

**Wolltapire, Tapirus pinchaque (Roulin), in Ecuador**

**The Woolly Tapir, Tapirus pinchaque (Roulin), in Ecuador**

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In the literature it is stated that in Ecuador live three species of tapir:

1. The Central American Tapir (Tapirus bairdii, Gill 1865),
2. The Woolly, or Mountain Tapir (Tapirus pinchaque, Roulin 1829),
3. The Brazilian Tapir (Tapirus terrestris, L. 1766).

The "Red Data Book" of the IUCN mentions that the Central American Tapir can be found as far south as the Gulf of Guayaquil. This is a mistake, because today it is not found in Ecuador. Since Hershkovitz' findings, no living specimens have been caught there. In over thirty years the noted Ecuadorian zoologist, Professor Gustavo Orces, could obtain no information that would definitely determine whether or not this species was present in Ecuador. Not a single skin could be found. My animal-catchers have instructions to talk with the natives of the coast region and to discover whether they ever come across tapirs in the course of their hunts. In the northwestern jungle regions it seems that it is still encountered. The inhabitants of the rain forest know it as the "Cow of the Forest" and maintain that they have procured some. I hope to be able to collect additional details in the course of the next few years in order to make more definite statements.

During our efforts we caught two other interesting species: a Harpy Eagle (Harpia harpyja) and a Bush Dog (Spethos venaticus). This may be the first time that either of these animals has been reported from outside the Amazon basin. It is also the first record from a tropical coastal jungle—at least within the boundaries of Ecuador (i.e. west of the Andean chain, which is approximately 5000 m. elevation in this area). The Harpy we sent to the Seattle Zoo and the Bush Dog to the Los Angeles Zoo.

It appears, however, that only a very few animals have succeeded in crossing the Andes. The fauna of Ecuador has undergone a typical tripartite division. The Pacific coastal plain, the Andean highland, and the Amazon basin essentially have their own respective faunas and only a very few species are found in all three or even in two of those regions. We have, in the past few years, observed tens of thousands of live birds and thousands of mam-

mals, and again and again have come to this conclusion. It is therefore not astounding that three species of tapir occur in Ecuador.

It is noteworthy that the Mountain Tapir which is excellently adapted to its habitat, the high Andes, is not found in all high altitude areas, but only in the eastern part of the eastern Andes range. We have tried in vain to find Woolly Tapirs in the western Andes. Either the animals never lived there or they have been extirpated for a long time. This is not very likely since there are extensive jungles in the western Andes as well. The western part of the eastern Andean chain has been settled for generations and it is therefore apparent that the tapirs have retreated eastwards into the untouched mountain forests. Today we find the Woolly Tapir in the following provinces: Carchi, Imbabura, Pichineha, Cotopaxi, Chimborazo, Canar, Azuay, Zamora-Chinchiipe, Morana-Santiago, Pastaza and Napo.

The inhabitants of these areas and other people who know the fauna consider the Woolly a common and abundant animal. All the hunters are familiar with it and the Indians hunt it for meat. In the realm of the volcano Cotopaxi, shanks of Woolly Tapir meat are sold for about \$3.20 (American). Salves made from the animal's toes and ears are found in the Indian markets where they are offered as aphrodisiacs and healing solutions, etc. They are called by the name "Launa de la gran bestia," the nail of the great beast. In other areas the Indians do not hunt the Woolly at all. The flesh is not considered to be very good. Here only Mazama (Deer) species are hunted. This is especially true of the Antisana area (5705 m.). On the other hand, the hunters of the larger towns consider the meat a delicacy. I have eaten it and it seems to be very tasty. North of the Cayambe mountain range, to the east of the village of Pimampiro, the Indians often keep young tapirs that have fallen into the hands of hunters after the mother has been shot. They are kept with the domestic animals, especially pigs. I have also made this observation in other areas. My animal-catchers reported to me once that there were Woolly Tapirs on the farm of some mountain Indians. When we arrived there a little later, the animals were dead. The Indians explained the killing thus: The tame young animals ate the children's meal and the parents became so annoyed that they killed and ate the tapirs. It is to be expected that tapirs kept in this way, by Indians, never live long because of the unsuitable food and the lack of any veterinary services.

