

AMAZONIA



Otter Girl

A sloth, an armadillo, forty two natives and a crocodile by the name of Lucy: this is the company Emanuela has been keeping for the past four years in the heart of an Amazonian village on the banks of Rio Negro.

It was love at first sight. Emanuela travelled for two



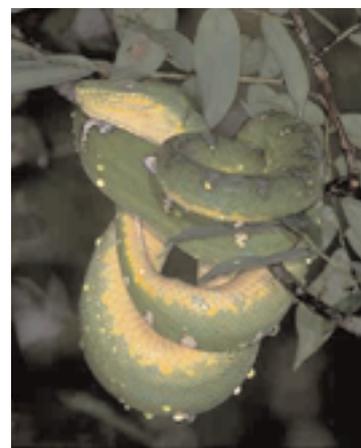
entire days without stopping; she travelled by boat from the port of Manaus until she reached the heaven of the giant otter: a magnificent animal which may well vanish from the planet's forests, before we have had the chance to get acquainted with it.



From the moment she set eyes on this lost corner of rainforest, five hundred kilometres of river-water away from the city of Manaus (two days of non-stop navigation) it became her home and her working purpose.

Emanuela studied biology at university, so she knows full well that the tropical forest is a rich source of biological diversity; a bottomless well of marvels and research material for a scholar. And yet nothing could have prepared her for the world that was about to reveal itself to her - one which would have changed her life.

Emanuela studied biology at university, so she





grow to two metres long), they are timid and elusive animals. Every day at dawn, a fisherman takes her in his canoe to a clear-water cove, sheltered from the currents:



this is the place the otter family has chosen as its den.

**I**n front of her eyes, first a group of pink dolphins parade in front of her followed by armadillos, snakes, sloths and colourful birds who all take turns to keep her company.

Emanuela's work on the Xixau

nature reserve otter population will serve to bolster the scarce and muddled bits of information that have been available to zoologists so far. The otters are undoubtedly one of the most seriously threatened animal species in South America today. Once upon a time, the giant otter thrived all over South America.



Nowadays, it can be found only in some parts of the Amazon and in the Brazilian Pantanal.

Although it is no longer hunted for its precious skin, there are many other dangers threatening its life: deforestation,

water pollution and intensive digging into long tracts of the river to extract gold.

Emanuela is vividly aware that it is extremely important to gather information of the otter's relationship with its environment, its feeding habits and its social activities with members from the same family and between different groups. You cannot hope to protect such a delicate and elusive living species without being com-



pletely familiar with its habits and needs.

But there is something else Emanuela knows: - land and local population are intrinsically linked; if you want to protect one, you need to protect the other.

Environmental protection is useless unless the locals are supported too - they are the prime custo-

dians of the natural resources.

**P**arts of the forest are so remote that health facilities, governmental aid and schooling never filter through. Naturally, the general reaction to this is urban emigration. The natives feel they have no choice but to abandon the villages? Emanuela fears that the real danger will come when the rainforest becomes a desolate no-man's land.

Emanuela belongs to the Amazon Association and this is precisely what they are trying to avoid. A meeting between the Rio Jauperi natives has been



organised and they have decided to take measures to safeguard their heritage by declaring it an "ecological reserve".

The Xixuau Nature Reserve is run according to strict rules: fauna is protected, poachers are kept out, timber is not sold and the locals live on farming, handicraft and ecological tourism.



Over time, the natives' living conditions have been greatly improved: a school and a health post have been built and humanitarian aid is being collected on their behalf. The idea of urban emigration has been put on the back-burner.



**I**t is a universal dream to repeat the experience in other parts of the Amazon.

Emanuela was warmly welcomed by the river dwellers since the very start. The Caboclos are a kind-hearted and hospitable race. But as time passes, Emanuela has become increasingly attached to them and they to her.



