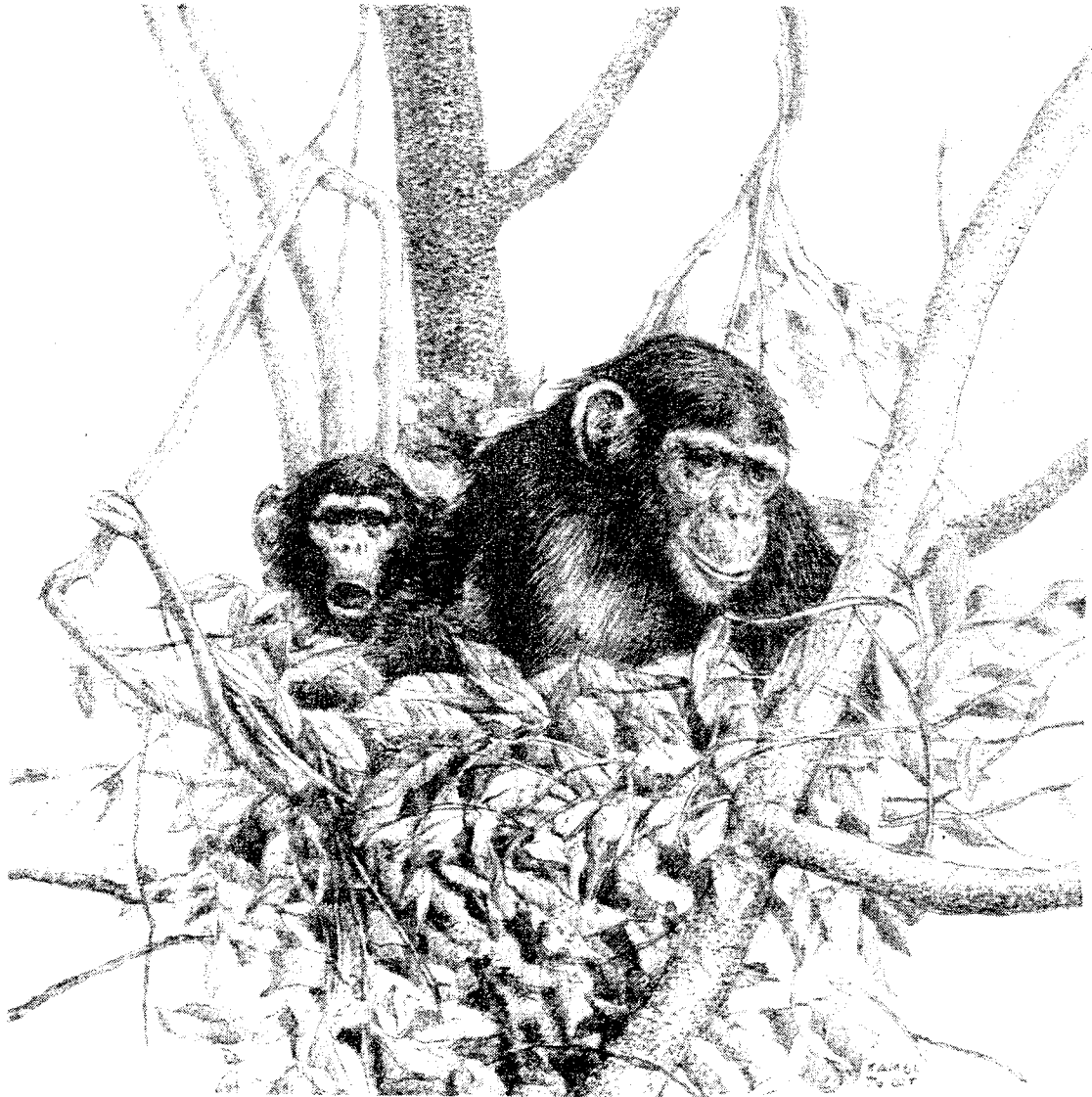


THE INTERNATIONAL PRIMATE PROTECTION LEAGUE

Special Report

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CHIMPANZEE REHABILITATION

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This Special Report comes to you with Season's Greetings from all IPPL officers.

Most of the traffic in apes (gorillas, chimpanzees, orang-utans and gibbons) is a one-way street with no return. After undergoing the trauma of separation from its mother who has been shot so that it can be captured, the infant ape is shipped to zoo, laboratory or private collection, never again to see its homeland.

