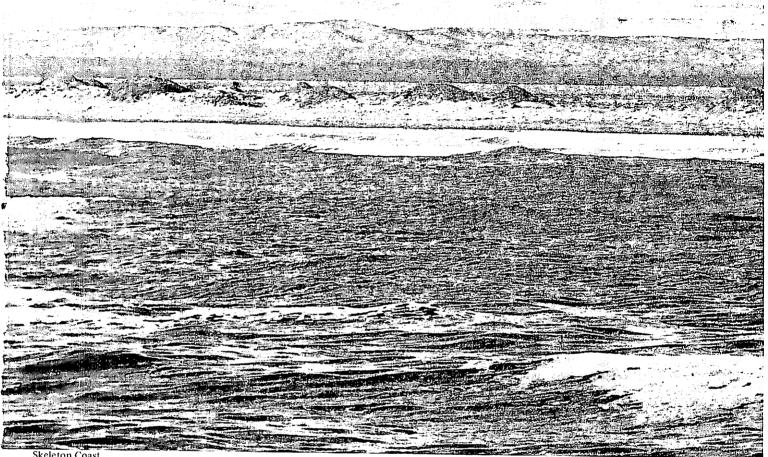
THE KAOKOVELD **LAST WILDERNESS**



A LTHOUGH Portuguese mariners had reached South West Africa by 1485, the inhospitable coastline prevented exploration of the interior for nearly 300

About the middle of the eighteenth century the first Cape settlers crossed the Orange River, and during the following years, expeditions from the south traversed the Great Namaqua Plateau and entered Damaraland. By 1850 small trade and mission stations had been established in many parts of southern and central South West Africa.

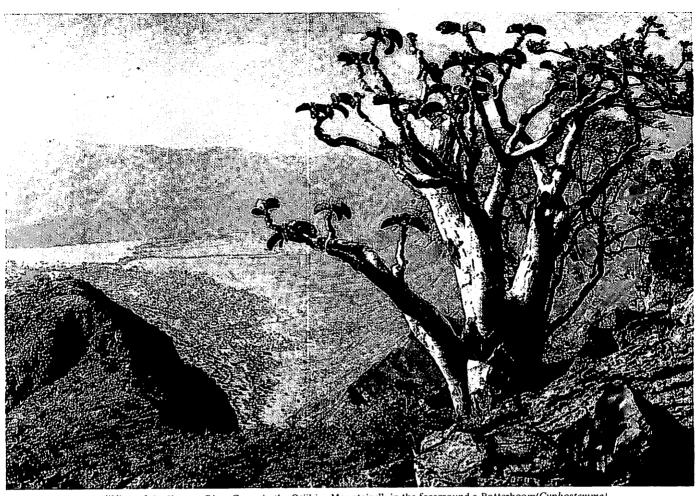
The first overland attempt to penetrate the Kaokoveld interior was made by Charles John Andersson in 1858. After trekking across the broad plains of Damaraland, Andersson entered a region of arid mountains so rugged that it barred his further progress. It was left to Hendrik Smuts, a hunter from the Cape, to be the first white man to reach Kunene River from the south, followed a few years

later by the explorers Frederick Green and Axil Eriksson.

In 1885 Germany annexed South West Africa, but the Kaokoveld was later sold to the Kaokoveld Land and Mining Company of London for £45,000. Dr. George Hartmann was commissioned by this company to explore their newly acquired territory for minerals and guano. In 1895 Hartmann set off on the first of a number of expeditions in which he was to traverse the region from east to west and also travel along the whole coast from the Kunene mouth to Swakopmund. Although he discovered no deposits of value, Hartmann produced the first map of the Kaokoveld that was based on actual observation.

