



Young elephants depend on their mothers and female relatives for many years

WILDLIFE AREAS AND NATIONAL PARKS

NATURE CONSERVATION THROUGH THE AGES

Fine balance in the flux of continual changes is one of the greatest wonders of our planet. All of life is subject to continual adaptation in the battle for resources. At the same time every species inhabits its own individual niche and distinguishes itself in some way from all others. No type of animal or plant behaves exactly like another. So each species also embraces absolutely specific tasks and contributes to that fascinating balance in nature, which mankind all too easily heedlessly throws into chaos.

The effort to manage wildlife successfully is a walk on a knife edge, trying to protect the different species without interfering in natural processes. Successful animal conservation demands first of all the protection of natural habitats and furthermore an equilibrated balance between interference and free development. How this is done is always characterised by the ethos of a particular age. The insights and convictions of earlier biologists, ecologists and researchers have often enough been thrown overboard and revised by following generations. Despite this even modern science once again presumes to know when and how man may or must interfere with nature. Yet no one knows today if future generations will smirk about one or other 'piece of scientific knowledge' from our days, or potentially even have to suffer the consequences of it.

WILDLIFE ECOLOGY AND PARK MANAGEMENT

Before the arrival of Arabs and Europeans the people in the Luangwa Valley lived in villages that were protected from the dangers of the wilderness by high palisades. The men went out in groups to hunt and the women gathered fruits and herbs. Thereby they evidently had only minimal influence on their natural environment. This changed with the appearance of the Arabs and later the Europeans, who came equipped with firearms and went on forays no longer just for their own needs, but above all for the ivory trade in remote trading posts, bringing about a blood-bath among the wild animals. When the British, with the BSAC, took over administration of the Luangwa Valley in 1889, they did not merely wish to control the lucrative ivory trade, but soon saw themselves compelled to establish conservation areas and drastically reduce ownership of weapons, hunting and poaching. For decades the Arab and Portuguese ivory hunters had rampaged in the valley, and the situation at that time was particularly dramatic for hippos and giraffes. In order to prevent their extinction, 1904 already saw the colonial administrator Sir Robert Edward Codrington initiating the establishment of a first conservation area on the Luamfwa River. This 'Luangwa Game Reserve' admittedly faded into obscurity after his death and was shut down again in 1911. In 1920 the BSAC placed the hippos in the valley under protection, as they were still under threat. Gradually the strict surveillance showed some effect, and the stocks of animals recovered. Soon so many elephants were wandering through the valley that they became a problem for the resident villagers, since the bulls plundered the farmers' fields during the rainy season. Thereupon the BSAC hired hunters from among the white population. They were supposed to shoot the problem elephants, and as a reward were granted the tusk of the fallen elephant that first touched the ground, once the animal had been shot. However the ruling led to misuse, because instead of shooting the troublemakers, the hunters preferred to shoot specimens with hefty tusks.

In 1931 the Game Warden of Uganda, Captain C. R. S. Pitman, undertook a research trip through Northern Rhodesia and issued a report that was published in 1934. He counted as an expert in his field, and the „Pitman Report“ was still being referred to for questions of wildlife management and nature conservation decades later. Pitman recognised that already in the previous 25 years 75 % of Northern Rhodesia's wildlife stocks had disappeared, observing that the species were developing in varying ways: susceptible species that occupied specific niches were being lost, while on the contrary robust species, such as elephants and buffaloes, were proliferating too successfully. Therefore Pitman recommended strict elephant control and for the Luangwa Valley the establishment of conservation areas, in which there should be no villages.

HOW WILD ANIMAL MANAGEMENT DEVELOPED IN THE LUANGWA VALLEY

People followed his advice. In 1935 elephant control began with three permanently employed 'Elephant Control Officers' (see p. 46). Apart from this the administration for the first time managed the granting of hunting licences. Dealing with them however remained careless and wasteful. For a fee of three British pounds anyone was allowed to shoot buffaloes, hartebeest, impalas, zebras and wildebeests at will, as well as four elephants, four elands, two hippos and two kudus. In 1938 three reserves were established in the Luangwa Valley and in exchange several villages relocated. A small number of village communities remained at first within the reserve, but protection from elephants was denied to them and by the beginning of the 1950s the very last families had moved out of today's park areas.

