resources and is listed as such in its Red Data Book. In response to the importation of this vulnerable species, a petition was circulated among chimpanzee workers by Dr. W. C. McGrew, University of Stirling, Scotland. The petition, with signatories, is reprinted in the January 1976 issue of Laboratory Primate Newsletter.

The five justifications listed below for the pygmy chimpanzee project have been offered in different contexts by individuals (and organizations) who were involved in the acquisition of the animals: Dr. Geoffrey Bourne, Director, Yerkes Primate Research Center; Dr. Philip Handler, President, National Academy of Sciences; Mr. Lannon Walker, U.S. Embassy, Zaire; and the U.S. Department of State.

1. The project is a conservation, not a medical, project.
2. The pygmy chimpanzees were all humanely caught by netting.
3. The animals were legally exported.
4. The animals were exported on a "lend-lease" basis, which was not an attempt to circumvent Zaire's export ban on this species.
5. The assistance of the U.S. Embassy in the exportation operations was minimal (but helpful). The U.S. National Academy of Sciences was the only U.S. agency directly involved.

Since the appearance of the IPPL Newsletter, additional evidence has come to light which raises serious questions about the validity and credibility of these justifications. The source of the new information is Dr. Joseph Ghesquiere, a Belgian professor who formerly served as the co-ordinator of the pygmy chimpanzee project in Zaire. Dr. Ghesquiere corresponded with Dr. McGrew in a letter dated September 11, 1975, enclosing a copy of the October 15, 1974 contract between the Yerkes Primate Research Center and the Institute for Research in Central Africa, the Zairean organization involved in the transaction.

A CONSERVATION OR MEDICAL PROJECT?

The contract between the Yerkes Primate Research Center/National Academy of Sciences and the Institute for Research in Central Africa states, in part:

The first phase of this research consists primarily of establishing the biomedical importance of the animal...the possibility of creating breeding stations...will not be considered until the specimens tested at Yerkes have convinced the specialists of the biomedical importance of the animals.

Dr. Bourne has stated that the Merck Sharp Dohme Pharmaceutical company, the Eli Lilly Drug Company, the Kaiser Foundation, and the Office of Naval Research have all contributed funds to the project. It should be noted that Merck sharp has been involved in laboratory research on hepatitis which has resulted in the death of thousands of moustached tamarins (see IPPL Newsletter, May 1975). It may legitimately be asked what interests such pharmaceutical companies would have in the Yerkes pygmy chimpanzee project if it were primarily a conservation and not a biomedical project. The implications of this latter possibility are clearly raised in the passage of the contract quoted above.

CAPTURE BY NETTING?

In the November 1975 issue of Primate Eye, Dr. Bourne states the following in respect to capture methods:

Despite rumors that Pygmy chimpanzees were very rare, the capture expedition had no difficulty in capturing 5 of these animals in less than 2 weeks of trapping time, and could have caught many more if they had had stronger nets.

In a letter to IPPL dated June 5, 1975, Dr. Bourne wrote, however, that "the first capture operation netted 3 animals; about a week later 2 young animals were added." Furthermore, in his correspondence with Dr. McGrew, Dr. Ghesquiere reported that the two infant pygmy chimpanzees were, in fact, purchased from hunters.

LEGAL EXPORT?

According to Dr. Ghesquiere, although the Government of Zaire issued an export license for only the three older pygmy chimpanzees, the two infants were also sent to Yerkes "on their mother's passport." But, as was reported in the preceding section, it appears that the five animals were obtained from two different sources, the older animals through netting and the two infants through purchase from hunters. (The U.S. Lacey Act makes it an offense to import any animal exported in violation of the laws of the country of origin.)

LEND-LEASE?

Explicit in the lend-lease arrangements whereby the pygmy chimpanzees were imported to Yerkes, in spite of the existence of an official export ban on this species, is the provision that the animals will be returned to Zaire. In a talk before the Simian Society at Jacksonville, Florida in May 1975, Dr. Bourne publicly stated that he expected that the Zairean government would let the pygmy chimpanzees remain at Yerkes. IPPL has now learned that on December 1, 1975, Dr. Ghesquiere requested the U.S. Embassy in Zaire to inform the National Academy of Sciences that the pygmy chimpanzees were to be returned. It will be illuminating to see how promptly Yerkes complies with the official request of the Zairean government for the return of these animals.



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EMBASSY ROLE?

Letters to IPPL from both the U.S. Embassy in Kinshasa, Zaire and the U.S. Department of State minimized the Embassy's role in persuading Zairean officials to permit the export of the pygmy chimpanzees. In his letter to Dr. McGrew, Dr. Ghesquiere stated, however, that "the U.S. Ambassador approached President Mobutu or his chef de cabinet, Cit. Bizengimana about the Pan Paniscus (sic) and got the OK." That the number one American official in Zaire personally contacted highest echelon Zairean officials about this project implies that the U.S. Government's involvement in the export phase of this project may have been more significant than has been suggested previously.

In summary, IPPL feels that the inconsistencies reported above in respect to the stated purpose of the Yerkes pygmy chimpanzee project and the means by which the animals were acquired leave the entire project open to question.

OFFICIAL RESPONSE TO PETITION

The McGrew petition found wide support among the chimpanzee field workers who were invited to sign it. (See the January 1976 issue of Laboratory Primate Newsletter.) It was hoped that the petition would lead to a rational and academic discussion of the merits of the proposed project. Unfortunately, Dr. Bourne has chosen to defend the project not by addressing the issues but by deriding and ridiculing its critics, suggesting that they are "nonentities" whose opinions are not worth consideration. In fact, Bourne wrote a letter of denunciation to the president of McGrew's university and, in turn, denounced the University of Stirling when it failed to take action against McGrew and upheld his right of free expression.

Some of Dr. Bourne's correspondence is illustrative of his lack of objectivity on this matter:

July 22, 1975 letter to Dr. McGrew

"Dear McGrew,

I wrote a detailed account of our Pygmy Chimpanzee project to you some months ago which I thought sufficient for any rational individual to understand what we were doing....now I find that you have sent out some blurb to people who work with chimpanzees in the wild complaining about our activities. Apparently, you either did not read what I sent you or it did not get through to your conscious mind....I am as much dedicated to primate conservation as you are, if, in fact, you are, and I resent the behavior of people like you."

August 1, 1975 letter to Dr. McGrew

"Dear McGrew,

...What have you done to help the Pygmy Chimpanzee? How much time and effort have you devoted towards their conservation? You do nothing and plan to do nothing but stand there bleating like a sheep, about a subject of which you are totally ignorant."