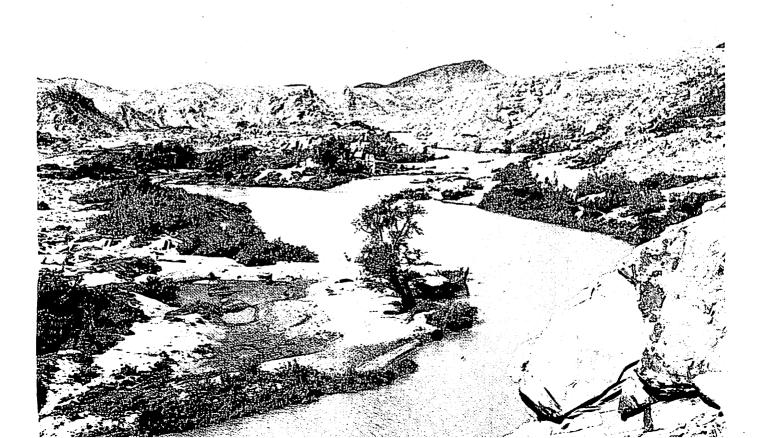
After the turn of the century, expeditions were led by Dr. Kuntz, a geologist, Maudslay Baynes, an Englishman who followed the Kunene river from Eriksson's drift to the coastal plain, and Dr. Vedder, who studied the in-

Probably no other European has known the Kaokoveld as well as Garth Owen-Smith. who spent $2\frac{1}{2}$ years there as the agricultural officer covering a 56 000 square kilometres region. In this article he pleads for an ecological plan which will give a fair place to the Africans and Wildlife of the Kaokoveld



"View of the Kunene River Gorge in the Otjihipa Mountains", in the foreground a Botterboom(Cyphostemma).

The lower Kunene, west of the Hartmannberge. The author came across both elephant and black rhino in the narrow strip of riverine bush, in this photograph.



digenous people.

In 1915, South West Africa was surrendered to the invading Union Forces, and by the Treaty of Versailles was declared a C Mandate, entrusted to South Africa.

To obtain information for the new administration, further Kaokoveld expeditions were organised by Manning, Denys Reitz and Guy Shortridge—the author of "Mammals of South West Africa." However, the remoteness and inaccessibility of the Territory left considerable areas still completely unexplored.

In 1922, the Kaokoveld was proclaimed a reserve for Chiefs Oorlog, Muhona Katiti and Kusupi and their respective tribes. The reserve was theoretically administered jointly by officials in Outjo and Ovamboland, but in actual fact, they seldom visited the area and the Africans were largely left to themselves. Six years later the Kaokoveld was also declared a game conservation area, to be known with the Etosha Game Reserve, as Game Reserve No. 2 – covering a total area of approximately 34,000 square miles.

In 1939 the first Native Commissioner for the Kaokoveld was stationed at Ohopoho, and in 1947 the Territory was officially proclaimed as African reserve.

In 1962 the Odendaal Commission was appointed to enquire into "further promoting the material and moral welfare, and social progress of the inhabitants of South West Africa, more particularly its non-white inhabitants."

The recommendations of this commission were submitted in 1964, and included the deproclamation of the Kaokoveld game conservation area, and the ceding of approximately 6,000 square miles of the Etosha Game Reserve to the Kaokoveld, Ovambo and Damara homelands. A 20-mile wide strip of Namib desert along the coast would remain as a game reserve. In effect, Game Reserve No. 2, which in 1962 covered 34,000 square miles, would be reduced to two separate reserves - the Etosha Game Park and the Skeleton Coast - with a combined area of about 14,000 square miles of which more than half is either barren desert or salt pan.

The Kaokoveld African Reserve, as it still existed in 1968, was approximately 22,000 square miles in extent. The borders were — in the north, Angola; in the east, Ovamboland; in the south, the Etosha Game Reserve; and in the west, the Atlantic ocean.

The Kaokoveld population, which in 1970 numbered about 13,000, is made up of three closely-related tribes — the Herero, Tjimba-Herero and Himba — who are all of the same stock, and speak the same language. Most of these people live in the highlands, where they graze their herds of cattle, sheep and goats.

Until 1950 the way of life in the Kaokoveld was primitive and little affected by the twentieth century — less

than a generation ago white civilization was represented by a single European official stationed at Ohopoho. In the intervening years, Ohopoho has grown into a small but firmly established town; the first mission, hospital, school and post office have been built, agricultural and veterinary services improved, and lately, large scale exploration has been started by two Rand-based mining companies.