Now, for the first time in history, this traffic is occasionally being reversed. The work of the Orang-utan Rehabilitation Centers in Indonesia is well-known. Now IPPL is bringing you the as-yet-untold story of the remarkable work being done at the Mount Asserik Chimpanzee Rehabilitation Center in Senegal where Stella Brewer and Raffaella Savirelli are teaching chimpanzees how to live in the wild again. Stella Brewer tells the story.

Like too many other forms of wildlife today, the non-human primates are threatened with extinction. "It is ironic to think that man, a primate, in failing to protect the vanishing primate, is destroying an important link" (Prue Napier, Monkeys and Apes, 1970). Surprisingly, few offenders are responsible for the vast wanton annihilation, but the responsibility for conservation lies with us all.

Primate dealing continues to be a lucrative business for the native hunters, the smugglers, the wholesalers, and of course for the zoos, circuses, laboratories, and pet businesses. But whether the motive be money or scientific research, the technique of capture is the same. This is especially regrettable for the great apes: "Usually, the mother is shot in order to capture her baby. The population is thus deprived of its most valuable asset from the point of view of conservation--a breeding female" (Napier, 1970). According to Adrien Kortlandt (cited by Barbara

Harrisson, in Conservation of Non-human Primates, 1970), two or three mothers must be shot to obtain one surviving young. Between capture and purchase one quarter of the offspring die, and of those finally purchased, another quarter die. So to obtain one living young chimpanzee, at least four, perhaps six mothers are killed. Needless to say, the impact on wild primate populations is devastating.

Destruction of habitat also plays a significant role in the onslaught. The timber industry, especially in Borneo and Uganda, has the practice of poisoning unwanted "weed" trees to make room for trees that will yield useful timber. These unwanted trees often provide a major food source for wild primates.

The pharmaceutical industry, which uses primates for drug testing and produces vaccines from monkey kidney tissue, is responsible for its share of foul play. "The requirement not to use chimpanzees unless parallel experimentation has been tried with other species of non-human primates, and to use them sparingly, needs strong re-emphasis" (Harrisson, 1970).

The entertainment industry has long exploited apes, with special attention to the chimpanzee. Desmond Morris (cited by Harrisson, 1970) suggests that chimpanzees provide "relief from the pressure of everyday social restrictions" when they break the rules of our society. As an excuse for this kind of entertainment to relieve our frustrations, some may say that the life of a performing chimpanzee is more stimulating, active, and motivated than would be life in a cage. "But of course there comes a time when every performing chimpanzee reaches puberty and becomes too strong and intractable, and finally has to be placed in a zoo" (Vernon Reynolds, The Apes, 1968). Those not accepted by a zoo end up in a research laboratory cage or are destroyed.

In planning a zoo, the two basic extremes that must be considered are total freedom in a natural environment, and hygienic captivity of little more than

living specimens. Many zoos, unfortunately, in finding a compromise between these extremes are deficient on both sides. It is not surprising to find the following description:

Three adult males were caged, singly, in small wire cells. All showed symptoms akin to catatonic schizophrenia in their motionless postures and staring eyes. I enquired of a keeper why there were no females, and he replied that the management thought that their sexual swellings would be an embarrassment to the public. He said that one of the males had been caged for thirteen years (Reynolds, 1968).

While some zoos have made serious attempts toward re-creating the natural environment, certain problems remain unsolved. Korlandt has suggested that the relatively more arboreal habits of caged chimpanzees are caused essentially by a lack of space on the ground which frustrates their normal locomotory needs. His conclusion, after a study of various zoo enclosures, is that "chimpanzee accomodation in zoos should be a large and undulating open enclosure rather than a cage with trees."

Time which in nature would be spent foraging for food is wasted in hours of captive boredom after prepared food is given and eaten. The great importance of living in groups is often overlooked, although primates are in many ways the most social of all animals, and their social life reflects on all other aspects of behaviour.

If any of these problems is neglected, the justification for zoos is correspondingly reduced, for the zoo's educational value lies in its representation of wildlife, not zoolife.