Dr. Bourne directs similar insults to Dr. McGreal, IPPL co-chairperson, in the November 1975 issue of Primate Eye and to all signatories of the McGrew petition in the January 1976 issue of Laboratory Primate Newsletter.

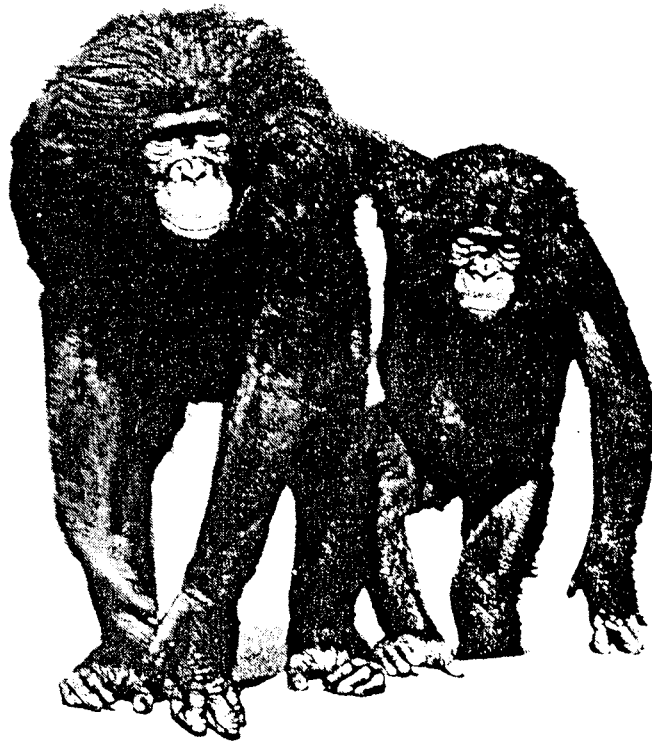
Even if Dr. Bourne's critics had no academic credentials - and, in fact, many have earned doctorates in Psychology, Zoology, or Anthropology from prestigious universities - he is obliged by all the rules of professionalism and common courtesy to address himself in appropriate terms to the substantive issues raised. Criticising ones critics is an all-too-common technique for evading and obscuring real issues.

PROJECT RECEIVES SUPPORT

The project has received support from Dr. Adrian Kortlandt, a veteran chimpanzee worker who opposes laboratory use of the pygmy chimpanzee but favors the Yerkes "conservation" project. Another supporter is Dr. David Chivers. Chivers has studied gibbons and siamangs in Southeast Asia. In an "open letter" dated October 1975, he expressed fear of the "disastrous results a similar petition might have in Southeast Asia."

IPPL REAFFIRMS SUPPORT FOR PETITION

IPPL wishes to reaffirm its support for Dr. McGrew's petition on behalf of the conservation of the pygmy chimpanzee. Most of all, we wish to express our admiration for his preparation and circulation of the petition and especially for his courage in the face of an unwarranted attack on his abilities and sincerity.



pygmy chimpanzees  
Linda and daughter  
courtesy San Diego Zoo

#### RECOMMENDED READING

The April 1975 issue of Defenders of Wildlife, the monthly magazine published by the international animal welfare organization of the same name, is a special issue devoted to the wildlife of Madagascar and the Comoros, especially the lemurs. The issue is beautifully illustrated with color photographs and is available for \$3.00 from the following address:

Defenders of Wildlife  
1244 19th Street  
Washington, D.C. 20036

L'Adieu aux Betes (Farewell to the Wild Animals) by Jean-Yves Domalain, Librairie Arthaud, Paris, 1975, is an extraordinary book by a former trafficker in wildlife who gave up the business to become a conservationist. Domalain, who used to operate out of Laos, had a near-monopoly of traffic in such rare animals as Douc langurs and gibbons. In his book, he describes the techniques of animal trafficking, including the use of "connection countries". (See the article on the "Singapore Connection" in this issue.) Any English translation of this book will be announced in a subsequent issue of the IPPL Newsletter.

Proceedings from the 5th Congress of the International Primatological Society, Nagoya, Japan, August 1974, edited by S. Kondo, M. Kawai, A. Ehara, and S. Kawamura, Japan Science Press, Tokyo, 1975. The Proceedings includes a paper by Shirley McGreal and Ardith Eudey entitled "The International Primate Protection League; Program on the Supply and Use of Primates in Medicine and Industry." Requests for reprints should be addressed to Ms. Eudey at the Department of Anthropology, University of California, Davis, CA 95616.

Primate Utilization and Conservation, edited by Gordon Bermant and Donald G. Lindburg, John Wiley and Sons, Inc., New York, 1975. This work contains the proceedings from a conference on "New Concepts in Primate Production" sponsored by the Battelle Institute at Seattle, Washington in August 1972.

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CITY MONKEYS MOVED

In many parts of the world expanding human populations are encroaching on primate (and other wildlife) habitat. The result is often competition for the same food sources. This conflict may result in populations such as monkeys being destroyed as pests.

When the city of Bangalore in South India was plagued by marauding bands of bonnet macaque monkeys (Macaca radiata), a different approach from killing was attempted--an effort was made to move the monkeys to a new home. This approach is consistent with the philosophy of most Indians, since, according to Hindu tradition, it was the Hanuman langur which helped rescue Sita, the heroine of the Ramayana, from the clutches of the demon Ravana. Some of the reverence accorded to langurs on the basis of this episode has been shared with the mischievous macaques, which have become nuisances in many Indian cities, including Bangalore.

According to Shri Partha Sarathy, Secretary of the World Wildlife Fund in India, the monkeys of Bangalore fall into three categories:

a) Temple monkeys These animals are fed by faithful Hindus, and consequently cause few problems, staying around the temple compound.

b) Market monkeys These monkeys, according to Shri Partha Sarathy, "seem to have made peace with the area where they coexist."

c) Garden monkeys These monkeys raid fruit and vegetable gardens. Shri Partha Sarathy reports that, as the result of the 1975 food shortages in India, many Bangalore residents had started to grow their own fruit and vegetables, and, provoked by the monkeys' depredations, had taken to shooting the animals.

In 1972, the Bangalore City council started to move a few monkeys into the countryside. In 1975, however, the local Forest Department, the City Corporation, and the World Wildlife Fund joined with a group of scientists from the University of Agricultural Sciences in Bangalore to develop a plan to relocate entire groups of monkeys away from the city. Dr. Hafeezur Rahaman, the leader of the team, has kindly provided IPPL with a progress report.

