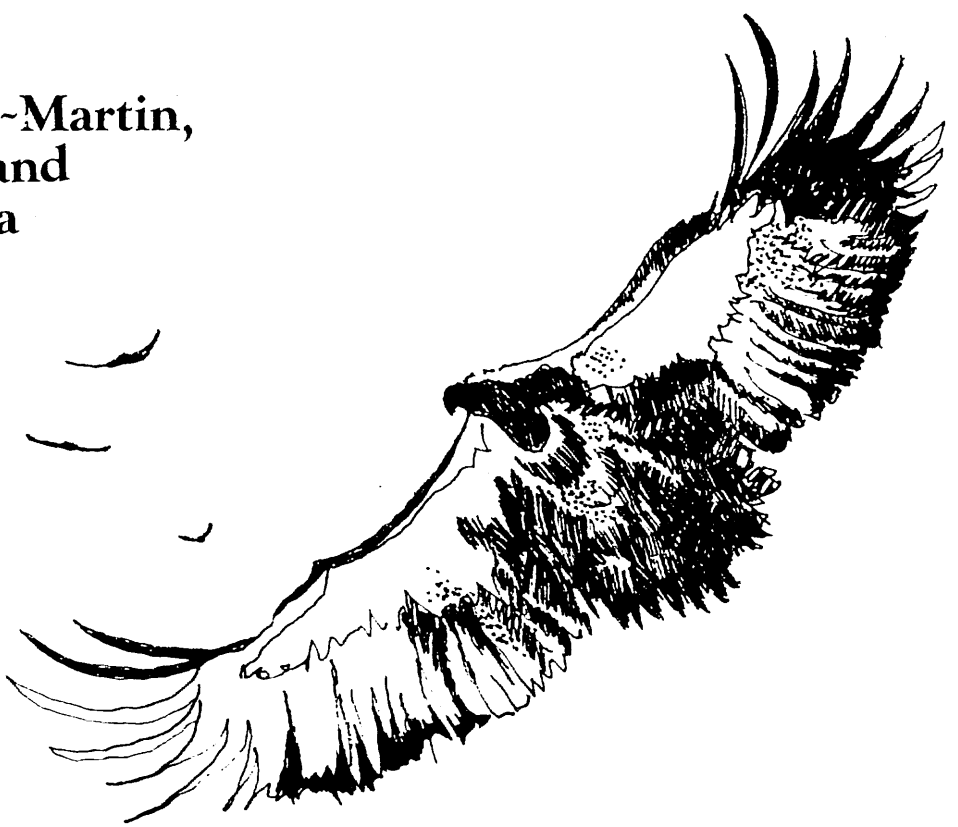
Kaokoveld

The last wilderness

Anthony Hall-Martin,
Clive Walker and
J du P Bothma



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been studied. The Kaokoveld elephants break branches like other elephants, but not nearly to the same extent as can be seen in the Kruger. They seldom fell trees as other elephants do. They also do not debark trees to the same degree as elsewhere. This care in husbanding their food resources can be seen as behaviour necessary to ensure survival in an environment where woody plants are few and far between. There is, therefore, little of the 'elephant damage' or 'elephant impact' that has been recorded from other areas to be seen in the Kaokoveld.

Because their food is so widely scattered the desert elephants are required to spend more time, and energy, on the move in search of food. Their daily movements cover about 26 km, according to Viljoen. Elephants in the Kruger, Addo or Knysna, by contrast, seldom move further than 5–10 km per day when not disturbed. The desert elephants, like most of the other mammals, birds and insects, are heavily dependent on the vegetation of the riverbeds for food. However, even in the Hoanib, where they occasionally ringbark ana trees, the percentage of elephant-damaged trees that will probably die is less than a third of the percentage of immature, established trees that are able to replace them. This is the situation now, when the elephant population is a remnant one; yet the evidence indicates that the equilibrium between elephants and trees was equally stable in the past when there were far more elephants living in the Kaokoveld.

