In December 1974, the Peruvian government ordered the release in the jungle of the survivors of over 800 Saguinus mystax (White-moustached Tamarins) captured for the Merck Sharp Dohme Pharmaceutical Company and Louisiana State University, USA, which are performing research into hepatitis. Although tamarins are not, strictly speaking, marmosets, the word marmoset is often used to refer to the whole range of tamarins and marmosets and, since all materials relating to the episode use the word marmoset, we shall use it.

Marmosets are among the most fascinating and delightful of animals. These tiny creatures live in the jungles of South America. Unlike most primates, they have claws, except on their hindfeet, where they have a nail, and their long tails are not prehensile like those of several South American monkey families. Marmosets live in groups with a marked social structure. They make a large variety of sounds, many of which resemble those of birds. Most of the time, marmosets and tamarins give birth to twins, which are frequently carried by the father. Captive marmosets often produce two pairs of twins in a year.

Unfortunately for the White-moustached Tamarin, it has been claimed to be a suitable animal model for the study of hepatitis A, which is caused by contaminated food or water. (Hepatitis B is caused by dirty needles, blood transfusions, etc.) The Merck Sharp Company, in conjunction with colleagues at State University, has been using marmosets in hepatitis research for several years. This research has been costly; in that hundreds of marmosets have been inoculated with hepatitis and sacrificed.

Recently a trapper operating on behalf of Louisiana State University caught over 800 marmosets for export to the USA. Apparently, a trapping permit was issued to the University but not to the Merck Sharp Company, according to Felipe Ilenvides, the noted Peruvian conservationist.

After the marmosets had been assembled in Lima, which involved a long journey to the headwaters of the Amazon, the Peruvian government refused to issue export permits, under a 1973 law which forbids the export of all live jungle fauna, and authorises hunt and capture but not export, only in the case of "scientific investigations" which the Peruvian Ministry of Agriculture has interpreted as "ecological and systematic studies but not for medical investigations where a commercial operation mediates." According to a State Department source, Merck Sharp contacted the Department of State for assistance. The role of the US Embassy in Lima is unclear as it has failed to answer 3 separate IPPL communications. However, President Velasco of Peru upheld the export ban and ordered the marmosets to be released in the wild.

IPPL received a report from a US government source that Merck Sharp had refused to feed the marmosets when the ban was imposed. An immediate phone-call to the company met with a denial, and, later, William B. Freilich, a Company lawyer, wrote to IPPL asserting:

at no time did we refuse to feed the marmosets... the animals were fed 3 times a day. The a.m. feeding consisted of cereal, sweetened condensed milk, and vitamin powder. The material was boiled and fed warm. The noon feeding consisted of raw chicken and the p.m. feeding consisted of bananas and papaya.

IPPL would welcome readers' comments on the suitability of tías die.

Many marmosets died between capture and release. The release of the survivors was organised by Señor Carlos Ponce de Prado; one batch of 420 and another of 236 were released on the banks of the Maniti River, a tributary of the Amazon. According to these figures, 144 or more marmosets would have died, but an Embassy source in Lima reports 115 deaths. Such death rates raise the question of whether, assuming no company negligence, death rates of 14-18% in holding are considered routine and tolerable. If so, it strengthens IPPL'S contention that primates should be spared this ordeal. (Ian Crompton reported to Barbara Harrison in 1966 that, for every primate exported from Iquitos, Peru, 4 or 5 would have died in capture or transit to the city.) A US graduate student who witnessed the release is reported to have stated to the Embassy in Lima that many of the animals were too weak on release to climb trees and that further losses could be anticipated. This conflicts with the report in La Cronica, a Lima newspaper which, reporting the incident on Dec. 11, 1974, noted "in a few minutes the marmosets disappeared into the leafy jungle where Nature had given them life and thus they escaped being used as guinea-pigs in a foreign country."

Since then, a team including... has held and Dr. B. Crompton (sic) of the US National Institutes of Health, went down to Lima to propose a program "to meet the aims of... conservation and medical research" by conducting a trapping of primates. This approach is not favored by IPPL. (See "To Cull or not to Cull, this issue.) In fact, the National Institutes of Health have already financed some primate survey work in Peru through the Pan-American Health Union.