Through newspaper advertisements and radio announcements, citizens of Bangalore have been requested to report to the City Corporation instances of monkeys causing trouble in their area. A team of trappers is then dispatched to the affected area, along with a large combination trap-holding cage. As soon as a monkey is caught, it is transferred to the holding section of the cage, and the trap is rebaited until all or almost all members of the troop are caught. The monkeys are marked with indelible paint and taken to the release area. This is the Savandurga, a 1600-acre forest reserve about 40 miles from Bangalore which was selected because of its variety of (food) trees and low resident monkey population. Neighborhoods where the monkeys were caught are periodically checked to see if the old monkeys have returned or if a new troop has invaded the area. In all cases, the original monkeys have not returned, and no new monkeys have appeared. The forest release area is also checked to see whether the monkeys are still present. Several of the marked monkeys have been observed and appear to be doing well in their new homes. Forty miles seems to be an appropriate distance away from the city for release of urban monkeys, but when a troop was released in a forest area only six miles from Bangalore, the monkeys returned to the city.

A total of 718 monkeys had been moved by October 1975. Dr. Rahaman comments on the project:

The present translocation operation appears to be highly effective for ridding urban areas of the monkey menace and also provides a habitat suitable for their survival without inflicting pain on them, thus not hurting the feelings of the religious.

IPPL extends its congratulations to Dr. Rahaman, Mr. Partha Sarathy, and all involved in this excellent and humane program. Dr. Rahaman is interested in hearing about similar projects in other parts of the world. Letters addressed to him in care of IPPL will be forwarded.

Note: A common excuse of those who wish to see continued use of wild-caught monkeys in biomedical research and production is that the animals are going to lose out to deforestation anyway. Since many areas of viable forest have been denuded of wildlife, translocation of healthy animals to suitable forest habitat may be feasible in many situations.

## ENDANGERED SPECIES CONVENTION

The Convention on International Trade in Endangered Species of Flora and Fauna officially came into force on July 1, 1975, 90 days after it had been ratified by ten signatory nations. The Convention represents the first effort to regulate traffic in wildlife (and vegetation) on an international level. The Convention was prepared and adopted at an international conference held in Washington, D.C., from February 12 to March 2, 1973. Henry L. Heymann, IPPL field representative in Washington, was one of the principal planners and organizers of the conference.

Animal species threatened with extinction are listed in Appendix I of the Convention. Any shipment of these animals must be accompanied by both an export permit from the country of origin and an import permit from the country of destination. Primates listed in Appendix I are: all lemurs, with the exception of the ringtail lemur; all gibbons and siamangs; gorillas; orang utans; and many species of New World monkeys and Old World monkeys, especially species of leaf-eating monkeys in Asia and Africa.

Species which may be threatened with extinction unless trade in them is strictly regulated are listed in Appendix II of the Convention. Any shipment of these animals must be accompanied by an export permit from the country of origin. Primates listed in Appendix II are: the ringtail lemur, the Asian lorises, all chimpanzees, one species of capuchin monkey, and several Old World monkeys, which are again primarily leaf-eating species.

In addition, any country can place a locally endangered species on Appendix III of the Convention. Such listing means that this species cannot be imported into a country which is a member of the Convention without an export permit from its country of origin.

The Convention provides for standardized export documents. The use of these documents would do much to eliminate the common practice of using forged documents in the export and import of protected animals.

To date, the following countries, which are listed in alphabetical order, have both signed and ratified the Convention: Brazil, Canada, Chile, Costa Rica, Cyprus, Ecuador, German Democratic Republic (East Germany), Ghana, Malagasy Republic, Mauritius, Morocco, Nepal, Niger, Nigeria, Peru, South Africa, Sweden, Switzerland, Tunisia, United Arab Emirates, U.S.A., and Uruguay.

Canada, Switzerland, and several other countries have already started to enforce the Convention. Ironically, the United States, the first country to ratify the Convention, has done absolutely nothing to implement it. Concerned U.S. readers are, therefore, encouraged to write their U.S. Senators and Congressmen urging that the U.S.A. honor the Convention, which is the first effort to control wildlife traffic in the only workable way, that is, on an international level.

No European Common Market country has ratified the Convention. Some of these countries have been traditional havens for illicit traffic in wildlife. No Southeast Asian countries and very few African countries have ratified the Convention, yet these countries would benefit greatly from being parties to the Convention. Readers in all those countries which have not signed and ratified the Convention are requested to urge their governments to take such action and implement the Convention with all haste.

### MORE ON THE "SINGAPORE CONNECTION"

Past issues of the IPPL Newsletter have drawn attention to the role of Singapore in illicit traffic in the protected wildlife of Indonesia, Thailand, and Malaysia. Singapore itself has virtually no wildlife. This traffic reached its peak in the heavy orang utan trading of the late 1950's and early 1960's and continues to the present time. The only concession that Singapore has made in respect to this problem is to ban trafficking in oranges. As recently as January 23, 1976, the office of the Permanent Secretary of the Ministry of National Development stated that legislation in Singapore is "adequate to protect and control the smuggling of wild life."

### NO STATISTICS IN SINGAPORE

Singapore publishes no statistics on traffic in wildlife. This may be done deliberately in order that its neighboring countries do not realize the extent of their losses in wildlife.

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U.S. IMPORT STATISTICS

Through study of U.S. import declarations for wildlife for the years 1973 and 1974, IPPL obtained substantive information on the extent of Singapore's trafficking in gibbons and siamangs, small Southeast Asian apes which are not indigenous to the island republic. The following table of gibbon and siamang shipments to the U.S.A. for 1973-1974 is derived from these declarations. These are the most recent figures available from the U.S. Fish and Wildlife Service, and the 1974 figures are incomplete. The Division of Law Enforcement, U.S. Department of the Interior, allowed all these shipments to freely enter the United States.