That the desert elephants are living below the ecological carrying capacity of their environment is borne out by events during the prolonged and severe drought of 1979–82. During this time, when an estimated 80 per cent of all the wild ungulates died, not one desert elephant death was ascribed to drought. Further to the east, however, at Palmfontein, the death of five elephants of the eastern population was ascribed to the drought. These elephants are in regular contact with the Etosha population and are probably not as

attuned to the desert as are the western elephants. During this same period about 200 elephants died in Etosha from anthrax, but it is quite likely that the primary cause might have been malnutrition.

The ecological role that the Kaokoveld elephants play in their environment is considerable, but still little studied. They dig for water in the riverbeds, and during the drought many game animals, birds and insects depended on these waterholes for their survival. Seeds of a number of trees, including acacias, show considerably enhanced germination success after passing through the digestive tract of an elephant. Digestive processes break down the hard outer seed coat, which promotes moisture absorption and results in germination. The elephants eat plants like ink bush and the exotic castor oil, which are unpalatable to other animals. They also open up

time, when their numbers warrant it, they could also contribute to a viable safari hunting industry, but only when the hunting of these elephants can be sustained.

For the moment Kaokoveld elephant numbers are stable, and the birth of calves in the desert population will soon start the process of recovery. For those of the Damaraland elephants east of the veterinary fence and on the upper Huab, the future is far from certain. They clash with farming interests, and schemes to move them into the desert regions are well intended, but unrealistic. The future of the elephant in Africa is promising only in protected areas — such as the desert regions must become — and only there can they survive. Where they clash with agriculture they will be destroyed. This happened in South Africa and many other countries and conservationists will be hard put to stop the inevitable demise of such animals.

Those in the populated parts of the eastern sandveld will probably also ultimately disappear in the face of growing human populations and the need to maximise conventional and traditional livestock production. It is probably too much to hope that these elephants could also be incorporated into an integrated development and utilisation programme for all the resources of the region. Such projects are being tackled elsewhere in Africa, notably in Zimbabwe. However, the thinking in government circles in Pretoria and Windhoek is still so mired in political issues that it is most unlikely that this kind of forward-looking realism will prevail.

The black rhinoceros is undoubtedly the most critically endangered large mammal in Africa today. It has been hunted to the point of extinction in most countries where it once occurred, and at least 96 per cent of the continental population has been eliminated since 1970.

The rhino is killed for its horn, which is in great demand in the Middle East for the making of dagger handles, and in the Far East as an ingredient of traditional medicines used, in particular, by Chinese. The slaughter of black rhino has reached into the most remote parts of Kaokoland and Damaraland. It was the dramatic decline of this species, as much as

that of the elephants, that was the spur to the conservation action which has been a feature of events in the Kaokoveld in recent years.

The historical record concerning black rhino in the Kaokoveld is sporadic and incidental. Surveys by Shortridge provided the first reasonable summary of rhino distribution and habits in the territory. He found them scattered from the Ugab River to the Kunene, but nowhere east of a line from the Upper Ugab River, past Fransfontein, through Onaiso to the Kunene west of the Ruacana Falls. This range excludes most of the present-day Etosha National Park except for the western area around Otjovasandu, and indeed Shortridge commented that rhino were 'unknown in the Namutoni Game Reserve'.

Shortridge estimated a population of between 40 and 80 animals and mentioned that poaching of rhino by the Himba was already prevalent at that time. He also commented that 'the rhinoceros is the only animal in the Kaokoveld the existence of which is seriously threatened'. He identified the threat as local hunters, who shot them as they approached waterholes, and attributed the survival of a population of rhino to none other than 'a shortage of ammunition amongst the natives'. If the rhino were poached as relentlessly as claimed by Shortridge than it is likely that there were far more in the Kaokoveld than he estimated.

A comprehensive survey carried out by Dr Eugene Joubert of the Directorate of Nature Conservation in 1966 showed that black rhino were more widely distributed than Shortridge had realised. In addition to the range given in 1934, Joubert could add isolated rhino in the Erongo Mountains, a few scattered animals south of the Ugab River and isolated patches of rhino occurrence east of Fransfontein on the upper reaches of the Ugab near Outjo; and within Etosha at Gobaub and Grunewald.