The 'Department of Game and Tsetse Control' founded in 1942 laid emphasis at first on the economic issues, such as the control of elephants and the containment of animal diseases. The hunting behaviour of the Africans was hardly regulated at all, although a worrying development was already becoming apparent: with the First World War a glut of firearms had

ended up in the colony, and the Africans had learned how much more effective hunting was with these. With the building of the lucrative mines in the mining belt, the Copperbelt, thousands of workers were moving onto the compounds of the mining companies, where an immense demand for 'bush meat', or game meat, arose. Improved medical and hygiene conditions allowed the population to grow considerably. Game meat became more and more sought after, and the wildlife, not just in the Luangwa Valley, came under greater and greater pressure. In the mid-1930s the African population of Northern Rhodesia owned 33,000 firearms; by 1952 already 47,000 and by 1956 more than 50,000.

'BUSH MEAT' FOR HUNGRY WORKERS IN MINING TOWNS

After World War II the attitude towards wildlife ecology gradually changed, and men such as Norman Carr (see p. 44), evolved from carefree hunters to concerned admonishers, who created visions of the future for the African parks. Carr persuaded the Kunda-Chief Nsefu about the idea of a private conservation area, in which revenue would flow in from tourism instead of hunting. The first safari camp in the country, Nsefu Camp, was soon running so successfully that the Chewa people from the Lundazi District wanted to have one as well, leading to the opening of the Luambe Camp in the year 1954. Parallel to the nascent tourist expansion, the Lundazi District now hosted the first international hunting safaris with four state-recognised professional hunters. In 1959 43% of the country thereby stood under some form of protection, yet only in the Luangwa Valley were there two royal conservation areas, Nsefu and Luambe, where the Chiefs allowed tourists to observe the animals for money. This protection however in no way covered all wild animals. For shooting an African wild dog at this time, for instance, a premium of two pounds was still advertised.

Among the resident population in the valley conflicts were increasing, particularly with the Bisa people in the region of Nabwalya.

Here around 5,000 people lived in the most game-rich area of the whole colony, in a hot and highly unhealthy living environment. They had always survived on game meat and opposed modern civilisation, as otherwise only the people in the permanent marshes had. This went so far, that they would hide their sick people in the bush when every few years a doctor turned up in Nabwalya. Chief Nabwalya was regarded as a permanent enemy of the conservation authority and was not prepared to accept any restrictions on hunting. So the ruling on the shooting of problem elephants, for instance, could hardly be enforced. According to the law only wildlife officers had the right to shoot elephants. The tusks had to be relayed to the boma in Mpika; the affected villagers were entitled to 400 kg of elephant meat. If a farmer took it upon himself to kill an elephant that was raiding his garden, he would have to deliver everything to the boma as a penalty, the tusks as well as all of the meat. Such unpopular laws were perceived as discriminatory and patronising, and they lent fire to the political struggle against colonial power. In this end-phase of the colonial period the British administration had practically no more control over the Africans or their shooting in the hunting areas (Game Management Areas, abbreviated to GMA). When Zambia became independent in 1964, the conservation laws remained unchanged nonetheless, because to President Kaunda, as one of the first in his time, nature conservation was an important concern. On the other hand he did not prosecute poachers particularly strictly, when they construed his election promise 'Free Zambia' as a charter for hunting.

In the 1960s the sharply increasing elephant stocks were seen as a serious threat to vegetation and other wildlife species. In 1962 in the Luambe Reserve an experimental elephant culling was carried out, and three years later the 'Luangwa Game Cropping Project' began at Mfuwe. Between 1965 and 1970, owing to damage from overgrazing and other ecological aspects, several hundred hippos and elephants respectively were culled annually, besides numerous buffaloes and



Almost unchanged to this day: Fishermen among hippos and crocodiles

impalas. Their carcasses ended up after the nocturnal actions in the 'Kakumbi Abattoir', the project's own established slaughterhouse near Mfuwe. Here the meat was processed, and later it was sold in the whole country. The project was never profitable; therefore the President put a stop to it in 1970. From then on the government concentrated once more on expansion of the infrastructure for tourism. Several camps and lodges were opened, and in 1972 the Luangwa Reserve received its upgrade to a National Park. The new South Luangwa National Park integrated the game-rich Chifungwe Plain and the royal Nsefu Sector.