IPPL strongly asserts that countries have the right to limit or ban the export of primates for any reason they... be it political conservationist, or nationalistic. We are concerned at the possibility of large and powerful countries trying to put pressure on or influence less powerful countries. Current US efforts to pressure primates from Brazil are meeting with resistance.

It is clear that institutions involved in long-term research projects of a nature which destroys large numbers of primates cannot expect to be allowed to raid the wild indefinitely. Breeding programs should be instituted at the outset of any such research. Incredibly, MERCK SHARP HAS NO MARMOSET BREEDING PROGRAM. In Primate Eye (November 1974), we are told of a successful marmoset breeding program at the University of Bristol, England. Within three years, the original eight marmosets had increased to fifty. However, marmosets will not perform assembly-line breeding but require tender care and a minimum of personnel changes.
On March 15th, 1974, an article prepared in conjunction with the National Institutes of Health appeared in the *Bangkok Post*. Dr. Robert Purcell, Head of the Hepatitis Virus Section of the National Institute of Allergy and Infectious Diseases, NIH, candidly admitted that "as yet, we have no idea how to approach a vaccine for [type A] hepatitis." The article states "the research push is accelerating and the NIH budget for hepatitis research has risen from $1.5 million in 1970 to $5.2 million in 1974." One hopes that pouring vast sums of money into this field will not lead to wasteful infection of more and more marmosets to use up available funds.

The lack of a conservation-minded approach by the parties in this case (and, in fact, a lack of intelligent foresight and planning) is clearly evident in an article by Dr. William Goodwin, of NIH's Division of Research Resources, entitled "Current Status of Primate Breeding in the US, 1974". Goodwin reports that, in 1973, when the hepatitis research was well under way, 717 White Moustached Tamarins were used in US laboratories. A total of 1 (yes, one) female was in a "breeding colony" for a total of ONE birth.

In complete contrast to the irresponsible practice of raiding the wild as long as one can get away with it, is the attitude expressed by Dr. Daniel Snyder, Head of the Primate Research Facilities at Yale University, USA, who wrote to IPPI on Feb. 26th, 1975.

I am pleased to confirm our plans for establishing a marmoset breeding colony...I intend to breed three species of tamarin...the offspring will be retained through at least the second generation to ensure perpetuation of the colony. Afterwards, and if successful in later-generation breeding, some animals will be used for...studies. I strongly believe that nonhuman primates with dwindling feral populations should be bred for research and for exhibition in captivity so that animals in the field can be left alone (i.e., protected by law) as soon as possible.

IPPI feels that this incident should be studied carefully by all researchers as it indicates that the tropical countries are becoming aware that their natural heritage is not something to be sold cheaply into captivity. The research community will only have itself to blame if it refuses to accept the fact that the days of cheap primates plundered from the wild have vanished.
The recent marmoset incident raises the question of "to cull or not to cull" primates for use in biomedical activities. Those favoring "culling" usually advocate the following steps: 1) a census of the primate species in demand within the potential supply area, 2) determination of an appropriate "harvest" or "sustainable annual yield", and 3) cropping of the appropriate number of primates. Hopefully, this approach would lead to an appreciation of the economic value of primates and their conservation not for conservation's sake but on economic grounds.

Unfortunately, there are many weaknesses to this approach.

There are many problems involved in the census approach and procedures. Most disinterested parties do not have the financial resources to undertake intensive surveys. Therefore most surveys take place under the auspices of such "interested parties" as the US National Institutes of Health and Institute of Laboratory Animal Resources and other organizations hoping to share in a harvest of primates. (Such surveys usually involve expatriate "experts" brought in by the sponsors, or local personnel in the sponsors' pay.) Since the sponsoring organizations are also potential consumers for eventual harvests, they are likely to be in control of both information and market. The flaws in this setup are obvious and should be considered by officials in tropical countries when offered "free" censuses and expert services by would-be purchasers. The potential for bias is simply too great. In any case, censuses are of limited reliability and not subject to verification, and can thus be considered as hypotheses, at best. In Onyx (November 1974), Dr. Colin Groves presents an estimate of numbers of Tana River Mangabey in a circumscribed forest area, which, he admits, with a scholarly caution which some surveyors might do well to emulate, may be twice as many as actually exist. However, census claims are extremely hard to refute once made by anyone not intimately linked to them, while they are quoted as authoritative by animal traders and other laymen. Therefore, better no survey than a biased one. In some cases, a primate density for one small area is accepted as the density for all areas inhabited by the species and then multiplied by an out-of-date map and presented as an authoritative estimate!