GIBBON AND SIAMANG SHIPMENTS FROM SINGAPORE TO USA  
1973 and 1974

Date	No. of animals	Exporter	Importer
Jan. 9, 1973	2 siamangs	Y.L. Koh	Bronson, New York
Jan. 9, 1973	3 siamangs	Y.L. Koh	International Animal Exchange
Jan. 10, 1973	4 gibbons	Y.L. Koh	International Animal Exchange
Jan. 11, 1973	2 siamangs	Y.L. Koh	Pet Farm, Miami
Jan. 18, 1973	4 gibbons	Y.L. Koh	Pet Farm
Jan. 18, 1973	6 siamangs	Y.L. Koh	Pet Farm
Jan. 25, 1973	3 siamangs	Y.L. Koh	Bronson
Jan. 30, 1973	2 gibbons	Singapore Pet Farm	International Animal Exchange
Feb. 3, 1973	2 siamangs	Y.L. Koh	Bronson
Feb. 3, 1973	2 gibbons	Y.L. Koh	Bronson
Feb. 6, 1973	2 siamangs	David Mohileff	David Mohilef
Feb. 6, 1973	2 gibbons	David Mohileff	David Mohilef
Feb. 7, 1973	1 gibbon	Y.L. Koh	Arizona Reptiles
Feb. 7, 1973	2 siamangs	Y.L. Koh	Pet Farm
Feb. 7, 1973	4 gibbons	Y.L. Koh	Pet Farm
Feb. 27, 1973	2 siamangs	Y.L. Koh	Bronson
Apr. 6, 1973	3 siamangs	Y.L. Koh	Bronson
Apr. 10, 1973	3 gibbons	Y.L. Koh	Bronson
Apr. 18, 1973	2 siamangs	David Mohileff	Pet Farm
Apr. 18, 1973	3 gibbons	David Mohileff	Pet Farm
May 5, 1973	5 siamangs	Y.L. Koh	International Animal Exchange
May 5, 1973	4 siamangs	Y.L. Koh	Bronson
May 24, 1973	2 gibbons	Y.L. Koh	Bronson
May 26, 1973	2 gibbons	Y.L. Koh	International Animal Exchange
May 26, 1973	1 siamang	Y.L. Koh	International Animal Exchange
June 9, 1973	3 gibbons	Y.L. Koh	International Animal Exchange
June 10, 1973	2 gibbons	Y.L. Koh	Bronson
June 20, 1973	2 siamangs	Y.L. Koh	Bronson
July 12, 1973	6 siamangs	Y.L. Koh	Pet Farm
July 14, 1973	3 gibbons	Y.L. Koh	International Animal Exchange
Aug. 28, 1973	4 siamangs	Y.L. Koh	Frank Thomson, Bradenton, Florida
Sep. 27, 1973	8 siamangs	Y.L. Koh	Frank Thomson
Oct. 22, 1973	8 siamangs	Y.L. Koh	Frank Thomson
Oct. 31, 1973	2 gibbons	Y.L. Koh	Frank Thomson
Nov. 7, 1973	1 siamang	Y.L. Koh	Bronson
Feb. 22, 1974	3 siamangs	Y.L. Koh	Frank Thomson
Mar. 26, 1974	4 siamangs	Y.L. Koh	Frank Thomson
May 5, 1974	6 siamangs	Y.L. Koh	Novo corporation (Thomson's broker)
June 27, 1974	3 siamangs	Y.L. Koh	FRank Thomson
July 7, 1974	3 gibbons	Y.L. Koh	Frank Thomson
July 9, 1974	6 gibbons	Y.L. Koh	International Animal Exchange
July 12, 1974	2 gibbons	Singapore Pet Farm	International Animal Exchange
Aug. 27, 1974	5 siamangs	Y.L. Koh	Frank Thomson
Aug. 27, 1974	4 gibbons	Y.L. Koh	Frank Thomson
Aug. 30, 1974	6 gibbons	Y.L. Koh	Casa de Pets
Sep. 5, 1974	2 siamangs	Singapore Pet Farm	Dr. John Petrulli
Sep. 8, 1974	1 gibbon	Singapore Pet Farm	International Animal Exchange
Sep. 8, 1974	1 siamang	Singapore Pet Farm	International Animal Exchange
Oct. 1, 1974	7 siamangs	Y.L. Koh	Frank Thomson
Oct. 23, 1974	3 siamangs	Y.L. Koh	Frank Thomson
Oct. 23, 1974	3 gibbons	Y.L. Koh	Frank Thomson

These figures probably do not represent the total number of gibbons and siamangs shipped from Singapore since it is also likely that large numbers of these animals were sent to other consumer countries of wildlife, such as Japan, Germany, and the Netherlands. A further complication in assessing the magnitude of this traffic is the fact that Singapore dealers frequently ship gibbons and siamangs on export documents for monkeys. The pattern that emerges from this table is that of a small number of animal dealers in both the United States and Singapore systematically, profitably, and with complete impunity, exploiting the "Singapore Connection."

The exporters exploiting the "Singapore Connection" are Y.L. Koh, Singapore Pet Farm, and David Mohilef. Y.L. Koh is one of the world's largest animal dealers and specializes in the rare animals of Indonesia. Christopher Wee, director of the Singapore Pet Farm, is currently in trouble with the Singapore authorities, reportedly for using forged documents. He claims to be doing most of his wildlife trafficking out of Malaysia, but admits to getting most of his gibbons from southern Thailand. David Mohilef, an American expatriate, traffics mainly in birds at present, but the files of the Orang Utan Recovery Service allege that he was one of the major orang utan traffickers in the 1950's and early 1960's when Singapore was wide open for this kind of traffic. The Orang Utan Recovery Service was an agency set up by the International Union for the Conservation of Nature and Natural Resources (IUCN) to attempt to stop traffic in infant orangs.

#### U.S. DEALERS

The importers in the United States exploiting the "Singapore Connection" are Bronson, International Animal Exchange, Pet Farm of Miami, and Frank Thomson. Y. Bronson is a well-known animal dealer who has specialized in supplying primates for the pet trade. At one time he advertised stump-tail macaques as "Miniature Chimpanzees." The International Animal Exchange, as noted in the October 1975 issue of the IPPL NEWSLETTER, is one of the world's largest traffickers in wildlife, energetically using connections in both Laos and Singapore to obtain gibbons. Pet Farm of Miami, in spite of its name, specializes in supplying primates for laboratories. Frank Thomson is currently director of the Jacksonville Zoo, Florida. He was one of the first to register as an importer of primates under the new U.S. Public Health Service regulations. Since Thomson imported 48 siamangs into the U.S.A. during a period of a few months, IPPL considers it especially important to discover the ultimate destination(s) of such a large number of rare animals. Unfortunately, the U.S. Fish and Wildlife Service does not require information on the institutions (or individuals) which actually purchase animals such as these through animal dealers.