The future promises accelerating development, and plans have already been drawn up for new towns, hospitals and dams. A hydro-electric power scheme at Rua Cana is nearing completion and construction has begun on a modern harbour on the Skeleton Coast. On the contiguous Kaokoveld and Ovamboland southern border, an extensive quarantine camp is being built that will enable livestock, previously prohibited from crossing the "red line," to be exported to markets in the south.

The effects of these developments on the Kaokoveld scene will be far-reaching. The new facilities for selling and exporting livestock will bring comparative affluence to the cattle-rich Herero and Himba people which must inevitably initiate a swing away from the tribal customs and traditions. The impact of education and a higher standard of living, will create new horizons for the younger Kaokovelders, and they can no longer be expected to accept the depredations of predators and other wild animals. The introduction of modern farming methods. which must eventually include the erection of fences, will make the presence of elephant intolerable. With the emergence of a cattle-less and therefore proteinhungry working class element in the indigenous population, the future survival of the larger wild ungulates will also be uncertain. However the most immediate threat to the wild life of the Kaokoveld will be the influx of European officials and workers and the consequent rise in poaching.

Based on the above predictions the gradual disappearance of most of the larger game animals in the Kaokoveld appears inevitable under the proposals recommended by the Odendaal Commission. But is the destruction of wild life the unavoidable price of progress?

WILDLIFE

The Kaokoveld has been proclaimed as a game conservation area since 1928, although the African inhabitants do possess firearms and are not prohibited from shooting any species. The stockowning Herero and Himba people are however little interested in game as a source of food, and the wildlife of the region is today still varied and numerous.

Elephants are found throughout the Territory, except on the desert coast, being especially plentiful along the Ovam-

boland border, on the Ovahimba highlands and in the mountains and river valleys of the west. The black rhinoceros appears to be decreasing on the plateau, but is still relatively common in the escarpment mountains and on the subdesert plains.

Amongst the predators leopard are widespread, and lion are still found in few isolated areas, mainly in the west. Lion also periodically enter the southern Kaokoveld from the adjoining Etosha Game Reserve. Cheetah and wild dog are both occasionally encountered, and both the Spotted and Brown Hyena are still common. The larger predators all prey on the native livestock to some extent, but nowhere were stock losses found to be heavy.

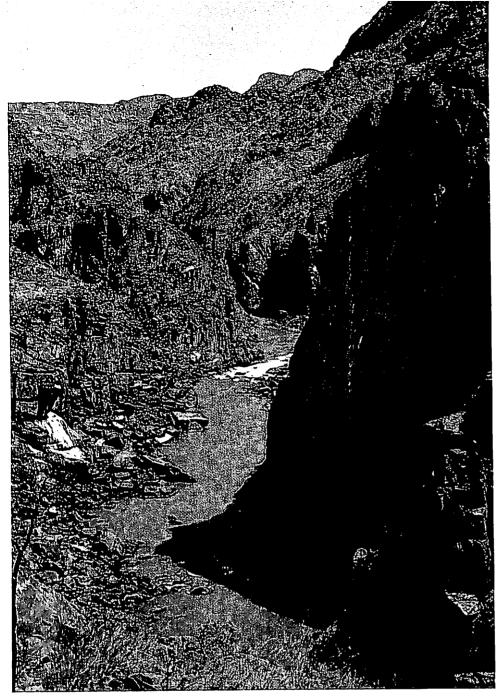
Giraffe, Burchell's and Hartmann's Zebra, kudu, gemsbok, impala, springbok, steenbok, duiker, klipspringer and dikdik are all more or less plentiful and hartebeest are occasionally seen along the eastern border.

During my 2½ years in the Kaokoveld. I found no signs of any large scale annual migration of game to and from the Etosha saline area. The evidence collected suggests a rather local seasonal cycle, with the water-dependant animals, such as elephant, zebra and kudu, concentrating in the vicinity of permanent waterholes during the dry months. In the rainy season, these animals disperse to exploit grazing in neighbouring areas where water has become available in the form of rainfilled pans and rock pools. These local movements do cross political boundaries where these have been drawn through single ecological units.

