



SOUTH WEST AFRICA ADMINISTRATION

WHITE PAPER

on the

ACTIVITIES OF THE DIFFERENT BRANCHES

for

1979

## Nature Conservation and Tourism

### Introduction

Altogether 240 563 tourists visited the Administration's game reserves and resorts during 1979, in comparison to 319 785 during 1978, which was a record year. The decrease of 79 222 visitors (24, 7%) can be attributed to the political and fuel situation. These factors especially affected visitors from the R. S. Ambers decreased from 112 110 in 1978 to 55 479 in 1979, which represents a decrease of 51%. There was a decrease of 12% in visitors from S. W. A. and 6% in visitors from overseas. Previously game reserves, resorts and certain hotels were so fully booked during peak periods that publicity was unnecessary. For the first time actual publicity has become a necessity.

The following highlights and problems characterized 1979:

- The turnover of game reserves and resorts decreased from R2 668 441 in 1979, a reduction of 9%.
- The occupancy figure of hotels, guest farms and other private accommodation establishments showed an average decrease of 13, 7% (45 278) in bed occupancy and 9, 7% (23 186) in room occupancy.
- The contribution to the gross national product in Southwest Africa of the game industry exceeded R10 million, an increase of R3, 1 million and from game culling R2, 8 million.
- During 1979 the fight against game poaching was successfully sustained. In 1978 there were 115 court cases, fines amounting to R19 698 were confiscated, whilst the figure for 1979 were 164 court cases, R51 165 in fines and R45 552 worth of confiscated goods. Illegal hunting in Southwest Africa became the subject of a large controversy in the press. The figures mentioned substantiate the fact that in the areas under the jurisdiction of the Administration effective action is taken against game poaching.
- The outbreak of rabies among kudu in 1978 reached epidemic proportions during 1979 and spread from the Okahandja districts of Windhoek, Gobabis and Otjiwarongo. The Veterinary Institute of Onderstepoort has joined forces in experimental research to establish the cause of the epidemic. 27 kudus were caught and are at present being kept in quarantine for experimental purposes.
- The historic Duwisib Castle in the Maltahohe, district was purchased at an amount of R130 000. After restoration it will be open to tourists.
- The farm Sesriem where the well-known Sesriem Canyon is situated was purchased and added to the Namib-Naukluft Park, thus creating a control point for entry to Sossusvlei. A masterplan for the management of the Naukluft Mountain complex, Sossusvlei and the surrounding gravel plains was completed.
- During 1979 nine veld fires destroyed 364 000 ha grazing in Etosha. This has been the biggest loss in grazing over the last decade.

- The Department of Nature Conservation of Sri Lanka officially invited the State Veterinarian, Okaukuejo, to handle the relocation of a group of elephants. Ten elephants were drugged and transported to the Wilpattu National Park. The Sri Lankan, South African and local press gave the operation favorable publicity.
- Legislation to exercise more effective control over the sale of venison was prepared and will be finalized in 1980.
- As a result of the decrease in the number of visitors and the problems which the tourism and hotel industries have been up against, two committees of inquiry into the hotel industry as recommended by the National Advisory Council for Nature and Environmental Conservation was appointed by his Excellency the Administrator General and a committee of inquiry into tourism as recommended by the Tourism Board was appointed by the Executive Committee.  
(Tourism statistics are attached)



## Game reserves and resorts

### Etosha National Park

Despite the large area which was devastated by veld fires the grazing was sufficient. In most parts the rainfall was considerably lower than during 1978:

	1978	1979
Otjovasandu	448 mm	243 mm
Okaukuejo	471 mm	448 mm
Halali	497 mm	417 mm
Namutoni	693 mm	541 mm

Apart from 50 fountains there are five artesian wells and 63 bore-holes in the game reserve.

As a result of the recommendations of a committee which had been appointed to investigate the problems caused by the increase in the elephant population, a new type of drinking-trough equipped with a reservoir was devised to solve the problem.