#### U.S. GOVERNMENT ATTITUDE

The U.S. Department of the Interior claims that one reason it has failed to take action against Singapore shipments is the difficulty of proving that the wildlife in question did not originate in Singapore. The Department of the Interior is not familiar, apparently, with the contents of the Singapore Outward Customs Declaration, which clearly requires the designation of both "Country of Origin of Goods" and "Country of Final Destination." Yet such documents must be presented daily at U.S. ports of entry. IPPL has in its possession an outward declaration form issued on August 29, 1974 to Y.L. Koh for six gibbons. These animals are designated as having originated in Indonesia. Not only have officials of the Department of the Interior never seized any of these shipments, but there is also no evidence that they have even warned U.S. animal dealers using the "Singapore Connection" to cease and desist from such activity. Singapore dealers even assured an IPPL representative that action would never be taken against any of their shipments because the U.S. government "did not care."

#### IPPL INVESTIGATION IN SINGAPORE

An investigation in Singapore in 1975 by an IPPL representative showed that import permits are freely granted for the importation of wildlife from Thailand, Malaysia, Indonesia, and other countries by Singapore's Department of Primary Production. This department is primarily concerned with controlling agricultural production in Singapore and only secondarily concerned with controlling traffic in wildlife. It appears to issue import permits for wildlife even if the countries in which these animals originate have not issued export permits. During the course of the IPPL investigation, Singapore officials maintained that their government had never received a complaint about its wildlife trafficking from any country in Southeast Asia. This excuse for official inactivity is no longer valid however. In a letter dated November 4, 1975 to Dr. Siew Tec Woh, director of the Department of Primary Production, Khun Pong Leng-EE, chief of Wildlife Conservation in Thailand, proposed that Singapore officials check with his office before issuing import permits for wildlife originating in Thailand.

#### IPPL VISIT TO SINGAPORE DEALERS

The IPPL representative visited several of the most prominent Singapore traffickers in wildlife. All said there would be "no problem" procuring any species of primate, with the exception of the orang utan. It was stated, however, that orangs could be supplied directly from Indonesia. One dealer claimed to have recently received an order for 300 gibbons for "cancer research" from a U.S. dealer he identified only as "Safari." Subsequent investigation has uncovered no further details of this transaction although IPPL has confirmation that the National Cancer Institute has awarded a contract which includes the acquisition of 30 gibbons. Two Singapore dealers had gibbons and siamangs in their shops. All these animals were young, and two of the gibbons were moribund.



LEGALITY OF SHIPMENTS

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IPPL considers that shipments of gibbons and siamangs from Singapore to the U.S.A. may be in violation of both the U.S. Lacey Act and the U.S. Endangered Species Act of 1973. The Lacey Act forbids the importation of wildlife which has been exported in violation of the laws of any country, and the Endangered Species Act prohibits traffic in any animal contrary to the provisions of the Convention on International Trade in Endangered Species. The Convention requires both an export permit from country of origin and import permit from country of importation (in this case, the U.S.A.) for species listed on Appendix I of the Convention. All species of gibbons and the siamang are listed on Appendix I.

ACTION REQUESTED

U.S. readers who feel action should be taken to end the "Singapore Connection" are requested to correspond with their U.S. Senators and Congressmen. Letters of protest should also be addressed to the following:

Hon. Nathaniel P. Reed  
Assistant Secretary for Fish and Wildlife and Parks  
Room 3156  
Department of the Interior  
Washington, D.C. 20240

Hon. Robert L. Leggett, Chairman  
Subcommittee on Fisheries and Wildlife Conservation and the Environment  
U.S. House of Representatives  
Room 1334, Longworth House Office Building  
Washington, D.C. 20515

THAI STUDENTS PROTEST TO AIRLINES

The October 1975 issue of the IPPL Newsletter reported the story of "Project Bangkok Airport," a ten-week survey of the wildlife traffic through Bangkok Airport. The study was conducted by students from various university conservation clubs in Bangkok. The survey disclosed that hardly any wildlife shipments complied with the mandatory standards for live animal shipments established by the International Air Transport Association (IATA).

As a followup to the project, the Environmental Conservation Club of Chulalongkorn University, acting on behalf of all the student organizations involved, sent the following letter to all airlines shipping wildlife out of Bangkok. The letter was signed by Khun Chainanong Pongsuwan, chairman of the club, and Professor Kampol Isranhura, the club's advisor.

The original letter reads as follows:

During March, April, May and June 1975, students from Chulalongkorn, Mahidol and Kasetsart University had been watching the exportation of live animals at Don Muang Airport. We found that there were many of live animals exported by the airlines. After careful investigation, it was found that the exportation did not follow the IATA regulations of transporting live animals by airplanes of which your airline is a member. The animal cages or containers were too small, over-crowded and had inadequate ventilation. As a result, live animals had suffered during the transportation and many were dead from lack of proper food and care. On the containers there were no labels indicating "live animal" and the name of the species in the containers were not declared. The most important thing was that the containers which were different from what the regulations allowed had often helped the illegal smuggling of the endangered species. Therefore, we would like you to consider this problem seriously in order to improve the situation and follow closely to the IATA regulations. This will facilitate the investigation of customs officers and prevent the illegal smuggling of the endangered species. We have confidence in your honorable service and sincerely hope that your airline may not risk your good reputation of violating the IATA regulations of live animals transportation.

We need your co-operation

Readers wishing to support the students' request for enforcement of IATA regulations for safe and humane shipment of wildlife should contact:

Chairman, Live Animals Board,  
IATA  
26. Chemin de Joinville  
P.O. Box 160  
1216, Cointrin, Geneva, Switzerland.



hairy saki monkey  
courtesy San Diego Zoo



smuggled saki monkeys  
dead at Heathrow airport

#### THE SQUEAKING TORTOISES

##### Sakis Smuggled from Guyana

On November 8, 1975, an attendant at London Airport's Animal Hostel was surprised to hear a squeaking sound coming from a crate of iguanas and tortoises which had just arrived from Guyana, South America, and was awaiting transshipment to West Germany.

When the crate was opened, it was found to have two secret compartments at the rear, each containing two Sakiwinki monkeys, genus Pithecia. Two identical crates were also opened, and each crate contained four monkeys in hidden compartments.

The shipper was Werner Bode, 47 Bel Air Springs, Georgetown, Guyana. The consignee was Herpetarium Moers, 413 Moers, Uerdingerstrasse 53, Dusseldorf, West Germany, telephone 02841/23710.