Joubert was able not only to gather information from his field surveys and waterhole counts, but also to compile information on the status of rhino during the previous 20 years. This was because large areas of the Kaokoveld along the Huab and Ugab Rivers were given out as farms and settled by whites in 1948. Wêreldsend was one such farm, as was Palmwag, and others around Grootberg. On all of these farms rhino were shot by the settlers as part of the ethic of 'taming' the land (and placating nervous shepherds).

After sifting through all his data, Joubert arrived at the conclusion that at the time of Shortridge's surveys there could have been 200–250 black rhino in the Kaokoveld. The decline predicted by Shortridge had occurred and Joubert's estimate for 1966 was that there were only 90 black rhino left. Of these 25 were north of the Hoanib River and 48 occurred in what was at that time (pre-Odendaal Commission) Game Reserve No. 2 – the original Etosha National Park. (There were 8 animals in the east, and the remaining 40 were scattered from Okawao and Otjovasandu southwards in the escarpment country around the upper reaches of the Hoanib, the Uniab and the Koichab as far as Springbokwasser on the Koichab River.) Another 17 were found elsewhere in adjoining territory (Ugab River, Doros Craters, Twyfelfontein). The last-mentioned animals were not only in farming areas where there was little hope of their survival, but had also been reduced to small local populations of widely scattered individuals with little hope of regular contact and breeding.

Within Kaokoland (north of the Hoanib River) the 25 rhino were mostly concentrated in three large areas. These were in the north (Zebra to Baynes Mountains and Kunene); west (around Orupembe and Sanitatas) and in the south (around Purros). There were also a few animals at Kaoko Otavi and in the upper reaches of the Hoarusib around Otjiwero.

The proposals of the infamous Odendaal Commission to cut off the entire western part of Etosha from near Otjovasandu meant that most of the black rhino range identified by Joubert would fall outside protected areas and the survival of the black rhino was therefore in jeopardy. The Directorate of Nature Conserva-

tion, under the late Bernabe de la Bat, then launched one of the most far-sighted, successful and significant yet least-known projects ever undertaken to conserve black rhino in Africa. A total of 43 black rhino were captured and translocated to within the boundaries of Etosha (as defined by the Odendaal Commission) between 1967 and 1972 and more followed in later years to bring the total to 52 rhino moved. Had this action not been taken it is very likely that many of these animals would have been shot and Etosha today would not have one of the largest populations of black rhino in Africa.

The bulk of the capture operations were planned and carried out by the game capture team of the D.N.C., led by the late Dr Ian Hofmeyr. Many practical problems relating to drug dosages and the design of darts and needles, bomas, crates and field vehicles, were successfully overcome. These operations and later translocations within Etosha, also conducted by Ian Hofmeyr, ensured the safety of rhino in Etosha and developed for Namibia an excellent rhino capture team.

Rhino were initially moved to the Otjovasandu area and then to Ombika, a waterhole near Okaukuejo, then to Halali and finally to Namutoni. The Hofmeyr and De la Bat legacy lives on, in that the D.N.C. capture team was responsible for catching six black rhino in the Otjovasandu area in 1985 for translocation to the Augrabies Falls National Park in South Africa. Among these animals was an old bull that had been moved by Ian Hofmeyr to Etosha from Damaraland in 1970–72. In 1987 the capture team was in action again when six black rhino were translocated to the Vaalbos National Park, also in South Africa.

Garth Owen-Smith, when he published his report in 1971 on his work in the Kaokoveld from 1968 to 1970, estimated a total population of not less than 100 and possibly as many as 150 black rhino in Kaokoland, north of the Hoanib River. This was a considerably higher estimate than the figure of 25 given by Eugene Joubert in 1966, and the 30 estimated by Joubert and Peter Mostert in 1975. However, heavy poaching considerably reduced the number of rhino and in 1977 when Slang Viljoen reported on an intensive survey of Kaokoland he concluded that no more than 20 rhino were left. This was after heavy poaching in the early 1970s had taken its toll.

Viljoen also found that individual rhino were seen at localities up to 100 km apart and he argued that if the individuals were not known, it would be quite likely that an overestimate of numbers would result. He reported that rhino had disappeared from virtually all of the localities mentioned by Joubert and Owen-Smith in the Ovahimba highlands and the eastern plateau. There were also no longer any rhino along the Kunene. He reported three individual sightings of rhino in the Heowa Valley, the Steilrand Mountains (Ekoto) and east of the Joubert Mountains (Otuzemba) in 1975. Other than these, the only reports from east of the escarpment were from the Beesvlakte and areas adjoining the Etosha National Park. The rest of the rhino occurred in the western desert areas and the escarpment zone.