The drought and the increasing number of animals at the Kaross Quarantine Camp. Several zebra and black-faced impala were caught and sold for R2 725, 00. 50 black-faced impala, 30 roan antelope, 30 kudu, 50 eland and 70 gemsboks were relocated elsewhere. 146 giraffes were driven out of the camp using a helicopter and eight rhinoceros were caught and relocated in another part of the game reserve. It was necessary to cull 498 gemsbok and 239 kudus. Part of the meat was used in the restaurant of the game reserve and the rest was sold on tender. The value of the meat was R2 875, 20.

There are now approximately 150 black rhinoceros and 100 black-faced impalas in Etosha. The future of these two rare game species is now assured in Southwest Africa.

During 1979 there were nine veld fires which destroyed approximately 364 000 ha grazing. One of the fires penetrated the reserve from Owambo while another was ignited on the northern boundary by game poachers; the remainder were caused by lightning. The veld southeast of Halali was set alight during an electrical storm at five different places simultaneously. The fire was driven on by a strong wind which made it extremely difficult to control. The fires were extinguished in the game reserve and did not reach the surrounding farms.

The final report on the research project on the population dynamics of the blue wildebeest was completed. Proposals for future management principles will be submitted to the Nature Conservation Board during 1980.



The fieldwork for the research project to determine the influence of elephants on the vegetation of the Etosha National Park was completed. When the information has been processed it will be possible to determine the carrying capacity of the game reserve. This will enable the management of the part to take the necessary decisions as regards the increasing the number of elephants. Elephants are causing considerable damage especially to the larger trees.

An air-census, during which a new method for counting game tested, was carried out. According to this census the elephant population is now 1 876 animals. The distribution areas of the elephants were also determined, and they can be sub-divided into three population groups, i.e., a western, central and eastern population.

As a result of requests by the Southwest African Agricultural Union a special unit was formed to accelerate the erection of elephant-proof fencing and the building of watering-places in the reserve.

Eleven lions were destroyed by farmers and one spotted hyena which had a trap on one of its legs were destroyed by park employees in the park. 21 hyenas were shot by farmers on border farms.

During the year four persons were charged for allegedly shooting steenbok in the park. They entered the park from Owambo. The case will be heard in 1980.

81 persons were prosecuted and twelve admonished for contraventions of the park regulations. R1 270, 00 was paid in fines.

During 1979, 41 368 people visited Etosha. Of these 11 326 were from abroad, 8 189 from the R. S. A and 18 853 from S. W. A. This represents a decrease of 56, 5% compared with the previous year. The number of visitors to Okaukuejo was 15 359, to Halali 11 014 and to Namutoni 14 995.

The turnover for the year was R802 235 as compared to R1 083 744 in 1978; a decrease of 26%.

A new water distribution network was put into commission at Okaukuejo. The gravel portion of a tarred road from the Andersson gate to Okaukuejo was almost completed.

Extensive improvements to the electricity and sewerage system at Namutoni were practically completed.

## Hardap Recreation Resort

At Hardap the poor grazing conditions and the high rate of increase of the game also necessitated decreasing the numbers. Due to the rocky nature of the northwestern part of the reserve, there is only a small area which lends itself to effective game catching. Consequently 62 hartebeest, 196 springbok, 38 gemsbok, 11 kudu and 10 elands were caught. The eland, kudu and ten of the hartebeest were donated to the Government of Bophuthatswana for the Pilanesburg Game Reserve. The remainder were sold to farmers for an amount of R8 870, 00.

In addition to the above 342 gemsbok, 245 kudu and 43 springboks were culled, and the meat was either supplied to the Division's restaurants or sold by public tender. The value of the meat was R16 578, 00.

The rainfall was intermittent with long intervals between showers, with the result that grazing was poor.

The research project on kudu in the Hardap Game Reserve which could not be proceeded with during 1978 because of lack of staff was resumed by a research officer from Rhodes University. Among other things comparisons are drawn between the Hardap kudu population and that of the Andries Vosloo Kudu Reserve in the Eastern Cape.

From January until October 8 964 fish belonging to seven different species were caught with nets in the Hardap Dam. Of these 7 686 (85, 7%) were kurper, which indicated that the catching techniques which had been developed to catch only full-grown kurper can be regarded as successful. The total mass of the kurpers was 10, 439 metric tons of which 3, 5 tons were supplied to the Division's restaurants.