But there are exceptions. In 1965 the first Woolly Tapir was brought to me. Hunters had caught the animal as a youngster and then taken it to their farm in the Amazon lowland. This farm was in the vicinity of the tiny Indian settlement of Cosanga. They kept the tapir about one year together with pigs, since no one knew that it would bring a good price alive. Had no one told the owner of our company, the animal would have been slaughtered and eaten. That is the fate of all animals captured in this country. The meat is eaten and the skin and feathers are sold. It was purely luck that we obtained the Woolly from Cosanga. The owner transported him

through the Amazonian jungle, across the rapidly flowing Napo River, and then by delivery truck to Quito. He was completely tame and had lost much of his hair. The first day he all but refused food. Then we thought to cook some lightly salted soup and this he relished, being thoroughly accustomed to the fare of pigs. One night he disappeared and we found, to our amazement, that he had gotten into our neighbor's house and had made himself comfortable in their daughter's bed! Only with great effort could we entice "Pancho," as we named the tapir, back home. Otherwise Pancho gave us much pleasure with his lovable ways. He was sent to England on Jan. 22, 1965, where he arrived in good condition. Unfortunately he later died of a liver ailment.

After that we were little interested in Woolies. Two Americans arrived one day with tranquilizer guns and killed many animals without one successful capture. One of them shot himself in the foot with the injecting pistol and had to be transported, unconscious, out of the mountains. Fortunately he survived, after having lain senseless for several days. Both Americans were with the L.A. Zoo, with whom they had presumably made an arrangement. Their misfortunes cast a shadow over our later Wooly capture expeditions—for one reason, their losses, but there were other reasons, too. It is to be supposed that the L.A. Zoo was not informed as to how the two Americans worked. In any case, we do not want to blame the zoo. The blame was, in fact, placed on us, in spite of the fact that we did not have anything to do with the men from Los Angeles.

An even worse impression was left behind by an official of the IUCN who had a Wooly Tapir shot in order to take the skin to Switzerland. His work on Woolies ("Contribution a l'etude du Tapir pinchaque") is, however, noteworthy since it brings all the essentials together from the available literature and because, at the time of his stay in Ecuador (1968) we had seven Wooly Tapirs in our compound. During his stay of several weeks we gave him our consent to spend as much time as necessary with these animals. However, he never went with any capture expeditions and never saw any Woolies in the wild. Therefore his paper consists, in part, of third hand, word-of-mouth reports, and contains errors. Dr. Frädriich and his wife, from the Berlin Zoo, are the only foreigners that have ever taken part in a capture and one can read the results in Dr. Frädriich's work, "Zum Fang des Wolltapirs" ("On the Capture of the Wooly Tapir").

We developed an effective capture method. The approx. 20 Woolies found in zoos today were acclimated and delivered, without great loss, by us. They can be found singly or in pairs or trios in the following zoos: L.A. Zoo (1/2), Memphis (1/2), San Antonio, Frankfurt, Leipzig, Wilhelma, Stuttgart, Menagerie des Jardin des Plantes in Paris.

These good results were made possible by the untiring efforts of my co-worker, Jose L. Paez, who has spent a large part of his time during the past few years in those cloud forests in which the tapirs live. He is respon-

sible for the capture and good health of these sensitive animals.

We suffered few losses in spite of the great difficulties involved in the capture and transportation of the animals in the rugged terrain. The area of the Andes in which we worked contains snow-covered, glaciated volcanos, rocky mountains, precipices, gorges and partially uninhabited areas, never trodden by man, which in their untouched beauty hold a wealth of plant and animal life. Rivers and mountain lakes abound with fish; high moors and waterfalls are found from the snowline down to the steep mountain valleys, where the tropical jungle begins. One may look over the unending expanse of the Amazon basin and sense the Atlantic at the other end of the continent. Here we find ourselves in the home of the Woolly Tapir, the Mountain Puma, the Spectacled Bear, the various deer species, the rare Pudu Mephistophales, the Mountain Paca, the Andean Fox and numerous smaller amphibians and insects. Here, too, the zoologist or botanist could perpetuate his name since there must be new species to discover.

The snow line is about 5000 meters, but in bad weather it reaches 4500 meters. We have even experienced snowstorms at 4000 m. and hail that whitens the landscape at 3000 m. The last mentioned is rare and the sun melts everything away quickly. In bad weather the Woolly Tapir wanders in lower areas. It can be found to about 2000 m. but we cannot accurately determine the lower boundary of its range since there are thick, uninhabited forests found everywhere and it becomes too difficult to follow the Woolies. The animals do like to wander many kilometers, presumably to find better feeding grounds. In so doing, they enter quite low elevations; they avoid the high passes. Only when the heat becomes too oppressive and large numbers of gadflies injure the tapirs do they go high into the mountains. The cloud forest reaches to 3800 m., then they adhere to the "Chaparos" (Crippled forests). Here one may find Spectacled Bears that have come to look for food in the forest. At about 4000 m. the "Paja" (Straw) begins—tough grasses that reach almost to the snowline. The tapirs may come into these areas on hot days, but their food is only found in the cloud (or rain) forests. These contain little-known flora. I know of certain bamboo species and majestic tree ferns that reach 10 meters in height and remind one of past ages of the earth; orchids in profusion are also to be found here. The ground is moist and slimy. During the day temperatures are generally pleasantly warm, but it gets very cool at night. These highlands, ranging from 2500 to 3800 m., are the favored habitat of the tapir. The temperature here is pleasant, water is plentiful and the vegetation gives the tapir more than sufficient protection from man, who appears to be his only enemy. Here the tapir finds a wealth of plants and leaves to eat—i.e. Colca (Miconia crocea). At least once a week the animals visit certain salt and mineral licks in the jungle. They lick the salt or even eat small pieces of the stone. An abundance of tapir footprints characterize such places. In the area of the still-active volcano Sangay (5323 m.) we noticed that the animals have black teeth. Pre-