THE GREAT DYING OF RHINOCEROSSES AND ELEPHANTS

Unfortunately just shortly afterwards the worldwide drop in the price of copper, on which Zambia was totally reliant, was to become the trigger for a fatal development. The country experienced a rapid economic downturn, and in the rural regions bitter poverty began to

spread. On this breeding ground ivory and rhino horn poaching now developed all over East Africa into organised crime with Mafia-style structures. Within just twelve years the entire population of black rhinos was wiped out in the Luangwa Valley, and the once immeasurably huge elephant population had become seriously endangered. From the numerous African civil war countries a mass of automatic, rapid-fire weapons flooded into Zambia, and with these the gangs carried out their ferocious butchery. In quick attacks and no-holds-barred campaigns they shot elephants and rhinos and vanished with their trophies, leaving the carcasses behind for scavengers. Those who commissioned them were unscrupulous dealers from the Far East, the valuable booty being brought out of the country with the help of Chinese railway workers and Somali tanker drivers along the Great North Road to Tanzania.

The 'National Parks and Wildlife Service' (NPWS) was far too powerless to resist this criminal superior forces; its scouts with their sports rifles were extremely poorly equipped,

underpaid and little motivated Resident Kaunda sought help from international NGOs who got involved only 15 years later though when 75% of the Zambian elephants and all of the black rhinos had already been exterminated first help came from the private Save the Rhino Trust (SRT), which Norman Carr and Phil Berry, with support from the WWF and the Wildlife Society of Zambia had founded in 1979. Their scouts patrolled on foot for 20 days each month Equipped only with hunting rifles and permitted to use them in self-defence only they were no match for the heavily armed poachers In the event of any exchange of fire there was hardly any legal basis in favour of the scouts and in the absence of radio equipment they were practically cut off from the outside world while out and about. Their effectiveness in curbing poaching was only patchy; any further action demanded much much more money materials and support from the government

By 1987 the situation had come to a head. If around 8,000 rhinos were still living in the Luangwa Valley in 1970, by 1987 their numbers had dropped to 100 scattered specimens. During the same period of time the elephant stocks had dropped from 100,000 to around 15,000, and the daily killing rate in the SLNP alone was around nine animals. So even the elephants were now in their eleventh hour. At last with international financial help, the state-run 'Luangwa Integrated Resource Development Project' (LIRDP) was established,



Norman Carr spent almost six decades in the Luangwa Valley. At the end of the 1960s he described for the first time the many baobabs damaged by starving elephants, the fibrous bark around their thick trunks tattered and half-eaten. He could not remember, on his arrival in the valley in 1938, having seen a single baobab damaged in this way and made the assertion that the elephants were no longer able to find sufficient nutritious food owing to overpopulation. For that reason, he suggested, they had in due course resorted to supplementing their diet with the very calcium-rich baobab bark.

into which the SRT, which had fought like David against Goliath, was integrated. However, the new anti-poaching units had to be assembled first, thus creating a vacuum with no scout patrols in the year 1988, which the criminal poachers exploited mercilessly. It became a year of horror with terrible, bloody butchering of animals. This one year saw the death-blow to the rhinos, and the number of surviving elephants shrank from 15,000 to just 5,000 scared individuals, of which half fled in panic into the mountains. The impoverished villagers sympathised with the poachers rather than supporting the wildlife scouts, because so far they had never really benefitted from the revenues of wildlife conservation – an error from which the nature conservationists would have to learn.

The world had paid little heed up to then to elephants and rhinos being slaughtered for piano keys, billiard balls, Arabian curved daggers and traditional medicine. Much-needed international attention, such and stricter laws might at last be initiated and a change in thinking stimulated among consumers, succeeded for the conservationists only when Richard Leakey and the Kenyan President Moi in Nairobi had a huge mountain of confiscated ivory publicly burned. Now the subject even merited inclusion on the agenda of the Convention on International Trade in Endangered Species CITES. In 1989 the international community finally made up their mind and ranked elephants at the highest level of endangered species. In Zambia and its



Wildlife scout on patrol along the Mwaleshi River

neighbouring countries to the south many were critical of the ban, even acknowledged conservationists such as Norman Carr, who represented the opinion that it was hardly beneficial for the local reputation of elephants if the poor village communities must also lose their income from the hunting safaris. It is however beyond dispute that the anti-poaching units of the LIRDP, together with the international ban of 1989, delivered the immediate, crucial turning-point in the fight for the elephants. When the international trade ban on ivory came into force in the year 1989 it finally deprived poaching of its market.