The census-harvesting approach seems to come into favor when tropical countries take the step of banning the export of primates or initiating quotas or restrictions. Nobody is begging to census the macaque species of Thailand, all of which are exploited at a more than sustainable yield level, since Thailand has not yet established or threatened to establish realistic or enforceable quotas on the harvest. The "harvest" approach is based not only on an assumption that primate populations are stable enough to allow this approach but on the improbable one that tropical countries will continue to cooperate indefinitely and that no other threat stemming from the indigenous demands of these countries on habitat and its animals takes place.

In disputes, dividing up the harvest would present problems both within and between countries. Since primate research is expanding all over the world, one can foresee fierce competition for the available animals.

The culling approach does not solve the problem of a large and sudden increase in demand, as was seen in the case of the development of polio vaccine. If a new vaccine were to be developed, great pressure would be put on the source countries to increase the harvest. The "saving human lives" argument would certainly take precedence over conservation interests.

Currently, sample sizes in many experiments are artificially high in order to compensate for the higher deathrate in the course of research of wild-caught animals than of those that are captive-bred.

There are many other weaknesses to the "culling" approach:

1) Vested interests in the fields of capture, transportation and holding would continue. While the rural catchers of primates are paid little for their efforts, the exporters, many of whom are expatriates, make substantial fortunes, as do many importers. A bureaucracy would exist depending on a continuation of "harvests", whatever the status of populations, and a research community similarly dependent.

2) There would probably be an increase of primate-smuggling by elements not receiving a share of the harvest they consider adequate.

3) The cross-border movement of primates from one country to another to defeat national intents and legislation and the quota itself would continue. Currently this is a serious problem in West Africa, Southeast Asia, and Amazonia.

4) The trauma of capture would be undiminished. Primates killed in the course of capture would be written off without entering quotas. Field supervision by disinterested parties would be difficult to establish.

5) The trauma of transportation of primates from field to cities, airports, and subsequently overseas would continue, with appropriate losses that never enter into statistics.

6) The painful trauma of adjustment to life in captivity would still have to be undergone by tens of thousands of primates annually.

7) The idea that primates are a "crop" or "harvest" is totally opposed to the IPPL philosophy. It "things" primates. IPPL feels that as many primates as possible should be allowed to live out their natural lives in the wild.

For all these reasons, IPPL opposes the "culling" approach. Instead, the League proposes

THAT SOURCE COUNTRIES SHOULD EXPORT PRIMATES, IF AT ALL, ONLY TO AUTHORISED BREEDING COLONIES WHICH EXIST FOR THE SOLE PURPOSE OF PROVIDING ALL PRIMATES FOR BIOMEDICAL ACTIVITIES.

The "primate crisis" caused by increasing demands and decreasing supplies should have been foreseen decades ago and substantial breeding colonies set up. But exhausting the wild was cheaper and made easy by animal dealers who organised smooth supply lines and became rich doing so. Although the cost of animals is a small part of most projects, neither granting agencies nor industrial users would be interested in paying $500 or more for a monkey they could get for $100. After all, most imports
are slated for short lives, especially in the drug and vaccine production and testing lines of the pharmaceutical industry which invests very large sums of money in all lines of "research", except into the status of its test subjects.

If long-term and viable populations of species of primates favored by the laboratories are to survive, sources of cheap primates must be circumvented, either through substantial price increases which adjust prices to those of monkeys bred in captivity or by strict enforcement of departure taxes on monkeys before they leave a source country.

IPPL feels that, even if a company like Merck Sharp Dohme (see "Marmosets Returned to Jungle", this issue) were given permission to import marmosets for breeding purposes, this would not be a constructive step. Generations of offspring would be sacrificed in experimentation and the colony would be threatened with uncertainty as soon as research interest in the animals discontinued. Therefore, IPPL takes the position that colonies should be established on a long-term, self-sustaining basis by breeding animals with whom potential users could make their own arrangements. The colony could lease primates for specific projects and receive animals.