Black bass were bred in the hatching dams and during the year almost 13 000 fingerlings were distributed. The current breeding season looks promising and hopefully sufficient black bass will be bred to stock the Hardap Dam.

Both the fish hatchery and the aquarium, the latter being the only one of its kind in Southwest Africa, were very popular with the tourists.

During the year there were three types of plants which caused problems at the fish hatchery, namely Dutch grass (ptamogeton), water fern (Myriophyllum) in the hatching dams and bulrush (typha) in the water canals. The degree of success of control measures varied and in 1980 measures to control these problem plants will continue.

On 29 August an explosion occurred in the machine hold of the research boat "Labeo" during a fishing operation. The explosion was probably caused by a fuel leakage. Two workers drowned and a nature conservation officer suffered burns. The boat was destroyed. This was a serious blow to the fish research program at Hardap.

Several complaints were received from the neighboring farmers regarding cheetah from the reserve which had raided their farms. Repairs to the fence were undertaken forthwith. Jackal which dug their way under the boundary fence to get onto surrounding farms were controlled by the setting of humane coyote getters at the places where they crawled through. 14 baboons which caused havoc at the rest camp and residential area were destroyed.

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There was a decrease in the number of tourists who visited the game reserves, the figures being 29 579 during 1979 as compared to 38 593 during 1978. The turnover for the year was R304 563, a decrease of 1% over 1978.

483 angling licenses were issued in the year. 30 new caravan sites and 20-day camping sites were completed.

#### Daan Viljoen Game Reserve

The grazing was poor and the area which burnt down a few years ago (1976) had still not recovered. The rainfall was 275 mm as compared to 400, 8 mm during 1978. As there was no strong downpours the dam dried up completely for the first time since the reserve was opened. This enabled the Division to remove the accumulated silt of many decades. 46 000 m<sup>3</sup> of sludge was removed by lorries and the capacity of the dam had been considerably increased.

A new sewerage system was planned for the rest-camp and tenders will be called for a scheme to purify the sewerage water in order to replenish the dam with it.

Five kudus with suspected rabies were destroyed. Seven carcasses of kudu which might also have succumbed to the disease were found in the veld.

Figures of the past year reflected a considerable decrease in the number of visitors. 39 115 people visited the reserve as compared to 55 025 during 1978. This constituted a decrease of 29%. The turnover for the year was R112 896, a decrease of 17, 4% compared to 1978.



## Waterberg Plateau Park

553 mm of rain was measured during 1979 as compared to 745 mm during 1978. The grazing on the plateau was none the less sufficient and no problems in this respect were experienced.

A research project on the plant ecology of the Waterberg Plateau Park, with the object to identify the different plant communities and to determine what factors were responsible for the different distribution patterns, progressed well.

64 eland and six kudus were caught and sold to farmers for R9 840, 00.

The first white rhinoceros' calf was seen by park employees. Tracks and droppings indicated that an additional two calves were born in the park.

Seven prefabricated houses were erected for the workers at Onjoka and the Plantage, thus alleviating the housing shortage.

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An extensive water network was completed on the plateau and an additional reservoir was erected to supply the staff complex with water.

Because of bush encroachment a fire-fighting plan was drawn up for the park and an experimental area was burnt down under supervision.

## Skeleton Coast Park

Rainfall was low and the grazing poor as usual. Permanent grazing only occurred in the river courses. The game in the park is mainly gemsbok, springbok and ostrich, lion, elephant, and rhinoceros occasionally appeared in the rivers of the park.

#### Terrace Bay

Terrace Bay is becoming increasingly popular and was fully booked during school holidays and over long weekends. The average bungalow occupation for the year was 59, 2%. Of the 2 466 visitors who spent the night there, 25, 8% came from the Republic, 68, 5% from Southwest Africa and 5, 7% from abroad.

The turnover for 1979 was R191 072 as compared to R115 208 for 1978, which is an increase of 66%.

A play park for children was erected. An area for cleaning fish was made available and this contributed a lot to prevent pollution.

A saltwater aquarium was developed and installed. This is part of a museum which will depict that section of Southwest Africa's coast and the adjacent interior.