In the ten years up to 1999 between 174 and 359 patrols were carried out annually in the Lupande GMA, and elephant poaching was reduced to 6–36 animals per year (while around the same number were shot because of field-raiding). Consequently the elephant herds in the valley recovered significantly, while unfortunately in the rest of the country they continued to decrease (1994: SLNP 7197, NLNP 2200, Kafue Ecosystem approx. 10 000; in the year 1996: SLNP 7942, NLNP 3033, Kafue Ecosystem only approx. 4980 still).

Alongside these dramatic events there were also numerous animal diseases during this period, which demanded a management plan. The greatest catastrophe had already happened, starting 1896 with an outbreak of cattle plague. This dangerous disease was transmitted through physical contact or contaminated food and water. It swept through the whole of Africa from the north, carrying off around 95 % of the cloven-hoofed animals and ruminants, and did not disappear from Southern Africa until 1903. Since 2011 cattle plague has been officially deemed to be eradicated.

Another bacterial animal disease is splenic fever (anthrax, *Bacillus anthracis*), an infection through anthrax spores, which occurs repeatedly in developing countries where people and wild animals live closely together. It can be transmitted to humans only by infected animals, never person to person. In the Luangwa Valley the disease began with inexplicable deaths of hippos, which biologists attribute to stress in the animals owing to overpopulation at the Luangwa, whereby the hippos were mentally weakened and their immune



A crowd of children beside a village kiosk

system affected. In the 1990s 5,000 hippos died because of this. The latest outbreak to date in the Luangwa Valley occurred in 2011.

Finally foot and mouth disease is also a recurrent risk, because the highly contagious virus affects hooved animals such as antelopes and buffaloes, as well as cattle, sheep and goats. It is transmitted via the bodily fluids of affected animals. When there is an outbreak of the disease the authorities have to introduce protective measures immediately.

THE CURRENT SITUATION AND THE VALUABLE WORK OF THE NGOS

Even today this unique natural paradise is exposed to countless dangers. Problems with deforestation, water distribution, livestock breeding, fires and poaching are as topical as ever; furthermore due to the population growth, conflicts about the division of land are on the increase and, to the dismay of all, commercial ivory poaching is flaring up once more. Modern infrastructure measures also

represent a danger. Transit routes and railway links are to be built and the protected valley will be opened up for the transport of economic goods. Wherever new roads are constructed in Africa, population follows hot-footed and with it the deforestation of ancient woodland, which destroys animal habitats. In some areas despite of their designation as GMAs, and thus established as buffer-zones, new settlements and fields each year encroach 2 km closer to the parks' borders. In addition, because of easier transport routes, commercial poaching will expand even further.

The growing conflict between man and animal is unresolved in the Lupande GMA. While here elephants multiply, humans do so at an even greater rate. 31,722 Kunda lived in this region in 1990, by 2002 the population had grown to nearly 50,000. Beyond Mfuwe the villages in the valley are still barely accessible and poorly provided for medically. The people in the Luangwa Valley still derive around 30 % of their diet from wild fruits and game meat, so they poach for their pots using wire snares or simple sports rifles. Preventing this is one of

the wildlife scouts' main tasks. Their patrols comprise several armed scouts and bearers. They patrol on foot in the wilderness for days at a time, watching out for the smallest signs that betray poaching, e.g. footprints and tyre-tracks, ashes from a campfire, distant shots or vultures circling above a carcass. Their job used to be life-threatening, because poachers often shot scouts on sight. These days the scouts mostly find wire snares that have been laid out in the brush. Elephant poaching is punishable with a minimum of five years in prison; all the same commercial poaching with automatic rapid-fire weapons is once more on the increase. In the Lupande GMA village scouts have been used since 1997. They work hand in hand with the wildlife scouts, but are not government commissioned and therefore not allowed to arrest anybody. Nor are they armed.

Farmers who have to share their habitat with elephants experience harsh economic losses through their plundering, which they are powerlessly exposed to. Not unusually their everyday life is also beset with dangers to life and limb – just imagine the unprotected women and children on their way from home to school or fields. Every year people are killed by raging elephants. The more the population pressure increases in the Lupande GMA and the closer fields and new settlements encroach on ancient elephant trails, the more dangerous conflicts increase, and the readiness of villagers to take a sensitive approach to nature is visibly being lost. This threatens to become a vicious circle. For years a strategy has been pursued of allowing village communities to receive income from the marketing of wildlife areas, whether from agricultural products, hunting or tourism.

Colourfully painted house in Zokwe