Hopefully the day will come when a scientist would no sooner use a wild-caught primate than he would use a rat from a city garbage dump. Suppose they tried to sell a primate and no one would buy? That would be a far better security for the world's primates than that provided by "harvesting".

STOP PRESS: Dr. Vernon Reynolds has sent in some comments which it is too late to incorporate into this article but will feel sure will be of interest to readers:

I agree that there are many problems inherent in censusing primates and I think it is well worthwhile putting into the problem you have mentioned. There is an additional complication. This relates to the physical problem on the ground of obtaining accurate information even if the person undertaking the census is in no way biased as regards the results. It is in fact very difficult to obtain accurate numerical data about the number of primates in an area. If one does a roadside survey, the kind made by Southwick on rhesus monkeys then one obtains plenty of information about the number of monkeys by the roadside but one never knows how many monkeys live deep in the surrounding forests. In order to discover how many monkeys live in the forest one needs to make systematic transects, but this is often extremely difficult when there are no tracks...natural populations, even if untouched by man, expand and then contract according to ecological factors: food supply, disease, etc.

Dr. Reynolds' comments regarding implementation of IPPL's proposal will be retained for the next Newsletter and we will readers' comments and suggestions. S.M.

Orang-utan with baby

TAIWAN ORANGS

Charles Shuttleworth reports that the three orangutans in the Taipei medicine shops are still there. They are forced to stay and stay up at night under the blazing lights. On April 7th, Mr. Shuttleworth attended a meeting to start off Protection Week. The meeting was attended by government officials, representatives of animal welfare groups and the media. Action proposed which would hopefully lead to the removal of the orangs to a more suitable environment.
FULL TEXT OF PLEA TO SAVE THE STUMPTAIL MACAQUE (Macaca arctoides)

As early as 1970, Barbara Harrison identified the stumptail macaque (Macaca arctoides) as being a potentially endangered species. The species is, in fact, poorly known, and its range, which extends eastward from India into southern China, is ill-defined. Prolonged warfare is known to have inflicted increased burning pressures and habitat destruction, frequently involving the use of defoliants, on populations throughout its distribution in Indochina however.

Elsewhere, especially in Thailand, the survival of the species is threatened by its increasing commercial exploitation for biomedical and other kinds of research in the United States and Europe. This situation provoked Harrison in the Conservation of nonhuman primates in 1970 (Basel, Karger, 1971 : 44) to issue the following plea:

Non-Asian researchers should make every effort to originate or support, ecological studies of stumptail macaques and, simultaneously, reduce the use of the species and promote laboratory breeding.

This plea, however, has been ignored, and the situation of the stumptail macaque continues to deteriorate.

The relationship between the exportation of stumptail macaques from Thailand and their importation into the United States graphically illustrates the plight of the species. According to figures compiled by the Bureau of Fish and Wildlife, U.S. Department of Interior, 6717 stumptail macaques were imported into the United States during the period 1968-1972. Of this number, only 327 animals were exported from countries other than Thailand. In 1971, the most recent year for which statistics are available for both the United States and Thailand, the United States imported 25,501 macaques. Of this number, 21,316 were rhesus monkeys (Macaca mulatta) from India. Of the remaining 4,225 macaques, 2,127 animals were obtained from Thailand. 1,069 of these animals were stumptail macaques. Only 138 stumptail macaques were obtained from elsewhere in Southeast Asia. The stumptail macaque, in fact, constituted the 12th most frequently imported mammal into the United States. Animal importers in the United States receive approximately twice as much money for stumptail macaques ( $ 140 - $ 270) as they do for the more common rhesus monkey, Macaca mulatta ( $ 55 - $ 225) and longtail macaque, Macaca fascicularis ( $ 50 - $ 175). (Prices provided by Primate Imports Corporation, March 1974.)

The Wildlife Management Section, U.S. Fish and Wildlife Service, Department of Interior, 908 pp., (in preparation). In an attempt to further protect the stumptail macaque, the U.S. Fish and Wildlife Service, Department of Interior, 908 pp., (in preparation) will undertake to limit the importation of these animals. The service has been asked to consider the potential future threats to the stumptail macaque, and to evaluate the need for additional protection measures. The service is also considering the possibility of listing the stumptail macaque as an endangered species under the Endangered Species Act of 1973.