Neville Whittaker, Manager of the RSPCA Hostel at Heathrow Airport, has sent the following information to IPPL:

The boxes were labelled British Airways Air Waybill 106-41979333 and had arrived at Heathrow by British West Indian Airways on the 8th November and had been delivered to the RSPCA by Air Canada. On the top of each box was a large label, "Reptiles-do not feed or give water." The front of the box was covered with gauze, and I could view Iguanas and Tortoises, but at the rear there were compartments measuring 19 inches long, 7 1/2 inches wide and 9 inches high. Each box had two compartments and in each compartment there were 2 Saki monkeys. Two monkeys were dead and they were approximately the same size as the compartment. The other monkeys were in varying states of shock.

The surviving monkeys were confiscated by British authorities and given to a zoo, where they were doing well at last report. IPPL has contacted Guyana authorities and the German conservationist Dr. Bernhard Grzimek about this situation, and will report on their responses in a future Newsletter.

The story of the smuggled sakis indicates the need for animal care facilities at all airports. At any other airport, the smuggling would have gone undetected with further loss of life.

In the October 1975 issue of Laboratory Primate Newsletter, Allan M. Schrier, editor, condemns the International Primate Protection League for such practices as "its ranting, mud-raking tone," "its flagrant anti-laboratory-research bias," and "its willingness to practice every form of yellow journalism at its disposal." Laboratory Primate Newsletter is supported by a U.S. Public Health Service Grant from the National Institutes of Health and is published quarterly by the Primate Behavior Laboratory, Psychology Department, Brown University, Providence, Rhode Island. Copies of the Schrier editorial were sent to official representatives of IPPL by Dr. Geoffrey Bourne, Director of Yerkes Primate Center in Georgia.

The criticism of IPPL by Dr. Schrier appears to have been precipitated primarily by the position which IPPL took in respect to the newly approved U.S. Public Health Service regulations which effectively eliminate the importation of nonhuman primates for the pet trade. As was originally stated in the May 1975 issue of the IPPL Newsletter, IPPL opposed these regulations because they fail to regulate the importation of all primates in terms of sound conservation and protection principles, not because they would contribute to the elimination of private ownership of primates, as Dr. Schrier suggests in his editorial.

In the form of a letter dated January 15, 1976, Ardith Eudey, co-chairperson of IPPL, delivered the official response to Dr. Schrier's editorial criticism. In a letter dated February 11, 1976, Dr. Schrier informed IPPL that this statement will be published in the April 1976 issue of Laboratory Primate Newsletter. An article by Dr. J. Erwin of the University of Washington supporting some of the goals of IPPL will also appear in the April issue.

Among the major points in Ms. Eudey's letter are the following:

1. Figures compiled and published in 1975 by the Committee on Conservation of Nonhuman Primates, Institute of Laboratory Animal Resources (ILAR) suggest that about three-fourths of the primate trade entering the United States is consumed for biomedical purposes annually. In his editorial, Dr. Schrier suggests that "at least half of all imported primates" are destined for the pet trade. The discrepancy in figures may be due to the fact that losses inherent in the system of commercial collecting of primates previously may have been attributed to the pet trade.

2. The inference of IPPL that the U.S. Public Health regulations were designed "to divert all available primates into biomedical activities" was made after careful consideration of the response of certain sectors of the biomedical community to (a) the attempts of countries with endemic populations of primates to limit or eliminate their export and (b) the proposed U.S. regulations on importation of injurious wildlife, including statements of opposition made by organizations such as the National Society for Medical Research which were reprinted in Laboratory Primate Newsletter. In his editorial, Dr. Schrier implies that IPPL had come up with this insight in a "Moses"-like manner.

Dr. Schrier's letter of February 11, 1976, probably suggests a more fundamental reason for his criticism of IPPL. In this letter he expressed his opposition to the establishment of a group, a "Grand Censor," to limit the use of primates in research on the grounds that "committees simply cannot decide what research will ultimately be of greatest benefit to mankind." On the contrary, IPPL strongly advocates that only those research projects should be approved which are "well-planned, promising, humanely designed, and demonstrate regard for conservation principles in species selection and sample size" and that "limitations on the severity and duration of pain in experiments should be legally defined and enforced. The IPPL emphasizes that the cloak of human interests does not relieve scientists of responsibility for ethically doubtful experiments" (Proceedings of the Symposia of the Fifth Congress of the International Primatological Society, 1975, p. 572). The IPPL "Award of the Month" for research should be seen as an attempt to encourage responsible members of the biomedical community to enter into a meaningful discussion of the problems of primate protection and conservation relevant to their own work, not as an expression of "flagrant anti-laboratory-research bias."



The IPPL award for research is presented to Edward Taub and numerous collaborators for a series of experiments involving deafferentation of the forelimbs in monkeys, that is, destruction of the forelimb nerves by surgical severance at the spinal cord, the results of which have been published for over ten years. These experiments have involved such procedures as inducing a monkey to use a single deafferented forelimb by subjecting the other forelimb to "prolonged impersonal restraint by means of a straitjacket."

Edward Taub is a behavioral biologist at the Institute of Behavioral Research, Silver Springs, Maryland. He received his Ph.D. from New York University in 1970. Among his specializations, he lists physiological psychology and neurology and operant behavior/conditioning. Taub and his co-workers state that they are investigating the role of somatic (body) sensation in the development of the individual's behavior, and the conclusion that they draw from their investigations is that "neither spinal reflexes nor local somatosensory feedback and vision are necessary for the development of most types of movement performed by the forelimb musculature in monkeys."

The discussion and quotations which follow are derived from two articles: "Behavioral development after forelimb deafferentation on day of birth in monkeys with and without blinding," 1973, Science, vol. 181, pp. 959-960, and "Diminution of early environmental control through perinatal and prenatal somatosensory deafferentation," 1975, Biological Psychiatry, vol. 10, pp. 609-626.

One experiment performed by Taub and his co-workers involved forelimb deafferentation of four infant monkeys (one baboon and three rhesus monkeys) within hours after birth. Intensive supportive therapy and nursing care were necessary in the early post-operative period "in order to maintain life after this long, shock-producing procedure." For example, "...the difficulties with temperature regulation ... were exacerbated in these animals...and since the animals could not turn over for the first few days, their position had to be changed frequently to avoid the development of respiratory difficulties." The completeness of the deafferentation was verified, in part, by pinprick examination. The authors report that the "infants were uniformly very responsive to pinprick on intact portions of the body" (emphasis added) although they experienced no sensation in their forelimbs.