In years when the desert receives rain, large herds of springbok, gemsbok and Hartmann Zebra concentrate on the new grass, but it appears likely that these animals come from no further afield than the escarpment mountains where they are plentiful, although usually widely dispersed. It is possible that springbok may also come from the interior plateau.

In Southern Africa today the vital need for rational land-use planning cannot be over-stressed. The regional deterioration of vast tracts of the sub-continent because of incorrect or short-sighted agricultural practices can no longer be tolerated, and in future ecological considerations must receive the highest priority in all rural development planning.

The Kaokoveld can be divided naturally along a chain of rugged mountains into a relatively high interior plateau, and a series of lower-lying river valleys and plains. The average rainfall on the plateau ranges from about 100mm above the escarpment, to 400mm in the north east of the Territory. The apparent absence of many tropical stock diseases, probably attributable to the semi-arid climate, counters the generally low carrying capacity of the region, making the highlands as a whole very suitable for livestock ranging.



Traditionally the Kaokoveld Africans have not resided west of the escarpment, although it appears that in periodic dry years. Himba from the western plateau regions migrated down the river valleys onto the sub-desert plains. Here the tall perennial grasslands were utilized for a few months until rain had fallen on the highlands. Recently however, the rapidly expanding herds of the plateau Himba have caused an overflow onto the subdesert, where about 20 families have now taken up semi-permanent residence between Orupembe and the Hartmannberge. In the last few years continuous grazing and trampling, particularly in the vicinity of watering points such as Orupembe, has led to a severe degeneration of the grass cover, and exposure to wind erosion.

The present position at Sesfontein should be taken as a warning. Over the years sustained heavy grazing on the surrounding plain has reduced the whole valley to an enormous dustbowl. During the 1970 drought, the already improverished people here would undoubtedly have suffered considerable stock losses had they not been granted emergency grazing in the neighbouring Etosha Game Reserve.

Dr. Rautenbach, Secretary for Planning in the Department of Bantu Administration, has recently* stated that the purpose of planning is the optimum use of resources. What does the optimum use of resources constitute in the western Kaokoveld? Surely not conventional animal husbandry which, unless preceded by extensive ecological research, can only be regarded as regional suicide in this delicate semi-desert environment.

* Natal Mercury April 27, 1971.

Top: Gorge through the Otjihipa Mountains.

Below: Hartman's Mountain Zebra.



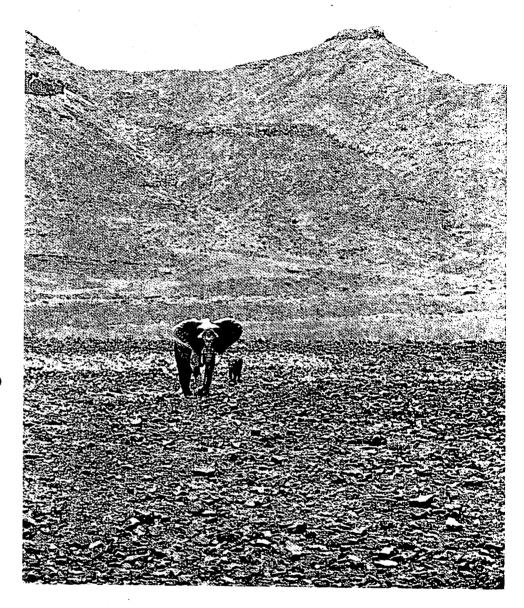
It is now generally recognised, that in a semi-desert environment, wild ungulates, because of their differential diets, the ability to forage further from watering points and their consequent better dispersal, are able to make more effective use of the available food and water resources, without damage to the habitat.

Apart from numerous endemic species of plant and lesser animal life, some unique to the western Kaokoveld, the broad plains of the sub-desert support large numbers of springbok, gemsbok and zebra, and the river courses that traverse the region are the stronghold of elephant, rhinoceros, giraffe, lion and cheetah. The ability of many of these large mammals to exist in this extremely arid environment, is of great scientific interest, and our loss will be inestimable should they pass from the scene before a proper study can be made of their ecology.