sumably, they lick the black, mineral-bearing volcanic ash. Paez was able to follow their tracks up to the snowline where we succeeded in catching a 275 kg. animal. However, since we couldn't transport it from there it was released. We estimate that in the Sangay area there are at least 1000 Woolly Tapirs. The high plateau north of this volcano is so cut by deep gorges that it is almost impossible to penetrate. The mighty emissions of the volcano make the area as light as day.

The Woolly Tapir usually sleeps during the day and feeds and becomes active at night. During the day it is most difficult to find the animal since it is hidden so well in the underbrush or in dens. Dogs must be used to follow the spoor and find the hiding-place. The tapirs' routes can be picked up easily in the moist mire and even more easily on riverbanks. The animal follows particular trails through the jungles—trails that a practiced eye can recognize. Tapirs are perfectly suited for passing through the thick underbrush. We can determine how old a trail is and approximately how big the animal is. Our catchers even maintain that they can tell the sex of the animals on the basis of the form of the toes. I would not care to guarantee the accuracy of this. The best time to pick up a fresh spoor is in the morning. It seems that the tapirs take a bath in the river in the gray light of morning, then seek a sleeping site nearby in the forest. Excrement can often be found in the vicinity of the sleeping site. However, some sleeping sites are clean. In the latter case, the animals apparently relieved themselves in the water.

Rubbing sites, approx. 2 m. high, can be found on some jungle trees. Here the animals have supposedly filed down their toes. In Quito they become nearly lame within a week if kept in an enclosure with a cement floor. We had this type of enclosure for hygienic reasons, but had to build new ones with dirt floors so the toes could grow back again.

Concerning the capture: We have already reported in another article in this magazine (Frädrieh, 1970) that when the place in which the tapir is caught is far from the base, we build on the capture sight a small (3 x 3 m.) enclosure. Our most frequently used capture areas, such as "el Placer," between the volcanos Sangay and Altar (5321 m.), are already equipped with such corrals. The corral at the main site is 10 by 20 m. and partially roofed over. There and during transportation to Quito, the animals receive their natural diet. As soon as the tapir is caught we drive the dogs away. After several days or weeks the tapir becomes tame. During the first days, however, it is always very aggressive and must be approached with the greatest of caution. This makes the medical treatment which is administered directly after catching very difficult. Lungs, heart and circulation must now be strengthened. If this does not take place, an enduring heart condition can result. Therefore, we give daily injections of heart- and circulation-strengthening drugs until the animal has gotten over the strain and shock of capture and of its transportation to the compound. Identical

treatment is necessary after transportation from the compound to Quito. Any small grazes or abrasions are treated immediately. Either at the base or in Quito the external and intestinal parasites are removed. This cure must be repeated. The animal's appetite is usually good until it reaches Quito. The problems begin when the animal is changed over to its new food. Excitement rather appears to stimulate the appetite; tapirs that are packed into crates and brought to the airfield in Quito are usually quiet and eat readily. Tapirs in the wild have more intestinal parasites than we had imagined, and wild ones are usually fairly lean. We take the temperatures of newly caught animals two to three times a day; morning temperature is low, mid-day quite high, evening low again. Measurements taken in the middle of the day are considered to be of little importance. The following is a temperature chart of a male caught on the 13th of April:

**13 April 1970:** Capture took place at 11:00 o'clock, arrival at base 1500. Temperature 39.4 degrees (much too high). The animal allowed us to take its temperature because it was too exhausted to pace about. We were able to handle the animal with no problems and to inject both necessary drugs.