"At the beginning, I think they saw me as a strange gringo, who was wasting her time with "useless animals" like the giant otters. "

"Our friendship really blossomed when it finally dawned on them that I wasn't going to abandon them; I wasn't just idly passing through -I



seriously wanted to share my life with them. From that point on, when I have to leave for some reason, they know I will be back again and that even when I am not there, I never stop defending the village and its ideals. "

If you ask her to describe in one word what she has learnt from the river dwellers, she says "patience".

This is a day in the life of Emanuela:

“I wake up at dawn, I go out in the canoe very early to find the last sighting of otters. My fellow-adventurer is called Mambiti. He is a young native. I am teaching to be a researcher. Sometimes we row for six entire hours just for a three minute sighting?..actually, come to think of it, that would be quite a successful day!



“But that is not all we do?.

Mambiti is an excellent fisherman, and so we have some very tasty snacks: we stop off for some delicious grilled fish and then off we go rowing again.

”



"Often I am busy in the village organising daily life: the community meetings are exhausting but satisfying: everyone takes part and everyone has the right to speak. Any decisions are taken only after intensive voting.

The work needs organising - fishing, farming, women's' handicraft, schooling.

In the evening, everyone gathers together in the Maloca, the huge community hut."



"Some people sip on caipirinha, a Brazilian lime cocktail, tell of the main events of the day and share their experiences. At the end of the day, I very rarely find the strength to switch the computer on and write an email.

Nature needs respecting and protecting, but you don't have to try and be Indiana Jones. "

"Who hasn't felt, at some point in their lives, the power of nature??. that feeling of recharging your batteries that comes after a walk in the mountains or a day at the seaside: it is like filling our energy tanks a little.

Nature has its own force and it is our duty to preserve it carefully. We all have our favourite place ?.I love the forest, but I know that the desert or the sea can have exactly the same effect on others. The locals have taught me a lesson: the Amazon is very generous which those who love her and just as cruel with those who disrespect her. "



"People often ask me what makes me lead such an odd life?."



"Actually, it is life in Milan I find odd. Everything here in the Amazon has naturalness about it. For example, I have an ongoing relationship with my neighbour and in the evening when I look up to the moon, I notice whether it is waning or waxing: these are unusual occurrences in a big city. "

"I think, somewhere along the way, the human race has strayed from its natural destiny. A harmonious and close relationship with our environment is something we all miss and need. "

"One of my most vivid memories of village life was the birth of Mateus last December. The partera - the nature reserve's midwife was away on her travels and a young mother decided to give



birth early. The village women came to ask for my help, but I didn't have the faintest idea what to do. The mother, Naisa, was only sixteen and this was her first child. We all gathered together and squatted on the hut floor? It was a fantastic experience to help in the birth of little baby and hear its first cry. "

"It was much easier to change my lifestyle than you might think. So much is superfluous in our lives. I don't look down on progress and technology, quite the opposite. In fact, I use technology on a daily basis, even in the Amazon: digital systems, the net and solar energy are all vital tools for my job. Modern life opens many doors and it would be silly not to take advantage. "

"When I am in Milan, I remember all the things I miss about "my" forest.

The Amazon is full of surprises. You never know what will happen tomorrow. In the city, everything is predictable and stagnant. There is no excitement.



I especially miss the noises: the frogs' concert, the screaming monkeys, the birdsong and the myriad sounds of the giant otters."

The Amazonian Association was set up in 1992. Its original purpose was to create a protected area in the Xixuau and Xiparina rivers. The Rio Jauaperi, which marks the boundary between the Brazilian states of Amazonas and Roraima and covers a surface area of 172,000 hectares, is completely covered by forestland and hosts a large number of animal species in danger of extinction.



In the nature reserve, we stop to watch Emanuela and the giant otter, (*pteronura brasiliensis*), but we also meet pink dolphins (*Inia geoffrensis* e *Sotalia fluvius*), highly rare freshwater manatees, (*Trichechus inungus*), jaguars (*Panthera onca*), black caymen, (*Melanosuchus niger*), the pirarucu (*Arapuama gigas*), the Harpy eagle (*Harpya harpija*), the spider monkey (*Ateles Paniscus*) and the giant anteater (*Myrmecophaga tridactilus*).