To the south of the Hoanib, rhino were scattered in the western plains and in the escarpment zone as far south as the Ugab, with occasional wanderers to the Skeleton Coast. The stronghold for the Damaraland rhino was the upper reaches of the Uniab and its tributaries and the western slopes and foothills of the Grootberg Mountain. The rhino reached their lowest numbers around 1982, when only 50 could be accounted for south of the Hoanib. This figure indicated that most of the previous estimates of black rhino numbers had been too conservative.

Rhino poaching, which was often coupled with elephant poaching, accelerated during the late 1970s and reached a peak of intensity during the 1980–82 drought. By then rhino were being poached in the Uniab Basin and around the Grootberg. The lowest numbers were reached during the dry season of 1981 and the summer of 1982. An intensive aerial census of the western desert region from the

Ugab to the Kunene carried out during July 1982 indicated that there were probably no more than 55 rhino left in the entire area. No rhino were seen in Kaokoland north of the Hoanib, but spoor seen from the air and later checked by ground patrols indicated that perhaps as many as five rhino were left in the western desert regions. Two were in the Nadas/Munutum area west of Orupembe, and three in the lower Hoanib/Tsuxab area. In Damaraland a total of 23 rhino were counted. This count and observations made of known animals indicated a population of about 20 animals in the Grootberg area, and as many as 30 animals in the rest of this range. The grand total for the entire Kaokoveld in 1982 was thus about 55 animals. During these aerial and ground surveys 29 rhino carcasses, most of which had been poached during the preceding three years, were recorded.

From about 1982 the influence of N.W.T.'s anti-poaching surveillance, the impact of Chris Eyre, whom the D.N.C. posted to Khorixas, increased patrolling by Rudi and Blythe Loutit from the Skeleton Coast Park and information provided by Viljoen's study began to be felt. Poaching was slowly brought under control. After the rains of February 1982, conditions for the rhino were presumably also improved — even though the drought had not affected their populaton to any great extent. Reproduction has been good; only two rhino were poached in the five-year period 1982–86, and by the end of that time the estimates of black rhino numbers, based largely on monitoring of individually known and recorded rhino, had climbed to a minimum of 60 animals.

The conservation work in the Kaokoveld was initiated by the S.A. Nature Foundation's sponsorship of Viljoen's study. The information he produced on the decline in wildlife numbers led to the involvement of the Endangered Wildlife Trust and other conservation organisations. Their efforts were then built on by the D.N.C., and the outcome has been an unqualified success. If surveillance and protection can be maintained this population should continue to show healthy recruitment. An identification file listing each of the rhino was kept by Ruth and Duncan Gilchrist and later handed over to Blythe Loutit and Martin Britz. They also measured footprints and noted small features of shape and pattern of the spoor which allowed them and their Damara trackers to identify each animal.

From these records they have compiled a reasonable understanding of the home ranges of the rhino. These are, as could be expected, much larger (up to 750 km^2) than those of rhino in high-rainfall areas like Zululand or Kruger National Park (100 km^2). By keeping records of the animals and regularly patrolling their ranges, they can detect any signs of poachers, which are then immediately followed up by the D.N.C. officers. They also record calving, and when youngsters leave their mothers; from this they will eventually build up a solid body of data on the population dynamics of these rhino.

The desert rhino are regarded as belonging to the nominate subspecies, *Diceros bicornis bicornis*, the original form described from the Cape of Good Hope by Carl Linnaeus in 1758. This opinion is based on measurements of rhino skulls from the Kaokoveld, and the historical record of black rhino distribution. Rhino were distributed continuously from the Cape up the escarpment zone to the Kunene. The original Cape rhino are known today only from records in the literature, and from seven skulls held in various museums. The skulls are considerably larger than those of any other rhino, and the closest in size to them are the black rhino of the Kaokoveld. The desert rhino also appear to be slightly larger than, for example, those from Zululand. They have larger horns and the posterior horn is usually larger, relative to the anterior horn, than it is in the rhino of Zululand or the Zambezi valley.