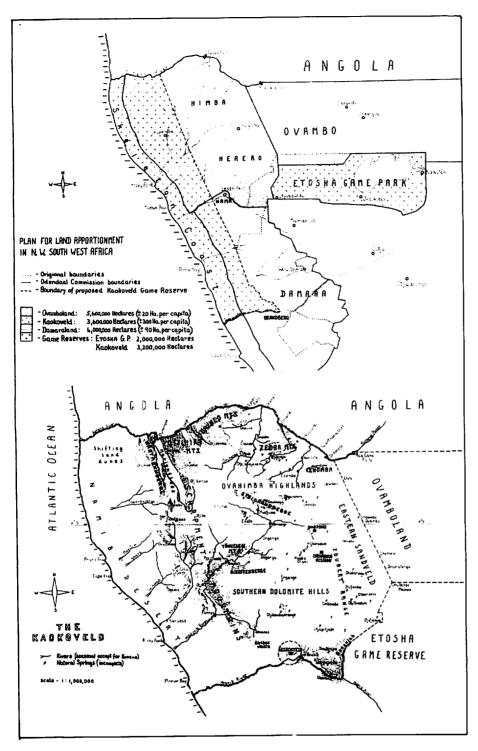
Throughout the western world the increasing pressures of urban living are creating an awareness of the essential value of the wilderness aspect to the human environment. In 1964 the National Wilderness Preservation Act was passed by the American Congress, whereby over nine million acres of wild land was protected from any development, and preserved in its natural state for future generations. Conservationists in the United States hope to have further 40 million acres approved for inclusion in a National Wilderness System by 1975.

South Africa cannot afford to disregard the growing significance of wild land, both as a cultural heritage and as a recreational necessity. Already many of our larger game reserves are showing signs

Top: Elephant cow and calf on the barren western plains. Below: Giraffe west of Orupembe. Photo by courtesy of Rosalee Morant.







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of overcrowding, and the quality of experience, derived by visitors to these areas, is decreasing as traffic congestion increases. In future, wild land will undoubtedly be a national resource of major importance. We need but remember that 17 years after the establishment of the Yellowstone National Park in America, President Paul Kruger, against much opposition, proclaimed the Sabie Game Reserve in the Transvaal lowveld. The situation today has confirmed President Kruger's wisdom and foresight.

CONCLUSIONS

Although considerable numbers of elephant, zebra, kudu, springbok and impala still survive in many areas, a realistic assessment of the position on these fertile highlands indicates that the interests of the local population must come first in any conflict of interests.

However the plains below the mountains in the western Kaokoveld are suitable for use as game reserve. The large scale introduction of livestock (or any other agricultural practices) into this sub-desert region must in the long term lead to a deterioration of the habitat and an eventual expansion of the Namib desert.

Although the escarpment mountains are seasonally used by many of the sub-desert game animals, they need not necessarily be included in the game reserve. The ruggedness of this range generally prohibits agricultural development, making it into a natural buffer zone between the inhabited highlands and a western wilderness.

The Skeleton Coast park as proposed by the Odendaal Commission, consists of barren desert and as such is unable to support any large animal life.

As no evidence was found of any large scale game migrations between Etosha Game Park and the western Kaokoveld, there is insufficient justification for a corridor across valuable ranchland to link these two regions.

The western Kaokoveld has vast potential as a recreational area and tourist attraction. The stark mountains and tawny plains offer spectacular panoramas, and with the added lure of big game the region can rival the world-renowned game areas of East Africa.

In time the potential of this area can be turned into an economic asset to the country as a whole, and particularly to people in the neighbouring homelands. However a need for a sympathetic understanding of the traditions and future requirements of the local people cannot be too heavily stressed.

Although the Herero and Himba people have in the past seldom used the sub-desert region, they regard the whole Kaokoveld as belonging to them.

In the final analysis it is only with their co-operation that the viability of



Cattle on the fertile Ovahimba highlands

Unmarried Himba youths walking through bush country in the Eastern Kaokoveld.

any game reserve in the Kaokoveld can be ensured. Conservation education is essential, and local participation must be encouraged at all levels, and a considerable portion of any future revenue derived from tourism should be channelled directly to the homelands into existing trust funds and future homeland treasuries.