Recently it has become both possible and fashionable to keep exotic and expensive pets. At a cost of thousands of dollars for a chimpanzee, gorilla, or orangutan, there is potential for a new "status symbol." Sometimes a compassionate person will buy a suffering chimpanzee in a cage

as an act of mercy, but by doing so, this only helps to perpetuate the market for captive chimpanzees. Whatever the reason a primate is kept as a pet, the technique of capture is devastating to the primate population, and the animals usually suffer the same fate as their relatives in show business when they reach maturity. To the great relief of the pet owner, the ape is put to sleep, given to a laboratory, or put behind bars.

Despite the fact that some governments are trying to enforce strict poaching control measures, the problem of the confiscated chimpanzee still persists. The infant cannot simply be abandoned in the wild, so a cage or enclosure is usually the answer. Wasting the life of a chimpanzee in this way is the very abuse that poaching control is intended to prevent. Rehabilitation solves this problem and also restores the loss in population that would otherwise go unchecked.

Our involvement with chimpanzees is due to extensive experience raising confiscated orphan chimpanzees, the desire to make a positive contribution towards the preservation of the species, and our interest in adding to present scientific information concerning animal behaviour.

Although there have been other attempts in this area, such as Grzimek's release of chimpanzees on Rubondo Island in Tanzania, this is presently the only major project for rehabilitating chimpanzees to the wild. Raffaella Savirelli and myself are systematically collecting information concerning behaviour, and making records of problems and progress so as to seek a method whereby captive chimpanzees can be returned most effectively to the wild. Therefore, not only will the chimpanzees of this project benefit, but other programs of this nature can be established more easily using our experiences. Already, a similar project for rehabilitation rather than just "release" has been started in Ghana by Meredith Rucks who contacted us for guidelines.

COMMUNICATION

Because many of the chimpanzees that arrive for rehabilitation have been raised by human families in isolation from other chimpanzees, they are unfamiliar with the tactile, gestural, and postural communication which Jane Goodall suggests plays an important role in interindividual relationships. Similarly, they are also unfamiliar with vocalizations and facial expressions essential for acceptance and integration within the group they enter. Thus, an entire range of communication must be learned by the new arrival immediately. Some common problems in communication are:

A dominant chimpanzee, in an attempt to be playful with the new arrival, will have his play misinterpreted as signs of aggression.

A new arrival will take liberties with another chimpanzee, and not understanding a negative reaction, will continue until an attack is provoked.

All of the group except the newcomer suddenly become silent and still. The new arrival must learn to notice this reaction and be alert to a possible source of danger.

Jane Goodall explains communication in wild chimpanzees in terms of life-long progress beginning in infancy, and the situation is very similar in the progress of captive chimpanzees being introduced to the norms of communication within a semi-rehabilitated group. We try to teach newly arrived chimpanzees certain appropriate calls (such as food grunting) and gestures (such as grooming), but they learn much more from the other chimpanzees by trial and error.

ENVIRONMENTAL ADAPTATION

Before arrival at the rehabilitation site, each chimpanzee is examined thoroughly by a veterinarian, and a health certificate is issued. We treat all minor ailments and injuries in camp, but if circumstances warrant, a veterinarian is contacted.

The first few days in the new environment can be terrifying for a chimpanzee who has spent years in the

confines of a house or cage. The sudden vast space and complete liberty are so overwhelming that the chimpanzee desperately needs the security and affection of one of us as it feels its way about the new location. It becomes accustomed to the freedom within a few days, and then explores its own capabilities and limitations.

When the chimpanzee reaches an age when it no longer requires carrying when out on an excursion, we compel it to walk alongside us. It is not long before the soft hands and feet of the new arrival become calloused, enabling it to walk comfortably on the hard rocky surfaces. Often, in the beginning, there is much whimpering and an occasional tantrum. After a short time, however, the notion of walking becomes less distasteful, and eventually we encourage the young chimpanzees to follow the older ones, rather than us. We lead all of the chimpanzees along the tree line when they walk, as opposed to the broad plateau. They learn to avoid open spaces in this way, a possible safeguard against predators. To date, all of the group can walk at least six miles in a day, and some of the older chimpanzees leave camp for days and weeks at a time.