That these rhino can survive in areas with less than 100 mm mean annual rainfall is amazing. Normally rhino drink every night,

yet in the Kaokoveld, because they must move great distances in search of food, they may drink only every third or even fourth night. They utilise a wide range of plants for food, as recorded in Blythe Loutit's field studies over the past few years. In a study carried out in the area of the Doros Craters, in the Ugab valley, it was found that black rhino utilised 74 out of 103 plant species present.

Among the plants taken were several which contain very high levels of soluble tannins, which are normally regarded as a chemical defence mechanism by which plants avoid being eaten. (Others depend upon physical defences, such as spines and thorns.) The rhino were apparently not even deterred by the exceedingly virulent latex and formidable spines of *Euphorbia virosa*, a favourite food plant for them. The milky sap of this plant is so potent that Blythe and her co-workers reported severe skin irritations afflicting the person preparing samples for analysis.

The rhino showed a distinct preference for certain other plants as well, such as *Sterculia africana*, which was often browsed down to a stump by the rhino. Fortunately such plants recovered quickly after rains fell and put out new shoots. The rhino also fed on *Welwitschia mirabilis* plants but sometimes just chewed on the leaves and dropped them. Other plants were fed upon as and when the rhino encountered them, and yet others were avoided.

These rhino are well adapted to life in the desert; they utilise the plants and waterholes efficiently and fit into the scheme of things, unlike man and his livestock which destroy wild places. Their presence adds a dimension of awe and wonder to an environment that is singularly beautiful and that if conserved and utilised sensibly can add immeasurably to the richness of Namibia, and the attractions of its flourishing tourist industry. The Kaokoveld black rhino population is currently one of very few populations in Africa that is on the increase. But this will only last while the current vigilance and anti-poaching effort is maintained.

The Chacma baboon is the most widespread of the primates and is found scattered throughout the Kaokoveld except for the waterless regions. Baboons are more abundant in the wilderness areas and less common where dense human populations occur. Like some of the ungulates of the Kaokoveld, they undertake seasonal movements and their range increases during the wet season. During the dry season they stay closer to permanent waterholes. Like their relative, the Anubis baboon, which occurs along the southern fringes of the Sahara and in the Tibesti mountains, areas that have much in common with the more rugged parts of the Kaokoveld, these baboons are well able to cope with the arid conditions and meagre food sources.

Vervet monkeys, which are more arboreal than baboons, are able to survive only in areas of riverine thicket and trees and close to water. Consequently, vervets have not been recorded except along the upper Kunene and its tributaries east of the Baynes Mountains, and on the upper reaches of the Hoarusib east of the escarpment.

A total of 24 species of carnivores have been recorded from the Kaokoveld. In general, the numbers of the large cats that can kill livestock are much depleted. Scavengers and the smaller cats have survived in apparently viable numbers.

The Cape hunting dog or wild dog is now extinct as a resident breeding species in the Kaokoveld. Garth Owen-Smith encountered small groups in northern Kaokoland in the late 1960s, but during Viljoen's survey no signs of wild dogs were found, and the last breeding record seems to have been of a pack with twenty pups on the plains north of Warmquelle reported in 1970. It is likely that because of the open terrain and the nomadic movements of game, wild dogs in the Kaokoveld occupied very large hunting territories. Their stock-raiding activities resulted in their being