In Thailand, the stumptail macaque is the most important primate species. It is found in a number of forest areas throughout the country. The species is not threatened by hunting, but it is threatened by habitat destruction, particularly in the areas surrounding the capital city of Bangkok. The stumptail macaque is also threatened by the collection of its young for the pet trade. The species is not maintained in adequate numbers in zoos or other conservation programs.

The Primate Research Center, Pennsylvania State University, reports that the stumptail macaque is a social species and is able to live in large groups. The animals are known to be intelligent and are capable of learning and using tools. The species is also known to be capable of living in captivity, but it is not known whether the species is capable of living in the wild. The species is not known to be capable of living in the wild. The species is not known to be capable of living in the wild.

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FOLLOWUP ON GIBBON CASE

Canadian IPPL Representative, Dr. Frances Burton, and Canadian animal-lovers have been corresponding with Mr. John Heppes Administrator of the Convention on Trade in Endangered Species of the Canadian Wildlife Service, Ottawa, Canada, about the Art Animal Exchange's shipments of gibbons to the University of California at Davis. They have learned that CANADA HAS NO LEG ISATION AT ALL to control the trade in rare animals. Any animal, however close to extinction, and whether in possession of valid export papers or not, is welcome in Canada!

Some extracts from Mr. Heppes' correspondence follow:

the only controls that exist in Canada covering the import of live animals into Canada is a health permit... hopefully health permits will be examined more closely in future... the only requirement is that the animals be "medically clean". There is no requirement that such an animal be legally obtained.

Referring to the gibbon transactions, he comments:

We must certainly do not approve of any trade in endangered species. While Mr. Clare is reputed to have illegally exported gibbons from Thailand, he imported and re-exported the animals in and out of Canada in accordance with Canadian legislation... whether or not Mr. Clare illegally obtained the gibbons in Thailand, he did not contravene any existing legislation when he imported them into Canada. In repeat, they were not smuggled into Canada.

Heppes blames the Thai authorities rather than the purchasers and animal dealers, and asks a correspondent:

are you aware of any pressure being exerted on the Thai government for not taking firmer action to prohibit the trade in gibbons from Thailand? Surely prevention is better than cure! Do you know what they are doing about this matter? Surely they should be able to act against traders involved... or is it that the Thai government is not as concerned as the IPPL is?

Frequently, when a country is criticised for negligence in such matters, its officials use the ploy of diverting the criticism. Instead of accepting responsibility for Canada's irresponsibility in not having legislation to restrict the wildlife trade, Mr. Heppes blames Thailand. By adopting such an attitude, Canada is indirectly condoning whatever methods are used to get animals out, and showing a total disregard for the plight of the individual animals and the welfare of the species. Do animals deserve the death penalty because they happen to live in countries which cannot or will not protect them? Surely, in such cases, the international community should make MORE not LESS efforts to save the animals.

Canada is a modern and wealthy country. Why then does it have no legislation to conserve the world's wildlife? Why is a Toronto lady able to purchase an infant gorilla (named Angel) and keep the animal (now 6 years old and 400 lbs.) in a garage to which it was relegated after tearing the steering-wheel off her car? (Toronto Star, Nov. 2, 1974).

Clearly it is easier to monitor animal shipments at the importing end; in fact, it is at this point that most illicit shipments are discovered. Smugglers can more easily arrange to have "cooperative" officials clear the animals for export than they can arrange things at the importing end where animals will meet random officials. IPPL also disagrees with Mr. Heppes' interpretation of the proven "Prevention is better than cure". The first step in wildlife transactions is the PLACING OF THE ORDER, which might be prevented in some cases if Canada did not have an "open door" policy for wildlife.

POSTSCRIPT: Mr. John Heppes informed IPPL on April 10th that Canada has now ratified the Convention on Trade in Endangered Species. Hopefully, the "Open Door" will be closed.