The aero plane hangar was repaired but it is used very seldom. Two new pump-houses were erected in the Unjab River, 30 km of pipeline was laid and reservoir for Terrace Bay's water supply was built.

#### Torra Bay

591 people camped at Torra Bay during 1979 as compared to 1 834 during the previous year. This reflects a decrease of 68%.

#### The Wilderness Area

The concessionaire for the wilderness area of the park took 205 tourists on sightseeing tours during the year. Most of these tourists came from Germany.

#### Van Bach Recreation Resort

Because of the relatively low animal population, there was sufficient grass during the year. Kudu, however, suffered later in the year because the bushes in the park are of a limited variety. The rainfall measured during the year was 99 mm, this being a

particularly low figure as the average rainfall of that area is in the region of 250 mm per year.

Cattle which were herded into the park from bordering areas via the mats in the river courses periodically gave rise to problems. Illegal hunters used the same route to enter the reserve with their dogs.

Towards the end of 1979 the water level of the dam dropped to 43% of its capacity with the result that several tree trunks and rocks had surfaced thereby constituting a danger to boats on the dam. These spots were marked with buoys. The banks of the dam were thoroughly cleaned for visitors and aquatic sport enthusiasts.

The game drank water from the dam because there were no drinking troughs. As an experiment members of the public were allowed to hunt a number of kudu under supervision during the hunting season. The operation went off relatively smoothly. 16 animals were shot for which R740, 00 was paid.

Rabies also occurred and the carcasses of 138 kudu were found.

11 616 people visited the resort during the year. There were 636 boats on the dam as compared to 682 in the previous year. This is a decrease of 7%.

The new entrance gate, office complex and day camping area were completed, and this gave the resort a new look.

#### Gross-Barmen Hot springs

19 881 people visited the resort in comparison to 20 334 the previous year. Day visitors increased by 8% compared to 1978 while overnight visitors decreased with 6%. The turnover increased with 7, 2%.

A tenniquoits court was added to the recreational facilities and a plastic runner was laid around the thermal bath to prevent bathers from slipping and injuring themselves. Two persons were charged for contraventions and fined R110, 00. Six persons were warned.

#### Namib-Naukluft Park

The game reserve was finalized with the purchase during the year of 156 906 ha of farmland. By so doing a migratory route to the gravel plains at the Naukluft mountain complex was created so that in times of drought especially gemsbok can move from the sand-dunes of the Sperrgebiet without causing disruption on farming areas.

A portion of the farm Sesriem on which the well-known Sesriem Canyon is situated as well as the farm buildings were also purchased. The latter was converted into a control point and a camping site for visitors to the canyon and Sossusvlei.

As far as area is concerned the Namib-Naukluft Park is now the biggest game reserve in the Territory. It measures 2 340 150 ha as compared to the Etosha National Park which has an area of 2 227 000 ha. Included in the Park area are marine park section at Sandvis which extends for 1, 61 km into the sea, the Swakop and Kuiseb Rivers, the Welwitschia Plain, gravel plains, sand-dunes, Sossus and Tsondab Vleis and the Naukluft Mountain complex. The Namib Research Institute at Gobabeb is also situated in the park.

According to the latest game counts there are at least 5 198 mountain zebra, 4 896 gemsbok, 3 383 springbok and 1 705 ostriches in the park. In addition, there are also kudu, klipspringer, baboon, hyaena, leopard, the smaller animal species and a large variety of birds, among others the lappet-faced vulture which has their main breeding place there.

Generally, the rainfall was below average and in certain areas there are signs of over-grazing. A professional officer was stationed in the park permanently to attend to these problems.

The eastern boundary of the park was partially jackal-proofed, while the southern boundary fence which borders on farmlands will be completed early in 1980.

33 persons were charged and 24 were warned for minor contraventions such as the possession of mall mussels, an over-supply of bait etc. The fines amounted to R2 020, 00. As evidence in outstanding court cases, 66 mountain zebra, 22 ostrich and one black-faced impala skins were confiscated. Three elephant tusks, eleven rhinoceros' horns and air-gun were also part of the evidence. The estimated value of the confiscated goods was R9 210, 00.