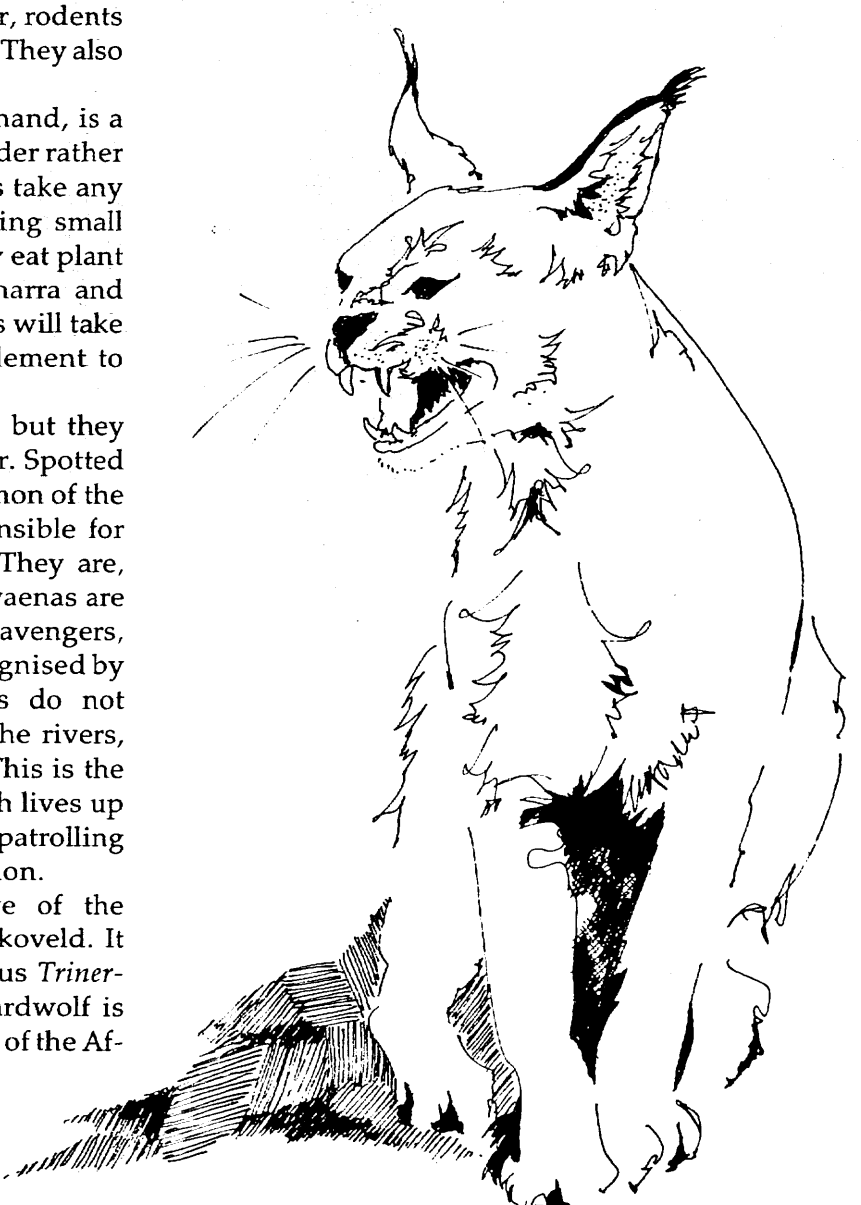
regarded as vermin, as elsewhere in Africa, and consequently they were shot whenever encountered. The elimination of stock-raiding predators, including wild dogs, was actively promoted from the mid-1950s through the issue of strychnine poison and service rifles to local headmen by the authorities.