The approximately 150 Himba now resident near Orupembe, do not seriously threaten the wild life, and need not immediately be moved. In the future however, these people can be persuaded to return to the more fertile highlands, by development of previously waterless areas on the western plateau.

The grasslands of the semi-desert can probably be grazed by Ovahimba cattle in occasional years of severe drought with little detrimental effect. As protected and conserved emergency grazing, they will have infinitely greater long term value to the people of the Kaokoveld.

As the situation in the western areas of the new Damara Homeland is essentially similar to that in the Kaokoveld, it should be possible to extend a game reserve southward along the semi-desert to the Ugab river — linking it with the existing Brandberg Nature Reserve.

The past twenty years have already much changed the Kaokoveld scene. Today, the inhospitable coastline and rugged mountain ranges no longer offer sanctuary to the wild life of the region, and what is preserved of this irreplaceable heritage now depends entirely on us—the present generation of South Africans, and our elected representatives. We must accept the final responsibility.

Editor's Note: This article is an abbreviated version of a more detailed paper published by the South African Journal of Science, Vol. 68 No. 2 February 1972. Mr. Owen-Smith has also published a fuller account of his ideas in a booklet called "The Kaokoveld – an Ecological Base for Future Development Planning" which is available at all public libraries in South Africa. The booklet was part-sponsored by the Natal Branch of the Wildlife Society.

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WILDLIFE COURSE

A SPECIALISED University course on wildlife capture techniques and general husbandry will be held in Pretoria from July 24 to July 28.

The course is being arranged by the Biological Group of the S.A. Veterinary Association, and the Wildlife Management Association, and will be presented at the Faculty of Veterinary Science at the University of Pretoria at Onderstepoort.

Although the course is primarily for members of the two associations anybody seriously interested in the subject can attend.

There will be more than 20 lectures by 18 experts in their respective fields. Subjects covered will include capturing techniques and the general husbandry of especially African antelope, as well as other large herbivores such as elephant, rhino, hippo, buffalo, zebra etc. and larger wild carnivores and primates. Several interesting slide and film shows will be given, and some demonstrations.

Anybody interested in attending the course should contact Dr. H. Ebedes, Secretary, SA. V.V. (Biological Group) P.O. Okaukuejo, via Outjo, South West Africa. Application forms for membership of the Wildlife Management Association can be obtained from Mr. J. Vincent, the Secretary, at P.O. Box 662, Pietermaritzburg, Natal.



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BRANCHES AT WESTVILLE, PINETOWN AND MALVERN

ANTLIONS

BY BELLE de BEER

T ALL STARTED on a February night when a large ant-lion imago with brown-spotted, yellow wings and a magnificent ruff of fluffy golden hair, flew into the kitchen.

Charlie Mhlongo, who has been in our employ for many years, captured the insect. It was, without doubt, a Myrmeleon

Palpares speciosus.

This lovely creature measured 12cm across the wings. Two large brown eyes testified to its excellent sight, and a mouth made for chewing suggested that it had been hawking for midges and other small insects round the street lights when it flew into the house by mistake. The legs were hairy and ended in a pair of sturdy claws.

"Phew! whistled Charlie, "Is first time I see dat ting here; is 'nother kind for that little one."

"Where did you see one before?"

"By my home."

"You sure it is this kind - not dragon-

fly? "

"N o o! is same for this one. Not flying in day time. Is sitting by little bit wet stones by that high wall for dam. You know that green stuff sticking on stones, like carpet — (moss)? Is sitting there all day. Is same place you finding that ting making light (glow-worms and fireflies)."

Mossy, damp places where there are stones, against a high bank. Where you find fireflies. Sometimes, Charlie says, the winged ant-lions hide in the stunted shrubs that cling to the wall.

"Not sitting on leaves; on wood (against the trunk). Like that (with tented wings). Is easy for catching; is shaking wings slowly – like ents (flying termites)"

Charlie Mhlongo is unsophisticated, observant and keenly interested in birds, animals, plants and insects. In his youth he was a herd-boy, and very little escaped his sharp eyes. He can neither read nor write, but if he had had the education he would probably have become a biologist.