#### Namib Desert Section

The competition for grazing and pods between the livestock of the Topnaar and the game in the Kuiseb become more intense as the Topnaar were unable to dispose of their surplus animals. The situation was aggravated by squatters who also settled in the riverbed with their livestock. Over- grazing by animals of small holders in the Swakop River caused increasing problems on the northern boundary of the park. The situation is past present under discussion at high level.

Because of the high alkalinity of the water in the desert all the zinc reservoirs became rusted within a few years. The reservoirs were lined out with brick and mortar and were covered with roofing so that birds cannot fall into the water.

The road along the river from Goanikontes to the Welwitschia Plain was graded as requested by safari companies. The landing strip at the Welwitschia Plain was tied up and the toilet and picnic facilities were completed.

Altogether 6 794 people visited the Namib Desert section of the park in comparison to 8 985 the previous year.

There was an increase of 460 (38, 3%) in the number of visitors from abroad while the visitors from the R. S. A. decreased by 1 774 (45, 4%). There was also a decrease of 387 (10%) in the number of visitors from S. W. A.

#### Sandvis

There was a decrease of 27% in the number of visitors. A number of seals were noticed in the vicinity, and it might well be that they are establishing a new seal colony there.

#### Sossusvlei

Altogether 1 011 people visited the vlei during 1979 as compared to 1 406 people during 1978. Ordinary vehicles are now permitted to drive within 3 km of the vlei. Entry is now controlled from Sesriem.

#### Sesriem

During the last six months of the year, after Sesriem was taken over by the Administration, 512 people visited the Sesriem Canyon.

#### Fish River Canyon and Ai-Ais Hot Springs

16 383 people signed the visitors book at the main look-out point at the Canyon. This is a decrease of 23, 4% as compared with the previous year.

The 122 groups which hiked through the Canyon consisted of 1 378 people. This represented an increase of 37, 8% as compared with 1978. These hiking trips are becoming increasingly popular. At the same time pollution in the canyon is increasing. Vandalism is also increasing, especially at the main look-out point where the rubbish bins and notice boards were shot at with rifles.

During 1979 10 484 tourists visited Ai-Ais. Of these 7 537 came from the Republic, 744 from abroad and 2 203 from Southwest Africa. This represented a decrease of 7 325 (41%) as compared to the figures of the previous year. The turnover for the year was R240 750 as compared to R275 367 of the previous year.

Unlike previous years there was only one car crash on the road to the Canyon. One of the passengers sustained serious back injuries.

Five of the private baths were converted into showers for the use of people hiring the flats. The Power station was improved, and two generators were replaced by new ones.

Contraventions increased. Several people were charged and fines amounting to R800, 00 were levied. 15% persons were warned.

#### National West Coast Tourist Recreation Area

##### Swakopmund

Although the bungalows were always popular there was a decrease of 11% in the number of visitors as compared to the 1978 figures. The average occupancy figure during the year was 43, 6%. During holiday periods and long weekends, it was 95%. The swimming pool was visited by 57 152 people and the need for swimming instruction increased. There was nevertheless a decrease of 14, 9% in the number of visitors as compared to the previous year. A linen store was built, as well as a freezing-chamber which will be completed early in 1980.

The reception apartment was also improved and renovated.

##### Mile 4 Caravan Park

5 710 people visited the caravan park as compared to 7 927 of the previous year.

A new playpark with wooden play-park equipment was erected. Due to the increase in fuel prices less people were inclined to tow caravans.

##### Mile 14 Caravan Park

Visitors to this overnight camping area decreased by 1% as compared to the previous year.



## Jakkalsputz

The number of people who visited the camping area increased by 11% as compared to 1978.

## Mile 72

The number of visitors increased by 7% and the turnover increased by 31%.

## Cape Cross

8 089 tourists visited thereal colony. Of these 2 036 came from the Republic and 1 121 from abroad. This represents a decrease of 11%.

## Mile 108

The overnight camping area was put into commission during December 1978. In the course of 1979 1 130 people made use of facilities.

## Henties Bay

Visitors to Henties Bay decrease by 16%. The turnover of R26 076, 00 was an increase of 4, 1% over the previous year.