Prior to arrival at the rehabilitation site, most of the chimpanzees spend an acclimatization period at the Abuko Nature Reserve, in The Gambia. Full climatic adaptation, however, is not realized until the chimpanzee spends its first rainy season in camp. Tropical rainstorms are formidably noisy, and apart from heavy rainfall, thunder, and lightning, storms are often accompanied by violent gales. These winds sway and buffet the trees, frequently tearing off large branches which crash to the ground. The chimpanzees are most frightened when these storms occur at night, and at times it has been necessary for us to sit outside through the storm, reassuring them. The situation resembles that of a wild infant chimpanzee who huddles in the embrace of its mother. Eventually



STEPS TO INDEPENDENCE (clockwise)...

they realize that they need only fear the discomfort of being wet and cold, although displays remain frequent.

It is during this early stage of rehabilitation that every sudden rustle of leaves or bird cry is alarming, and the newly arrived chimpanzee must learn to distinguish between an innocuous situation such as a lizard scuttling nearby, and a potentially dangerous one such as the twittering of wild dogs. At the presence of danger, the more experienced chimpanzees leap into trees, the others into our arms where they await our reaction to the situation. Because they imitate us so readily, it has been possible to teach the chimpanzees which animals or situations are dangerous by our reactions, e.g., jumping up with exaggerated fear, creeping away, or climbing a tree. Thus, when we encounter a snake, the chimpanzees exhibit the appropriate reaction by moving away with caution.



FEEDING

The first concern of rehabilitation in feeding is the change in diet from captive type foods such as monkey chow to wild African foods. It is important to maintain nutritional balance, yet accustom the usually reluctant chimpanzee to the new foods. The introduction of wild foods is begun by showing the new arrival how we eat the food ourselves, as we make exaggerated food grunts and expressions of enjoyment. This, combined with putting the new food in the chimpanzee's mouth, is usually enough to start the change in diet. Occasionally, underfeeding with vitamin supplements added to the diet is necessary to increase hunger. Sometimes we mix the wild food with the old type of food, gradually increasing the percentage of wild food until it is accepted alone.

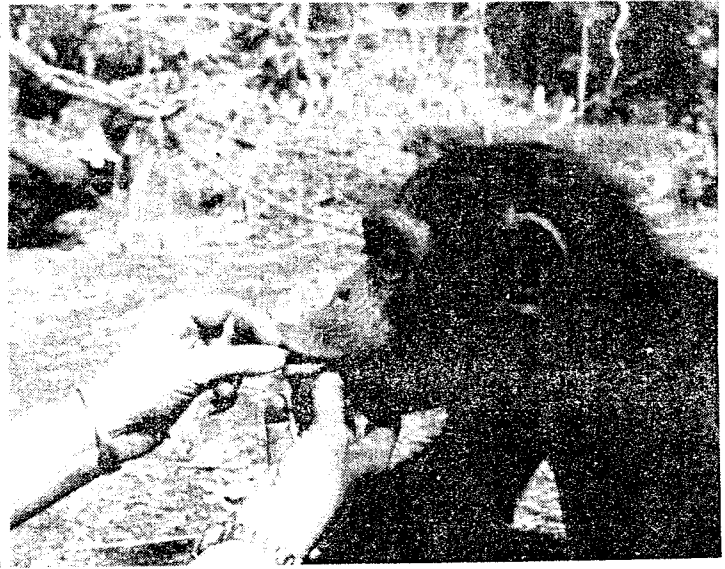
All of the chimpanzees are taken for daily walks to locations containing edible foods. We vary these locations with seasonal changes or as trees become bare of fruit. Older chimpanzees set a good example for younger ones or new arrivals by grunting at the sight of fruit trees and quickly climbing to feed.