Lufthansa Airline has stated, in reply to IPPL's inquiry about the gibbon shipments which it carried:

we can inform you today that the gibbons were shipped without our knowledge. The cages were delivered in Bangkok sealed by the local Customs authorities after Customs inspection had been effected. Usually, when such shipments are handed over to us, they cannot be checked by us because the holes of the cages are rather small. As the cages, however, had been controlled during the export customs clearance, we could not have any doubt regarding the conformity of the export declaration and the contents itself. Furthermore, you should consider the fact that the dimensions of the cages are rather small which means that we could not suspect gibbons therein, usually they are used for the shipping of reptiles. We assure you that we do not assist in the smuggling of rare animals.

Lufthansa failed to answer our enquiry about what steps it planned to prevent the repetition of such incidents. IPPL deplores the common airline practise of accepting animals in boxes into which one cannot see. In any case, under International Air Transport Association regulations, 1) the cargo must be correctly described on the airway bill and 2) the animals must receive appropriate care at all stages of their journey. Unless one can see into the box, the airline is not in compliance with the regulations and must bear its share of the blame. IPPL's complaint to the President of the International Air Transport Association was answered by Antony van Dyk, an IATA public relations man, who replied "the airlines of the world place great importance on publicising their interest in ensuring the welfare of animals."

NONHUMAN OR SUBHUMAN

On seeing Parke-Davis ads for drugs for "subhuman primates", IPPL contacted the company suggesting that, since the word "subhuman" had acquired connotations entirely inappropriate to primate animals, it be replaced by "nonhuman".

C.R. Beck, Director of Animal Health at Parke-Davis replied:

to change this is not a simple matter. It will require a formal submission to the Food and Drug Administration to include changes in all our literature, advertising, package inserts, labelling and all aspects involved... such a change, however, is extremely costly to make and I would be hard pressed to justify any great expense.
IPPL APPEAL IGNORED

In spite of an IPPL appeal to stop the smuggling of protected primates from Singapore to the USA, mailed to the Enforcement Division of the US Department of the Interior in January 1975, it has been reported to IPPL that two "Singaporean Siamangs" were admitted in March 1975.

Such shipments are possibly in violation of the US Lacey Act which forbids the entry of wildlife taken contrary to the law of any foreign state. The "captive breeding" argument does not hold water. Only 9 siamangs were born in world zoos in 1973! Bernard Harrison, Curator of Singapore Zoo (founded in 1973) has never bred either siamangs or gibbons, according to his recent reply to an IPPL enquiry. Siamangs are NOT indigenous to Singapore and are brought in from Malaysia or Indonesia. Interior should therefore demand valid export permits from the true country of origin.

Singapore has not signed the Convention on Trade in Endangered Species and presumably intends to continue to parasite on its neighbors' wildlife. Comments may be addressed to The Minister of National Development, National Development Building (7th Floor), Maxwell Road, Singapore 2, and the Secretary of the Interior, Washington, DC, USA.

MEET THE ARTIST

The attractive illustrations for this IPPL Newsletter have been prepared by Mr. Kamol Komolphalin, a 4th year student at the Faculty of Painting, Silpakorn University, Bangkok, Thailand. Mr. Kamol was born and raised in Bangkok but likes to go camping in the national parks of Thailand. Besides being interested in primates, he is an expert on the birds of Thailand. After graduate work in graphic art, Mr. Kamol hopes to make a career as a wildlife artist.

Mr. Kamol lives at 445 Rajutha Road, Bangkok, 4.

STRANGER THAN FICTION

A retired US Air Force pilot reports to IPPL that, when above-ground nuclear tests were being held in the USA, pilotless drone planes with chimpanzees strapped in the pilot's seat were directed over the test area. Our pilot followed behind in a regular plane in order to shoot the "drone" down if it went out of control.
THIS MONTH'S AWARD

This month's award goes to H.F. Harlow, K.M. Baysinger and P.E. Plueß of the University of Wisconsin, for an ingenious vice described in the article "A Variable-Temperature Surrogate Mother for Studying Attachment in Infant Monkeys", (Behavioral Research Methods and Instrumentation, 1973, Vol. 5(3), 269-272). The purpose of the work is to show how a rejecting mother affects her offspring.