The area of Rio Jauaperi hosts 5 small Caboclos communities plus other small isolated settlements; the total population just tops 500 people - 75% of the inhabitants are



under 15 years old. Mainly thanks to the work of the Amazonian Association, families have stayed together and have not been forced to leave their homes and emigrate to the cities.

The locals have a deep understanding of their surroundings. They are all committed to preserve and control the nature reserve. They themselves have

invented rules to run it properly. The Amazonian Association has drawn up an agreement with its residents who have become members to all effects. Before, all the representatives of the Rio Jauaperi community had declared themselves to be in favour of the Nature Reserve Project.



The goal of the Amazonian



Association is not just to protect and preserve the forest but also to safeguard the relationship of the Caboclos people with their natural environment.

The natives are fully aware that they are the custodians of an immense wealth of biological diversity and they know how important it is to avoid an indiscriminate exploitation

of its resources.

Many of those who previously fished and hunted to the detriment of the forestland now rally round to defend their habitat and preserve resources.

The area is carefully protected and there are numerous scientific research projects taking place there. Hospitality is offered to documentary makers and researcher; many visitors passing by and lovers of ecological tourism have also been welcomed.



One famous name on



the list of Association members is Michael Gorbachiov and with him many university professors, intellectuals and researchers.

Before the Association intervened, malaria was still taking many natives' lives.

In 1995 a new health post was built and an anti-malaria project was implemented. Shortly afterwards, a local Jauperi nurse was

selected, sent away for training and sent back to work on local soil - all thanks to a joint scheme between the FNS (National Health Foundation) of the Amazonas, the Istituto Italo-Latino Americano in Rome, the University of Siena (Italy) and the local health unit of Grosseto (Italy).



In the same year, a school was built where the alphabet, drawing and sexual education was taught. In 2001, basic Internet and IT notions were incorporated into the syllabus. After nine years of thorough protection, many animal species on the reserve have considerably augmented in number.

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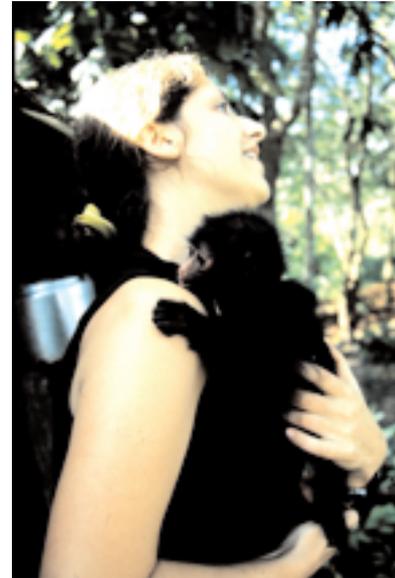


But despite this, the number of fishing boats coming up river from Manaus has increased over the past few years and the number of fish has gradually dwindled. The Indians and the other indigenous communities concurred that fishermen be banished from the river-

banks and as a result the fish are starting to flourish again.

L'Universidade do Amazonas is carrying out serious research into fish life and how to cultivate it - one way, for example, would be fish farming.

The first research project on the behaviour and the ecology of the giant otter in its natural surroundings began in 1994. This project, of which Emanuela's fieldwork and observations are part, is run by the



Laboratory of Aquatic Mammals of the National Research Institute of the Amazon. (INPA)

Another research project on medicinal herbs has been carried out by the Embrapa of Roraima, together with the University of Salerno (Italy) and the IILA of Rome. An anthropological research project on the Caboclos people has been carried out by the Sapienza University of Rome.

Further projects have been undertaken by the Quality of Life Research Institute of Copenhagen. The University of Rome has also contributed to the giant otter research project in collaboration with the INPA of Manaus.

The qualified staff of the Copenhagen zoo have started to take a census of all the mammal species in the nature reserve. A monitoring project on biological diversity through satellite images and the use of local knowledge was presented to the European Space Agency Symposium. The project was presented as an official advertisement of the International Year of Biological Diversity



Observation 2001-2002.