He spends all his spare time in the garden, ostensibly clipping the edges of the lawn and pulling out weeds, but in reality enjoying the sunshine and watching the birds and the "wearms." This word (worms) includes all insects other than those of which he knows the English names.

Charlie's home is at Kwa-yibusele, near Greytown in Natal.

"You know you find the babies for the little ones in the sand?" I continued.

"Yes. Is sitting in the hole, like that." replied Charlie, indicating a pit with his

hands

"And the babies for this big one?" lasked hopefully.

Charlie shook his head. "I not finding that one. Where you looking for that big one?"

I sighed. "I don't know where they stay, Charlie. Nobody has found the babies yet."

"Huh?" he grunted in surprise.

Perhaps I was not being quite truthful, because there is a solitary larva of Palpares speciosus in the Museum at Cape Town; and in the Transvaal Museum in Pretoria there are two large pale green larvae ("from Umkomaas") which belong to one of the Palpares group; but whether they are P. speciosus, P. caffer, P. indemens — or one of the others, it is impossible to tell, and there are no details about how or where exactly the larvae were found.

The members of the Palpares genus are all big ant-lions, and many of them are extremely handsome. The night-flying adults are frequently caught but the larvae are rarely found.

Next morning Charlie came to me in the study.

"I'm tinking something" he announced. "Nearby the Umvoti river is very big baby for that tings. I know him. Is white. Sometimes is baby for that pretty one. You like some for looking?"

I assured him that I would certainly like some ant-lions to study.

The result of this conversation was the arrival in dribs and drabs of 38 ant-lion larvae. Some came by post, others with friends or relations returning from holiday. The insects adorned the study, in an assortment of large and small sand-filled containers for ten months on end.

The first lot were dark in colour. Charlie announced that these "black ones" were the small variety; they made pits in the dark sand round the aloes, and fed on "little black ents."

Next a battered cardboard box, oozing pale, clean river sand, came by post.

There were three ant-lions in it. One

was gorged to bursting point, the other two were sucked dry and dead.

"Oh my!" exclaimed Charlie. Nevertheless his eyes shone. "That white one is from the river."

It was pale fawn, not white, with a dark stripe down its back. It was the largest I had ever seen.

According to Charlie these "white" ant-lions make pits up to 10cm in diameter in the river sand, well back from the water and away from the "road" which the cattle take when coming to drink.

They feed on "big black biting ents" which are abundant in the vicinity.

As ant-lion larvae feed through the tips of their jaws (from which a tube-like groove extents into the throat), the mouth is permanently closed.

When the tips pierce the victim's skin, a drop of poison is injected, which not only kills it but also liquefies the soft parts of its body so that the ant-lion can suck up the "broth." It digests practically everything it swallows and thus a functional anus is not required, so it, too, is sealed.

A small quantity of waste matter accumulates in the kidney tubes, the centre portions of which are modified for the secretion of silk. This liquid is stored in an enlarged section of the hind intestine.

When the larva is ready to pupate a small opening appears in the tail and the sticky fluid is used to fasten together grains of sand, and to line the inner wall of the cocoon with silk.

The thin hairy legs are highly specialized. The two front ones extend forwards and are used to pile sand on the creature's head when excavating its pit or capturing its prey. The other legs are usually specially adapted for walking backwards, and many species of ant-lions (but not all) are quite incapable of forward movement.

All the ant-lions from Kwa-yibusele dug pits soon after their arrival. The craters were generally made an hour or two after sunset, provided the study was left in darkness.

A shrouded light enabled us to watch

The insect digs into the sand, tail first, just below the surface; then by means of backward jerks alternated with sandtossing it makes a circular furrow — the outer circumference. One or two steps backwards, then a quick upward flick of the head with neck tilted slightly to one side, and a shower of sand falls 10cm to 12cm away. As the head is lowered the nippers are brought together ready for the next load. When it has been flung aside, they open wide — this is also the normal sequence when trapping its prey. Periodically the ant-lion pauses and looks up.

Round and round he goes in evernarrowing circles, getting deeper and deeper, and the cone of sand in the centre gradually diminishes and finally disappears. Lying at the bottom of the crater he then proceeds to "polish" the sides by tossing sand right and left until the slope is fine-grained and treacherous.