The "mother" has a copper spine, copper ribs, and a stainless steel head, and is covered with terrycloth. Controls can vary mother's temperature between "slightly above freezing" and 260°F (121°C). The designers are proud of the durability of this device since "monkeys display great ingenuity and appear to take great pleasure in dismantling and destroying everything in their environment. No apparatus can be described as "proof", but our surrogates have resisted destruction." The researchers conclude that "ventral contact, time spent clinging to the surrogate shows a sharp decrease during the cold period. . . . this points up the efficiency and long-term consistency of the temperature variable over previous attempts to build a rejecting surrogate using a variety of techniques ranging from sandpaper to hidden spikes. . . . the most promising finding from the viewpoint of experimental psychotherapy was a sharp and dramatic increase over the nine-week period in disturbances as measured by rocking, huddling and hand-sucking. We are told that research continues "to evaluate the significance of this finding".

The University of Wisconsin has been studying the effects of deprivation on infant monkeys since the '50s. Many readers will be familiar with the wire and cloth mothers, the compressed air blowing mothers, the rocking mother that rattled the baby monkeys' heads, the mother with the built-in ejecting mechanism, the "pecorpine" mothers, the "rape-rack" mothers, etc. Other Wisconsin devices which have been widely publicised include the total isolation chambers, the "pit", the "tunnel of terror", into which a noisy, light-flashing robot would be introduced and pushed toward the terrified baby monkey, the "well of loneliness", and the "well of despair" (shaped like an ice-cream cone in which monkeys would be totally isolated for long periods). Reading the list makes one wonder if the devices were invented by a consultant for an amusement park or Chamber of Horrors rather than by serious scholars.

IPPL questions this work on many grounds. One is the endless repetition of a theme with minor variations. Another is the difficulty of controlling the variables amidst such excesses of deprivation. Researchers at Cambridge University have approached the problem of defining normal social development in the opposite way. Since so many factors affect development, they have started with a fairly complex group and removed one factor at a time from the social nexus. Work starting from extremes of deprivation with no parallel in human or animal experience can lead one to false conclusions. Wisconsin researchers, after studying mother-raised and peer-raised infants, concluded that peers are more essential than the mother for normal development. However, this could be due to the fact that an infant with no peer to play with pester its mother and can exasperate her!

Not surprisingly, nearly all the monkeys exposed to these treatments became severely abnormal! At a time when the emphasis should be on the conservation of nonhuman primates, IPPL questions the necessity of producing monkeys unable to reproduce or socialise normally, and states that the emphasis of research should shift away from deprivation and towards enrichment, even though normal, healthy monkeys lack the dramatic stock of the Wisconsin assemblage of "freak" monkeys.

It is doubtful that work of such an inhumane nature would be permitted in England where legal restrictions on cruelty to animals exist. Currently the United States has no such legislation. The assumption is implicit that the research community is capable of policing itself and willing to do so. The fact that the Wisconsin work is now in its third decade clearly shows that legislation is necessary to protect primates against such cruel manipulation.

IPPL OPPOSES NEW REGULATIONS

IPPL has sent to the Center for Disease Control, 1600 Clifton Road, NE, Atlanta, Georgia, 30333, a statement opposing US Public Health Service Regulations 42 CFR Part 1.

These regulations would effectively eliminate private ownership of primates, allowing the animals to be public health menaces, and citing a list of diseases which primates can give to man, nearly all of which a 31-day quarantine prevents and all of which have been known for years but not considered sufficient to warrant regulatory intervention till recent efforts by tropical countries to eliminate or reduce export of primates. In effect, these regulations have the intent and effect of legislation, yet only one month was allowed for comments. Why the effort to railroad them into effect quietly? With Congress playing no role? The reason is the world shortage of primates and the clear purpose of the rules is to divert all available primates into biomedical activities. It would be naive to think the effect would be to reduce the trade.

The rules would limit ownership of primates to zoos (which buy few) and scientific institutions doing bonafide work. The rules might have had some value if the word "bonafide" had been defined. But it was not! Such work as killing 85 primates in simulated car-crashes and dipping monkeys in near-boiling water to see what happens (IPPL Newsletter, Vol. 2 no. 1), could continue unimpeded. While the plight of many, but not all, pet primates is tragic, can we say it is MORE tragic than the plight of the aforementioned animals?

Indeed legislation is needed to regulate primate import, but in order to conserve them and to protect the primates from man rather than from the primates.