The infants made no use of the forelimbs during the first week of life. A gradual increase in motor ability then took place until the third month, at which time the capacity to use the forelimbs regressed somewhat. Taub and his co-workers suggest that "the regression in motor ability was due primarily to the prolonged wearing of arm bandages which was necessitated by the tendency to self-inflict serious damage on the deafferented limbs by biting and sucking." At the age of 6-7 months, the infants were fitted with a "protective suit resembling fire-fighting garb. The arms were left free, while a wire-mesh visor permitted vision but prevented the introduction of the hands into the mouth. The infants lived in these suits much of the time and were only bandaged overnight." The publications suggest that at this stage, for the first time, the animals were permitted to exercise in groups in a "gymnasium"-like setup. Two of the animals that had not been given special training in prehension eventually exhibited a crude grasp, which previously had been entirely absent.

In order to test the role of vision in developing motor ability, two additional newborn rhesus infants were given forelimb deafferentation with blocking of vision by sewing the eyelids closed. "In the immediate postoperative period, one of the blinded deafferented infants continuously maintained its (fingers clenched), exhibiting extreme resistance to extension." The fingers of this animal were passively exercised for 1-2 weeks. Without this exercise, the researchers suggest that the hands would not have developed. All the other deafferented monkeys kept their fists clenched for 1-2 weeks after birth.

To investigate possible somatosensory feedback from movements made during intrauterine development, forelimb deafferentation was performed on eleven monkey fetuses after approximately two-thirds of the period of prenatal development. The monkey fetus was removed from the uterus for surgery and subsequently replaced. Five animals survived delivery through caesarian section and lived to be at least five months old. (At the same conceptual age, lesions were made in the prefrontal cortex of the brain in nine other fetuses, six in a pilot series in which methods of procedure were being developed, and three in an experimental series. One animal from each series survived.)

The prenataally deafferented monkeys displayed severe handicap in all limbs, hindlimbs as well as deafferented forelimbs. One animal died at the age of 5 months and the remaining four were sacrificed at 5-12 months for anatomical study. This study revealed that the surgical procedure employed in deafferentation had produced deformities in the vertebral column in the neck region which, in turn, had caused the destruction of the spinal cord in that area. As a consequence, the researchers could "make only minimal statements about the amount of movement possible following deafferentation two-thirds of the way through gestation," but they plan to continue prenatal surgery employing a different technique.

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Initially, IPPL questions the apparent redundancy and lack of planning in the research described above. Furthermore, in the literature published by Taub and his associates, no mention is made of the potential application of the results to be derived from this research. These factors diminish the value of any supposed justifications for subjecting monkeys, or other animals, to the extreme physical (and psychological) hardships described by Taub.

Ultimately, IPPL questions why a federally funded agency such as the National Institutes of Health would make money available for the experiments described above and why a journal such as Science, the official publication of the American Association for the Advancement of Science, would accept this material for publication. The ethical responsibilities of both funding agencies and scientific publications should dictate that research of this questionable nature be censured not supported.

#### MORE ON "GIBBONGATE"

In the summer of 1974, the International Primate Protection League began an international investigation to uncover the chain of events by which shipments of gibbons, the small Southeast Asian ape, were smuggled out of Thailand and funneled through Canada to the Comparative Oncology Laboratory, University of California at Davis. Since 1965 gibbons have been protected animals in Thailand, and their export has been subject to governmental regulation. During the course of its investigation, IPPL discovered that the animal dealer Pimjai Birds and Wild Animals had smuggled the gibbons out of Thailand to Ark Animal Exchange in Ontario, Canada, which subsequently shipped the animals to the laboratory in the United States.

To date, Thailand is the only country in which any substantive action has been taken to end this illegal traffic in wildlife although the investigation in the U.S.A. continues actively. In a letter dated December 7, 1975, Khun Anan Pananonda, Chief of the Investigation Branch of Thai Customs, informed IPPL that "disciplinary action is now being taken against the malfeasance of our customs officers involved in this matter while the shipper-smuggler is also under legal proceedings." Khun Anan concludes his letter, "With high recognition...of IPPL's action." IPPL sincerely appreciates this recognition of its efforts to end illegal trafficking in wildlife. An article in the Bangkok Post dated January 21, 1975 reports in more detail the progress of Thai Customs in investigating the gibbon case:

THREE Customs officials at Don Muang Airport have been placed under investigation for alleged complicity in the smuggling of gibbons out of the country.

The three officials were named as Suthep Saengpradab, Amnart Chantharavivat and Sa-nguan Laongmanee.

The investigation order signed by Customs Director-General Mr. Charnchai Leethavorn charged the three men of deliberately helping exporters to smuggle gibbons out of the country along with other wildlife species in January 1974.

#### EVENTS IN CANADA THAILAND REQUESTS CANADIAN ASSISTANCE

In October 1975, Khun Thanom Premrasi, Deputy Director General, Royal Thai Forest Department, sent an official letter to Canadian Agriculture Minister Eugene Whelan, requesting certified copies of the Canadian import permits, health certificates, and other documents relevant to the gibbon case. Some of the requested information was recently sent to the Royal Forest Department and is presently being evaluated.

In a letter to Dr. Shirley McGreal, co-chairperson of IPPL, dated February 18, 1976, Mr. Whelan states that from the "animal health point of view, monkeys, gibbons and other primates are considered to be in the same category. As a result, import permits for these species of animals are generally issued using monkeys as the description of the animals being imported." In a file maintained at the University of California at Davis on the gibbon acquisitions of the Comparative Oncology Laboratory, there is a copy of a permit which was issued on June 12, 1973 by the Deputy Minister of Agriculture, Ottawa to Ark Animal Exchange "to import animal, 40 (monkeys, Asia) through Vancouver, British Columbia, 11,12,1 - 73-74." The final series of numbers represents the period November, December, January 1973-1974. This failure by Canada to require more precise identification of imported animals may have served as an incentive for Ark Animal Exchange to violate the laws of Thailand.

IPPL has received from Canadian sources several new documents relating to the gibbon case. One is a health certificate issued on March 27, 1974, by the Thai Department of Livestock Development to the Siam Wildlife Company for a shipment of "6 Heads, Live Owls, and 6 Heads, Live Gibbons," consigned to the Aizawa Bird and Animal Farm in Japan. Surprisingly, this health certificate did not arouse the suspicions of the Canadian authorities, in spite of the following facts:

- 1) The name of the Thai dealer on the other documents which accompanied the shipment is Pimjai, not Siam Wildlife.
- 2) The gibbons were shipped to Canada, not Japan.
- 3) No owls arrived in Canada as part of the shipment.
- 4) "6 Heads, Live Owls" was typed on a machine with large, well-spaced characters, and "8 Heads, Live Gibbons" on a machine with narrow, closely spaced type.
- 5) There were 10, not 8 gibbons.