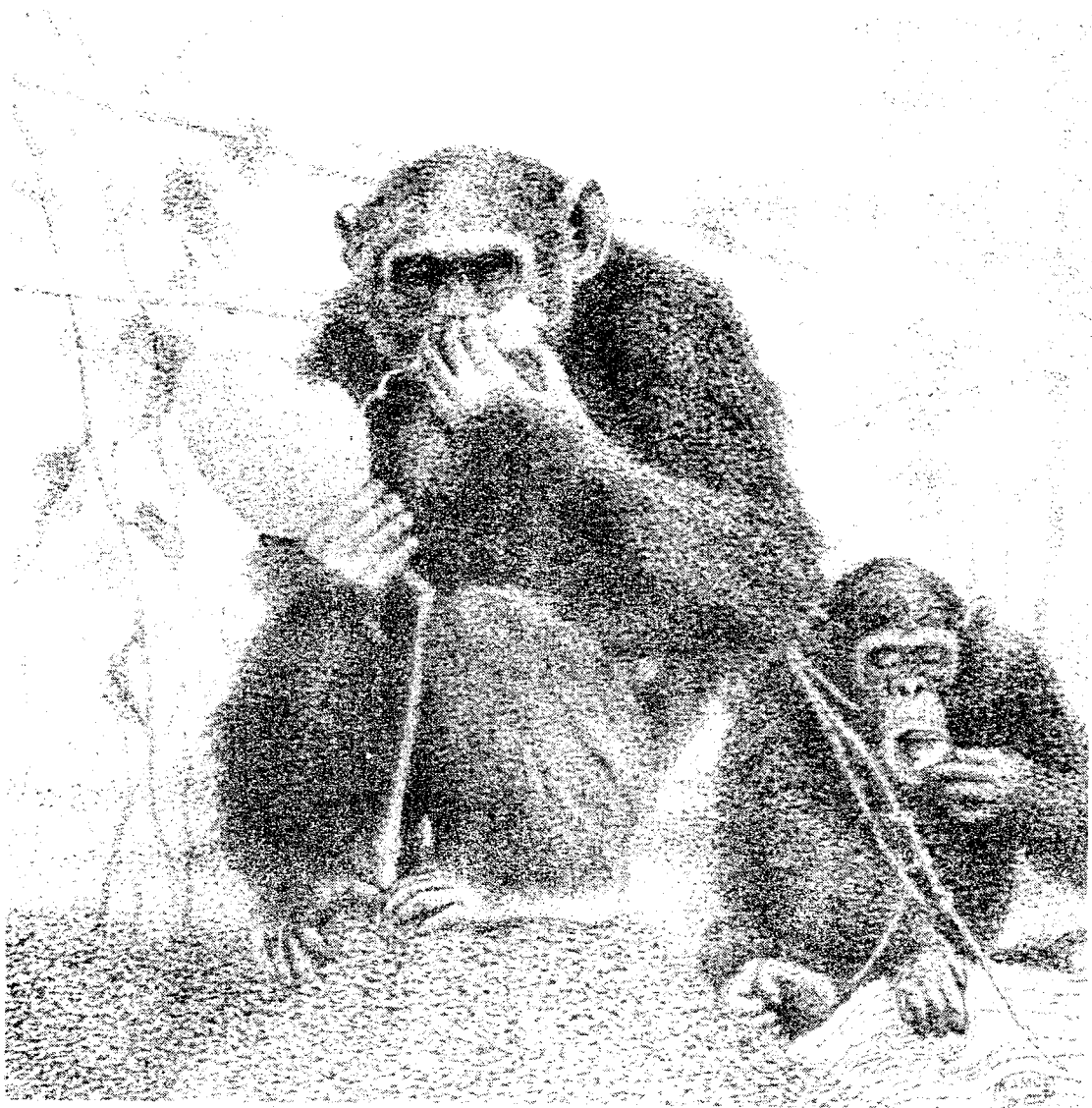
The younger chimpanzees, who still have small milkteeth, must have certain hard-shelled fruits opened for them; the older ones use their power-



LEARNING TO EAT...

*Above, bringing pod from a tree.
Below left, trying a strange food.
Below right, Raffaella teaching chimp
to open a hard-shelled fruit with a rock.*





ful jaws and sharp canine teeth. Despite the handicap of no mother to aid in feeding, we have taught all of the chimpanzees to climb and pick the fruit themselves, and then hand the fruit to us for opening. The breaking process is done in a fashion that can be readily imitated, even though wild chimpanzees have been recorded using similar methods extremely infrequently.

We feel that rehabilitated chimpanzees are at an obvious disadvantage when compared to wild chimpanzees, and any advantage we can give them in the way of learned behaviour is just compensation.

Baobab fruits (*Adansonia digitata*) are held by the stem and smashed hammerlike against a rock. Other hard shelled fruit, such as the pods *Afzelia africana*, are placed on a flat stone surface and crushed by a rock with repeated blows. These techniques, though occasionally unsuccessful when first imitated, are constantly used by the chimpanzees. For every success, progress towards true independence and rehabilitation is affirmed.

At present, three of the six chimpanzees in camp are entirely self-sufficient in feeding. Their diet contains over 70 different types of vegetable matter, birds' eggs, fledglings, young mammals which they hunt, and insects. Several of the chimpanzees occasionally break a small branch, strip the leaves from it, and probe for termites in the same way that Jane Goodall has observed in wild chimpanzees of East Africa. On one occasion we observed the oldest chimpanzee of our group using the same method to catch ants.