ATTENTION STOCKHOLDERS

IPPL members and friends holding stock in companies are requested to enquire whether their companies use primates for any purpose and, if so, whether wild-caught primates are used. In that case, we suggest you raise at the next Annual Meeting the question of whether the use is judicious and recommend that wild-caught primates not be ordered. Many primates are used by food, cosmetics, drug and other production and testing companies.
POISONING PRIMATES

Information on the use of primates in toxicology is difficult to obtain as most such work is done by private drug, food, agricultural and cosmetics companies.

A Conference on the use of nonhuman primates was held in Washington in 1966. It was chaired by Dr. Frederick Coulston of the Albany Union Medical College. One speaker at the Conference noted "how small a way we have actually gone exploiting nonhuman primates for pharmacological work". Another talks of experiments with sample sizes of 200-300.

A top official at NIH recently reported to an IPPL visitor that he considered toxicology to be one of the areas where primates are used wastefully. It sounds impressive to say that a new drug was tested on primates, whether it was necessary or not.

A common form of toxicity testing is the LD 50 test used to determine the dose of a particular substance that kills half a population of animals. Such testing is painful to the subjects and wasteful since what we really want to know is the dosage of a drug that will be fatal to NO users.

WHATEVER HAPPENED TO THE HOLLOMAN CHIMPS?

Many readers will be familiar with the large chimpanzee colony (200 + at one time) formerly maintained by the Holloman Air Force Base (USA) for research into such problems of space flight as decompression. In 1971, this colony was transferred to the Albany Union Medical College's International Center of Environmental Safety on a 20-year lease. In response to an IPPL enquiry Captain Bruce Koegler, Chief of Information at Holloman Air Force Base, where the chimpanzees (now 120 + in number) live still, wrote "use of the chimpanzees is restricted to baseline studies for establishing their potentialities as a surrogate for man in the study of environmental contaminants". The colony is maintained by the National Institutes of Health, Division of Research Resources and Dr. William Goodwin, of this Division, reported in 1972 that the chimpanzees were being used for the study of environmental toxicology, behavior, and breeding.

On June 21, 1974, Dr. Ira Rosenblum, Professor of Pharmacology and Toxicology and Director of the Center of Environmental Safety, wrote to IPPL that "the chimpanzees in this colony are not being used to study environmental contaminants" but he did not say what they were being used for. Members with information on this colony of threatened primates, please contact Dr. McGreal.

WHATEVER HAPPENED TO THE HOLLOMAN GORILLAS?

IPPL has been informed that two baby gorillas appeared "out of the blue" at Holloman Air Force Base about 11 years ago. Another IPPL contact reports that both died and alleges negligence. No reply has been received to our request for further infor -
TRAGIC EFFECTS OF POACHING

Gibbons and monkeys, so beautiful in life, make a gruesome spectacle at a poacher's campsite in Nam Naoy National Park, Thailand.
IPPL OFFICIALS

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- Vijay Bhatia (North India)
- Dr. Frances Burton (Canada)
- Gombi Stream Research Center (Tanzania)
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- William McGrew (Scotland)
- Sr. Carlos Ponce del Prado (Peru)
- Charles Shuttleworth (Taiwan)
- Professor J.D. Skinner (South Africa)
- Anne Williams (Burma)
- Henry Heymann (Washington)

Local Contacts:
- Professor Dao Van Tien (Democratic Republic of Vietnam)
- Detlef and Walai Blümel (West Germany)
- Fred Hechtel (Hong Kong)

Advisory Board:
- Dr. Arthur Westing
- K. Kalyan Gogoi
- Dr. Jane Goodall
- Dr. Colin Groves
- Barbara Harrison
- Lim Boo Liat
- Dr. Vernon Reynolds

HOW TO JOIN

Complete the form below and mail it with a cheque payable to IPPL, to Ms. Jones, IPPL, 22 Poppy Lane, Berkeley, Ca., 94708, USA.

I wish to join IPPL as a
( ) Sustaining Member - $25.00 or more
( ) Regular Member - $7.00
( ) Student Member - $3.00

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Please suggest names of people who would like to receive complimentary newsletters.

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Stumptail Macaque
Courtesy: Dr. Boonsong Lakagul