IPPL also learned that Ark Animal Exchange sent a shipment of gibbons to a Texas zoo in June 1975. The U.S. Fish and Wildlife Service did not question this shipment although it had been warned by IPPL more than a year before this transaction that the Ark Animal Exchange was trafficking in gibbons.

IPPL was also able to secure a letter dated August 28, 1972, from Dr. Thomas Kawakami, Director of the Comparative Oncology Laboratory, University of California at Davis, to Kenneth Clare, Manager of the Ark Animal Exchange. The letter reads in part:

This letter is to confirm our telephone conversation concerning the purchase of 10 young mature female and 2 young mature male White-handed gibbons. We are interested in establishing a modest gibbon colony and conduct studies on artificial insemination.

The study of cancer, specifically leukemia, the main purpose of the research conducted at the Comparative Oncology Laboratory, is not even mentioned in the letter. Clare has expressed to several correspondents his feeling that he was misled by his clients at Davis. In a letter dated August 25, 1975, he states, for example:

We had many long talks on the telephone with Dr. Kawakami and other people, and they stated that the animals were strictly for breeding purposes...I assure you that at no time did I have any understanding that these animals were going to be destroyed.

Readers may recall that an entire shipment of 10 gibbons was dead on arrival at Montreal Airport in March 1974. Clare claimed compensation from Lufthansa for these gibbons, maintaining that the deaths were due to negligence. All the gibbons had died between Frankfurt and Montreal and apparently with great suddenness. One of the gibbons was seated upright, holding a half-eaten banana to its mouth. Lufthansa denied Clare's claim. In a letter dated September 6, 1974, the company stated:

Our investigation revealed that this shipment was forwarded from Bangkok to Montreal as booked and no irregularity was noticed during the air transportation. Therefore, Lufthansa cannot be held liable and we are of the opinion that the monkeys (sic) died of natural causes...according to the conditions for carriage of cargo...the air carrier will not be liable because such consignments will only be accepted without responsibility on the part of the carrier.

According to the Lufthansa letter, an airline has absolutely no responsibility for the safety of its animal cargo, in contrast to the substantial compensation airlines are obliged to pay when human passengers are killed. In such a situation, it is not surprising that most airlines treat travelling animals with minimal concern.

#### LUFTHANSA'S THREAT

In a letter dated January 8, 1975, Dr. McGreal contacted Lufthansa about gibbon shipments which the airline appeared to have carried from Bangkok to Ark Animal Exchange in Canada. She requested that the company establish procedures to ensure that similar shipments not be accepted in the future. In a reply dated January 31, 1975, Lufthansa stated: "the gibbons were shipped without our knowledge; we can assure you that, of course, we do not assist in the smuggling of rare animals."

Subsequent correspondence was terminated by a letter dated August 26, 1975, from Lufthansa's lawyer in Bangkok, Prempreecha Dibbuwan of the Marut Bunnag International Law Office. The letter stated:

We have now advised Lufthansa that they are under no obligation either to you or your association to answer your letters or to institute any kind of investigation or enquiries into any matter concerning its business activities or to inform you of the steps being taken or will take (sic) to ensure that such abuses...do not continue.



The letter threatened "serious consequences against you personally." Such a statement is difficult to take lightly when one realizes that only a few months previously an American woman working as an investigative reporter for the Bangkok Post had been murdered.

IPPL questions the type of intimidation indulged in by Lufthansa in response to the reasonable request that the airline try to prevent illegal shipments of gibbons. When Thai officials later contacted Lufthansa for information about the gibbon shipments, Mr. Paul Strieve, the company's manager in Thailand, replied in a letter dated November 7, 1975: "We had been approached in this matter earlier by Dr. McGreal of the International Primate Protection League and following the information we received, an investigation was started" (emphasis added).

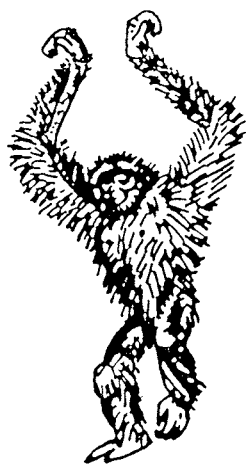
GIBBONS SPARED

Apparently, there was a dispute between Kenneth Clare, the manager of the Ark Animal Exchange, and the University of California over payment for the January 16, 1974 shipment of 10 gibbons, six of which eventually died of pneumonia. A university check to Clare for \$1650. was accompanied by a letter dated March 14, 1974, from Henry Thornhill, Business Manager of the Davis Primate Facilities. Thornhill wrote:

This amount represents payment for 6 gibbons at \$275 each. Although this is considerably lower than the original price of \$400, I feel you will be significantly compensated by our additional orders for 16 gibbons...we are looking forward to a continuing harmonious relationship with you."

The "harmonious relationship" was broken when IPPL requested the U.S. Fish and Wildlife Service to determine the legality of the gibbon shipment. According to Clare, the Comparative Oncology Laboratory was forced to cancel several purchase orders for gibbons.

In spite of the fact that the gibbon case is not yet resolved and the Comparative Oncology Laboratory retains possession of the gibbons, members and friends of the International Primate Protection League can find some satisfaction in the thought that many gibbons are alive today in the jungles of Thailand, thanks to IPPL's efforts. We hope this will encourage you to continue and increase your support for the organization.



PRELIMINARY NOTICE  
NOVEMBER SYMPOSIUM ON MONKEYS, APES, AND PEOPLE  
COSUMNES RIVER COLLEGE, CALIFORNIA

On Saturday, November 20, 1976, from 9:00 A.M. to 5:00 P.M., a symposium entitled Monkeys, Apes, and People: A Day of Discussion will be held at Cosumnes River College, Sacramento, California. The program will consist of 1 1/2 hours sessions with short presentations followed by discussion. Undergraduate students especially are urged to give short presentations on their research or ideas as they relate to the symposium topic. Last year's symposium on the same topic attracted 150 people from northern California and Nevada. For further information contact:

David Abrams  
Cosumnes River College  
8401 Center Parkway  
Sacramento, CA. 95823

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