The Xixuau-Xiparina Nature Reserve is twinned with the National Park of Maremma, Tuscany (Italy).

The Associação Amazônia is trying to foster ecological tourism. Small groups of visitors are hosted in the Maloca, a small Amazon-Indian style lodge.

The guests are mainly bird-watchers, journalists and photo-graphers.



An agreement with the Solar Electric Light Fund of Washington has lead to a solar energy system with a satellite internet link being installed on the nature reserve.

The Samauma community women have set up a handicraft co-operative. Their products are currently on sale to visitors only,

but they are contemplating on-line sales too.

A long-distance adoption campaign has been launched with the purpose of covering the costs of health assistance and schooling for local children.

The giant otter research project was carried out in collaboration with the Aquatic Mammal Department of the Inpa (Instituto Nacional de Pesquisa da Amazonia - National Amazon Research Institute ) of Manaus.

he giant otter is the largest of the 13 known otter species; ironically, despite the fact that, once upon



**T**a time, it was one of the largest predators in the tropical forests of South America, today it is in acute danger of extinction. Its area of distribution, which once stretched out from Venezuela to Northern Argentina, dramatically fell between 1950 and 1970 when the international skin trade brought it almost to extinction.



Today it falls under the protection of various national laws in most South American countries: hunting and trading its furs is forbidden. The giant otter comes under the endangered category of the IUCN (The World Conservation Union).

Information on surviving families are few and far between.

The otters' last strongholds are in the Suriname, in Colombia and in the Brazilian Pantanal. There are no exact statistics to tell us exactly how many are left living there.

Despite the collapse of the fur market, the species is still threatened by extinction. Deforestation, water pollution, hydro-electrical power plants and gold

extraction all attack its environment. Being highly sensitive to human disruption of its habitat,

the giant otter is one of the first species to abandon a disturbed area. For this reason, it is a bio-indicator, a sign of the level of conservation of the waters of the South American tropical forests. Like a canary in a coalmine, the presence of the giant otter tells us when nature is balanced, when the rivers are pristine and brimming with life. Contrarily, if it is not there, it means that extremely serious environmental change is taking place.



In the Xixuau-Xiparina reserve there are a fairly large number of giant otters and nearly all the available nooks are inhabited.

Emanuela gathers information on ecology and the behaviour of a population which lives peacefully; her work is a precious addition to scientific research.

The results will be used to protect the population in the best possible way and to develop a programme which can be used in other areas too.



The nature reserve is mainly covered by jungle. During the rainy season, the water levels can even reach 12 metres, and the landscape totally changes.

**T** Large areas of forestland end up submerged by water and on the land left dry, large groups of animals gather.

During the dry season, on the other hand, the waters recede and plants, rock formations and bits of sandy beach emerge. Emanuela carries out her research on a long, light, wooden canoe; she is always careful to look for tracks and any other telltale signs, which might reveal the presence of animals.



For each den, or campsite, the geographical co-ordinates are registered with the help of a GPS: the information is stored on a map so that the required territory size for wildlife can be analysed and calculated: the home range.

The otters live in small groups and each one is intensely observed. Emanuela sketches the marks on their necks so she can learn to identify and recognise the various individuals. This way, she creates a sort of family album of resident otters with information on each one's role within the group, their behavioural traits and their daily routine.

In order to study their feeding patterns, she gathers samples which are subsequently analysed by Dr. Fernando Rosas of the Inpa of Manaus.

The giant otter is a sort of umbrella species i.e. an animal whose presence has a beneficial effect on the entire habitat.

In the Brazilian Amazon, the giant otter shares its territory with many other species, many of which are also in danger of extinction. Primarily the manatee, then the river dolphin, the smaller neotropical otter, the black Cayman, the rare pirarucu. Over the past few years the tendency to use the image of one particular animal as a symbol of environmental protection is becoming more and more widespread. The members of the Amazônia Association - and first and foremost Emanuela - and the inhabitants of the Rio hope that the giant otter can take on an increasingly important role as a messenger of one of the last healthy habitats of the planet.