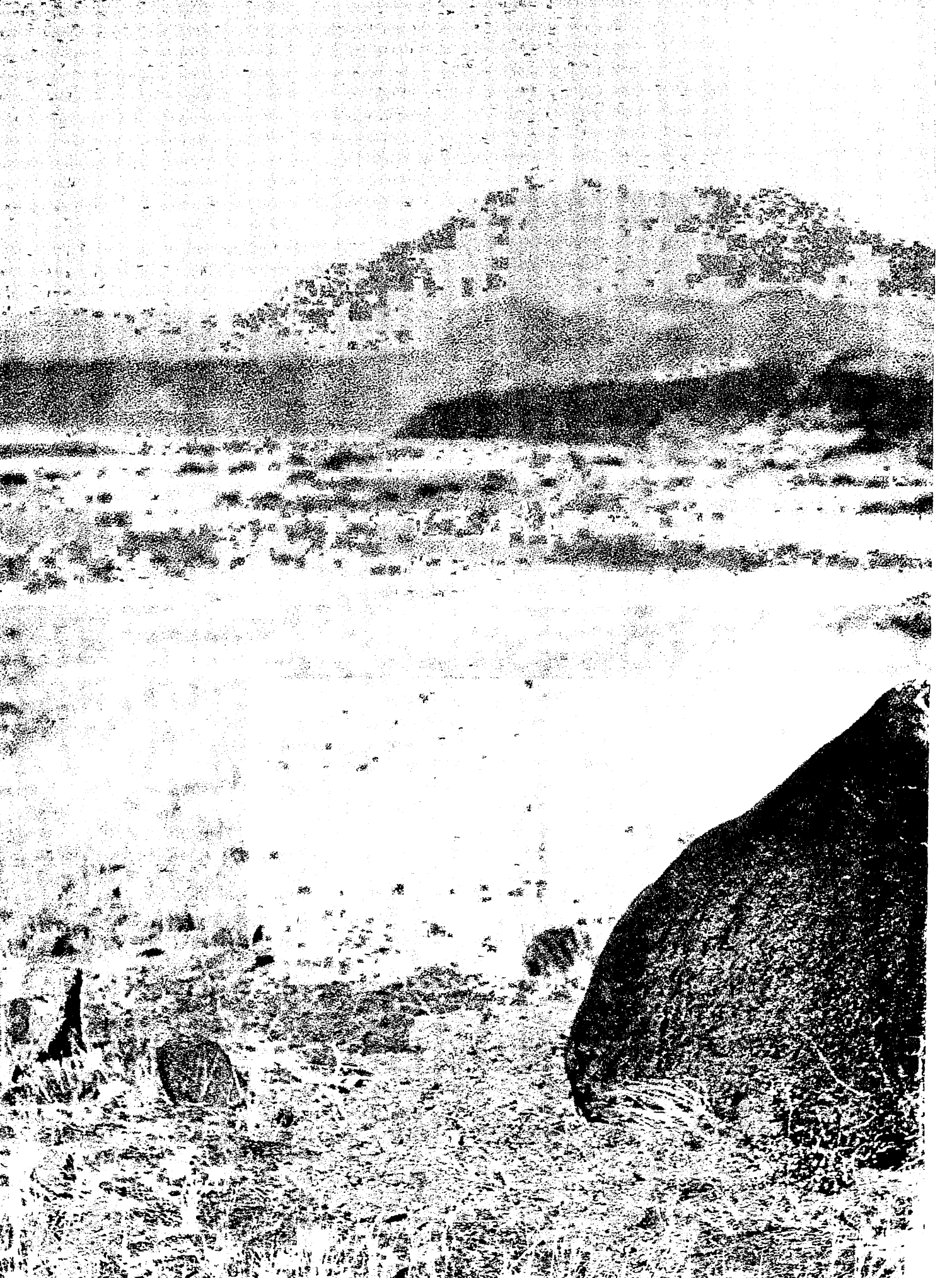
The two hyaena species are still found throughout the Kaokoveld and are able to co-exist, as they have developed very different lifestyles. The spotted hyaena is a social specialist feeder, usually hunting in packs and communicating by characteristic wailing whoops. While the prey of their choice are large mammals like gemsbok, springbok and mountain zebra, they also take smaller mammals like steenbok, klipspringer, rodents and occasionally birds like ostriches. They also scavenge large mammal carcasses.