**14 April 1970:** Acts normally and is aggressive. Temperature could not be measured.

	A.M.	P.M.
<b>15 April 1970:</b>	36.8 C	36.4 C
<b>16 April 1970:</b>	36.0	36.4
<b>17 April 1970:</b>	35.8	38.8
<b>18 April 1970:</b>	36.5	36.6
<b>19 April 1970:</b>	No measurements taken.	
<b>20 April 1970:</b>	35.0	36.2
<b>21 April 1970:</b>	36.0	36.5

The temperatures did not vary much during the following two weeks, even after the animal had been taken to Quito. In Quito, the lowest measured was 35.0 degrees, and the highest was 37.5 degrees.

After capture and acclimatization, the animal has to be taken from the base corral to the road. In the catching areas there are practically no roads. Very few people know of the paths that do exist. Only with the greatest of effort can we and our helpers push forward to a point that is near the capture area. Our capture efforts are therefore limited to a few areas: Antisana, Cotopaxi, and the area between Altar and Sangay. The walk from the base to the road usually takes from one to six hours. Sometimes the tapir leaves the footpath, apparently taking pleasure in eluding us, and we have been hard put to keep up. Unfortunately, the tapir never feels like following along voluntarily. More often he disappears into the

jungle only to be restrained by lassoes. When we come to water he halts completely, lies down and will not get up. Thus, the walk from the enclosure to the vehicle can be stretched into days instead of taking hours. We cannot over-exert the tapir, and the strong pulling of the lasso can cause injuries and cutting. Two years ago we introduced an improvement—we built light boxes in which the tapirs could be transported. The boxes have numerous air holes and are built in such a way that the tapir can barely move, but can lie down comfortably. Ten men are required to transport one box. Still, there are quite a few places in the mountains in which these boxes cannot be used. The tapir is then pulled along with the lasso. The boxes can be disassembled on arrival at our destination. Our driving time to Quito is an additional 4 - 8 hours. When the roads are in bad shape because of rainfall or dirt slides, or when we have motor trouble, the question becomes problematical. A year and a half ago our jeep, with Indians and tapir, rolled over. The men came through it with only minor injuries; the tapir, unfortunately, died. We have considered bringing the animals out of the mountains in a helicopter, but that would raise the prices so much that no zoo could buy one.

Immediately on its arrival in Quito, the tapir is taken to our compound. Here we have pools and small huts that protect the animals from the sun, rain, and cold. The altitude at Quito is 2850 m. and it is possible to find Colca (the tapir's main food) there. However, we make every effort to accustom the animals to zoo food. The transition does not always take place quickly and easily. We feed carrots, alfalfa hay, mineral salts, etc. We sometimes have cases of intestinal illness that doesn't want to quit. The worst thing is that the slightest case of diarrhoea can lead to gastroenteritis, which can be fatal within 24 hours in spite of every effort by the veterinarian. This year we had one such case. The autopsy usually also reveals a heart failure, but it seems to be a consequence of the gastroenteritis. We are unfortunately not veterinarians, and those available to us are not capable of giving a clear analysis. They have had no experience with Woolly Tapirs before working on our animals. Fortunately, in almost all cases, we have been able to take care of the intestinal infection before it leads to gastroenteritis. We use a combination of medications that has a maximum range of effect. One which gives us good results is "Streptomagma;" it is also important to give appetite stimulants and to fight anemia, which comes with the other health problems.

How much of an effect psychological circumstances connected with the capture, transportation and food change have on the health of the animal is not known. Some of the tapirs could be sent out of the country after only a few weeks, while we have had to keep others for over a year. We had one unfortunate loss during transportation to Europe. The animal suffocated in the airplane (through the fault of the airline) when its air supply was cut off. There were also losses after arrival in both Europe and the U.S.

One zoo did not even have a pool in the compound, although the tapir was bought during the height of the summer heat. The blame was usually placed on us.

This modest contribution to the knowledge of the Woolly Tapir in Ecuador leaves all too many questions unanswered. However, we hope that someday the gap will be closed.

Following is a list of those photographs accompanying the original article:

1. Habitat of the Mountain Tapir and capture area on Antisana (5705 m.). Uppermost limit of the tapir.
2. Lower limit of the Mountain Tapir's range. Habitat area. The Pastaza River leaves the Andes and reaches the upper Amazon basin.
3. "Laguna de Papallacta" near Antisana. Here the Mountain Tapir lives at 3000 m. elevation. The Stuttgart female and the Frankfurt male were captured here.
4. Young Mountain Tapir, 6 months old. Today in L.A. Zoo, U.S.A.
5. A Mountain Tapir just an instant after capture.
6. The transport box stands ready.
7. Catchers on the road in capture area.
8. The transport is tiresome for man and animal.
9. Mountain Tapir in our compound in Quito. On the right a small bathtub.