All of the chimpanzees drink at least once a day, usually from a running stream. They show a distinct preference for moving water. Like wild chimpanzees, they crouch down at the edge of the water and suck the liquid up with their lips, generally drinking as a pause when passing a stream during a walk. Some of the chimpanzees, however, go to a nearby stream specifically for a drink.

NESTING

Nest building is, perhaps, one of the most difficult aspects of rehabilitation. Each evening, wild chimpanzees normally construct a nest in a tree, made of branches and leaves. High from



NESTING...

Top, Stella helps chimp into nest.
Bottom, he's on his own.

the ground, the chimpanzee is relatively safe from predators, and the nest is a comfortable place in which to sleep. Our captive-born chimpanzee showed a desire to gather material around her before sleeping. As she is the project's only captive-born chimpanzee, we were fortunate not to have problems in this regard.

At first, a newly arrived chimpanzee is placed on an elevated platform and given fresh leaf bedding each evening. If the chimpanzee has a familiar object of security (blanket or pillow) with which it is accustomed to sleeping, it is not taken away until the new sleeping site becomes familiar. We chose a height of 25 feet for the platform, based on the fact that wild chimpanzees usually make their nests at heights above 15 feet.

Next, the platform is covered with thorny branches and an oversized nest is constructed for the new arrival. After it becomes accustomed to this nest built by us, we place the newcomer in an abandoned nest made by another chimpanzee. Through watching the nest building process we use, and the methods used by other chimpanzees, the newcomer gradually learns how to construct its own nest.

Nests built by us are disassembled very frequently to prevent parasites. Primates rarely have fleas because the continuous use of new sleeping sites interrupts the life cycle of the parasite.

At this time, all of the rehabilitatees sleep in nests at heights over 30 feet.

MATERNAL CARE

"A wild chimpanzee female, by the time she has had her first baby, has not only enjoyed normal relations with her mother and other individuals, but has had the opportunity to watch other mothers with small babies and to play with infants and to carry them around" (Goodall, The Behaviour of Free-Living Chimpanzees in the Gombe Stream Reserve, 1968).



TINA & TILLY...

In captivity, it has been found that inexperienced chimpanzee mothers are frequently afraid of or unintentionally mistreat their first-born. Though there has been no recorded instance in which a mother chimpanzee has attacked her infant, she can seriously endanger its survival by ignoring it or carrying the infant in an inappropriate way.

"Tina," the group's eldest female, was captured when she was approximately six years old. Unlike a chimpanzee born or raised in captivity, she would almost certainly have had opportunities to watch the mother-infant interactions of wild chimpanzees. When it was discovered that Tina was pregnant, we thus had reason to be optimistic that she would be competent enough to look after her infant. Yet it was with a certain amount of apprehension that we awaited the birth.

On 31 October 1975, Tina left camp. Four days later she returned, supporting with one hand an infant clinging beneath her. As the rest of the group followed her into camp, their attitude was one of mild curiosity. Our own curiosity was satisfied when we were lucky enough to determine

the sex of the infant almost immediately. We named him "Tilly Asserik."

Tina's behaviour with her newborn closely parallels that of a wild chimpanzee; we have observed none of the tendencies exhibited by captive mothers. Our comparison with wild mothers is based on Jane Goodall's (1968) observations of wild chimpanzee mother-infant behaviour, and Stella Brewer's work at the Goodall project. The following examples of behaviour all demonstrate normal and efficient motherhood.

At first, Tina allowed none of the others to touch the infant, and any attempts were aggressively thwarted. On the third day, however, she allowed "William," the oldest male and probable father, to touch the infant briefly. As Tilly became more active, and began reaching out to grip leaves and pieces of grass, he also began to grip other chimpanzees as his mother groomed them. At such times, Tina gently but firmly detached Tilly's hand and placed it on her own body. Tina has been observed to groom her infant for up to two or three minutes at a time; she normally pays attention to the face, eyes, ears, and top of the head.