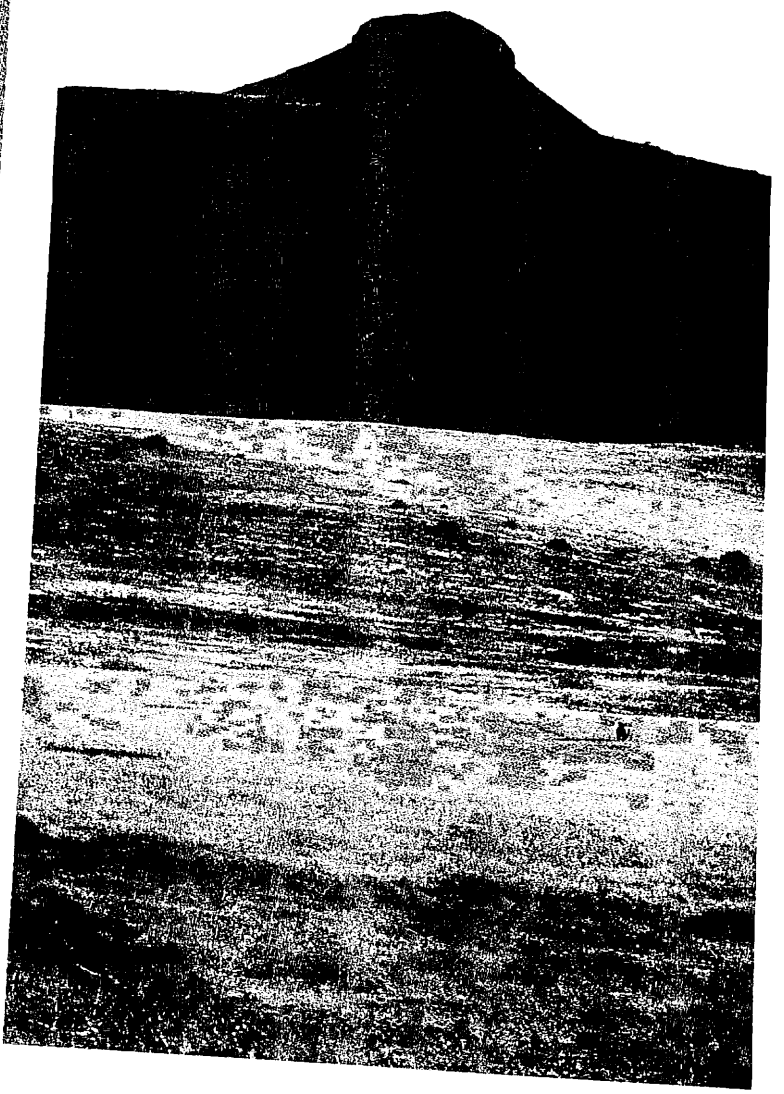
The brown hyaena, on the other hand, is a solitary scavenger and generalist feeder rather than a social hunter. Brown hyaenas take any carcasses they find as well as hunting small mammals. When times are hard they eat plant material such as the fruits of the narra and tsamma melons. Both hyaena species will take ostrich eggs as an occasional supplement to their diet.

Estimates of their numbers vary, but they appear to be in no immediate danger. Spotted hyaenas are probably the most common of the large predators and are held responsible for more stock losses than any other. They are, therefore, heavily hunted. Brown hyaenas are seldom hunted; their role as pure scavengers, at least in relation to livestock, is recognised by the local people. Spotted hyaenas do not penetrate the desert, except along the rivers, and are not found along the coast. This is the preserve of the brown hyaena, which lives up to its traditional name of *strandjut*, patrolling the beaches and seal colonies for carrion.

The aardwolf, a smaller relative of the hyaenas, is widespread in the Kaokoveld. It feeds mostly on termites of the genus *Trinervitermes*, and in this respect the aardwolf is probably the most highly specialised of the African carnivores. It is usually a solitary feeder and, like the hyaenas, is nocturnal. Studies done on this species in the Central Namib indicate some variation in the termite species taken by aardwolves, which can be related to rainfall and habitat conditions: in a dry year a higher intake of the harvester termite *(Hodotermes mossambicus)* was found. A possible indication of the relatively impoverished nature of this environment is the higher proportion of *Trinervitermes* termite soldiers to workers in the diet of Namib aardwolves when compared with aardwolves from higher rainfall areas. Though this could be a result of different defensive strategies among different







Left Polished rubbing stone reveals to the trained eye the presence of black rhinoceroses.

Above No more than a speck, a black rhino against the majestic backdrop of the escarpment foothills.

Facing page Lethal behemoth challenging the unwary intruder.

Above Supreme confidence guarding its home ground.

Left Black rhinoceros track in mud – often the only evidence Kaokoveld travellers find of this elusive herbivore.

Below Totally at home in the desert, black rhino feed on whatever may be available.

Facing page Armoured yet vulnerable, black rhino sometimes succumb to natural environmental stresses.

Above Grimace of death, but the presence of the horn shows that this rhinoceros died of natural causes rather than the poacher's bullet.

Right Timely action by the Directorate of Nature Conservation has established a reserve nucleus of Kaokoveld black rhino in Etosha.