Tina carries her infant in the normal ventro-ventral position, low on the abdomen. For the first few days, she constantly supported Tilly with both thighs and one hand while travelling, in what Jane Goodall refers to as a "hunched gait." After the first week, Tilly was able to cling to his mother unsupported for short periods. As soon as the grip began to loosen, Tilly would whimper and Tina would respond instantly by supporting him with her hand. If Tina needed to use both hands while climbing, she supported Tilly either by drawing both thighs to her behind Tilly's back, or by crossing one leg over and pinning him in position.

The infant searches for the nipple by means of jerky uncoordinated nuzzling movements of his head against Tina's abdomen, and by pulling himself

upwards. Often, Tilly is helped when Tina pushes him up towards the nipple into a better position. Frequently, Tilly supports himself during suckling by clinging for the duration of a feed.

We feel fortunate that Tina is able to set such a fine example of normal maternal care for the younger females who will be future mothers in the group.

EMOTIONAL INDEPENDENCE

Most of the chimpanzees that arrive at the rehabilitation site are clearly emotionally disturbed. Some common symptoms of abnormal behaviour are violent prolonged rocking of the body, tongue sucking, lethargy, hair pulling, self-slapping or biting, and excessive screaming. No forcible attempts are made to stop these behaviours, as they disappear of their own accord as the chimpanzee becomes rehabilitated and emotionally independent.

Healthy emotional independence can take place only after emotional dependence is re-established, and the chimpanzee



TEMPER TANTRUM...

anzee gradually grows independent in a normal fashion. Thus, our treatment begins with replacement of the mother figure. This is not possible with adolescent or adult chimpanzees, as experience has shown. When three older chimpanzees arrived at camp for rehabilitation, instead of clinging to us as young chimpanzees do, their reaction was to run away.

When a wild chimpanzee infant is captured, the entire world of the warm soft belly of the mother and the comfort and security of her nipple is shattered in a moment. The bewildered infant is shoved into the darkness of a sack or crude crate and taken on a long, dusty, jolting journey to a town to be sold. Stunned and hungry without its mother's milk, the infant is occasionally given strange and questionable food until it is crowded into a large box with others sharing the same fate, some of them already dead from heat and exhaustion. The brutal shock of the mother's slaughter and the infant's consequent abduction is plainly the beginning of its insecurity and emotional disturbance.

Opposed to even the most adequate human replacement, the importance of the natural mother cannot be stressed enough. Jane Goodall (1968) made the following observation in her work with wild chimpanzees.

The death of the mother, even during the fourth year of an infant's life, may cause profound psychological disturbance...two infants which lost their mothers when they were about 3 years of age developed abnormal behaviour patterns despite the fact that they were 'adopted' by their elder siblings.

Though it is not possible to do all for a chimpanzee that a natural mother can do, it is still possible to gain trust and create a feeling of security, both essential in helping the young orphaned chimpanzee. "The young chimpanzee has a long period of complete dependence on its mother when it relies on her for food, transport, and protection" (Goodall, 1968). We can

fulfill these needs easily enough, but emotional disturbances can be treated only by emotional means. We constantly make it evident that we can be depended upon for affection; we are fair and consistent; we exhibit patience and understanding; and we demand respect, but remain sensitive.

The result is trust, self-confidence, a willingness to learn and obey, and a feeling of security. In short, the chimpanzee is willing to climb, taste new foods, walk alongside without being carried, sleep in a nest, play, inhibit aggression, and be generally more cooperative in every way, due to the emotional attachment.

In establishing this emotional bond, great care must be taken to be discriminating, as overindulgence can be as harmful as neglect. The chimpanzee must feel secure and protected, and at the same time be allowed to become more independent. The rehabilitated chimpanzee is then able to become emotionally independent at adolescence as naturally as a wild chimpanzee. With no encouragement from us, the chimpanzees begin to travel alone and spend increasingly more time away from camp, like the wild chimpanzee who "as it grows older, moves about less and less frequently with its mother" (Goodall, 1968).

CONCLUSION

According to Emil Menzel (Leadership and Communication in Young Chimpanzees, 1973) "the group as-a-whole locates food, water, shelter and all other basic necessities and manages to avoid dangerous situations and predators." Bearing this in mind, our rehabilitation work has had, as its underlying goals, survival and procreation, with an emphasis on group unity and self-sufficiency. Successful integration with an already existing group of wild chimpanzees is unlikely due to negative reactions our group has experienced thus far. It is more reasonable to aim for the formation of a cohesive group which can survive independently in the wild.

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