## Lüderitz

The 4 601 tourists who visited Lüderitz during the year represented a decrease of 1 375 (23%) over the previous year.

Requests by the Division that commercial lobster catching boats in the Diamond Coast Recreational Area be discontinued and that the season for catching lobster be extended to include December in order to benefit visitors over that period were successful. This was a positive step to make the area more attractive for visitors.

The planning for the infra-structure of a rest-camp on Shark Island was completed and tenders will be invited shortly. The planning for the restoration of the old lighthouse to accommodate tourists was also completed and the work will be done departmentally by the Division of Works within the near future.

The turnover for the rest-camp and restaurant was R87 769 as compared to R89 893 of the previous year.

## Tourist office

A larger computer was installed by the Administration with the result that reservations can now be handled with speed and efficiency by the reservations office. In the year 26 050 applications for reservations were handled, which represented a total number of 240 563 visitors to the game reserves and resorts. An amount of R639 471, 00 was earned in respect of reserved accommodation.

## Nature Conservation

The hides, tusks and horns which served as evidence in cases which were heard together with evidence of cases which still had to be heard consisted of 558 zebra, 9 gemsbok, 13 kudu, 2 hartebeest, 103 ostrich, 2 giraffe and 10 springbok hides, as well as 48 elephant tusks and 43 rhinoceros' horns. The value hereof was R41 240, 00.

## Otjiwarongo Regional Office

64 cases were taken to court, of which five were still pending. 79 persons were found guilty and sentenced to fines amounting to R27 115, 00, and articles to the value of R1 600, 00 were confiscated.

Poaching on the roads at night was still one of the more problematic aspects of law application. Some of the poachers sell the meat, which affords them a considerable income. Not only game but also cattle, sheep and goats were looted.

It is impossible to estimate the value of the game which is poached annually. There is a number of game reasons for this. Farmers frequently refrain from reporting incidents because they assume that tracking the poachers down will not be successful; the slaughtering-places of animals which have been shot along the roads are animals which have been shot along roads are seldomly found. The Division has on record that 67 kudu, 28 gemsbok, 19 warthogs, 48 springbok, 3 roan antelope and an impala were illegally hunted in the area which falls under the jurisdiction of the Administration. The market value of this game was R13 440, 00. The true value was much higher. If the number of animals of which the skins, tusks and horns were confiscated are taken into consideration, (these animals were in all probability killed in the northern areas, in which case it was illegal) the Territory lost at least R152 000, 00 in respect of game poaching.

In the Otjiwarongo region a coyote getter course for farmers which was attended by 15 people was presented. Ten lectures were given at meetings of farmers and associations.

Altogether 1 033 people attended these meetings. 62 farms were visited to render assistance or to give advice and instructions.

#### Windhoek Regional Office

59 cases were set for trial, of which eight were still pending.

Of the 51 cases that were heard, 63 persons were sentenced to altogether R18 960, 00. 472 zebra and 81 ostrich skins were confiscated, as well as 45 elephant tusks and 32 rhinoceros' horns. The estimated value of these were R33 662, 00.

A course in the use of jackal canons was presented and was attended by 14 people. A coyote getter course was presented and twelve people qualified. Talks were given at nine farmer's meetings which involved 358 people.

95 farms were visited where advice and instructions were given to the owners.

41 hunting farms were inspected for registration purposes and 37 hunting guides, and 14 professional hunters were tested. 17 marksmen for night harvesting and 47 prospective light operators were tested. The premises and registers of 22 traders in game skins as well as six traders in live game were inspected.

#### Keetmanshoop Regional Office

Seven cases were set for trial of which three will be heard during 1980. The accused in the four cases dealt with were sentenced to pay fines amounting to R3 050, 00. Three rifles, two telescopes and various other items were confiscated. The value of the confiscated goods was R1 080, 00. The articles confiscated as evidence for the other three cases comprised seven rifles. A few zebra hides, ammunition and approximately 120 kg of biltong. The game involved were 26 springbok, 6 gemsbok, 3 steenbok, 5 kudu and 6 ostriches.

Two courses in the use of coyote getters were presented and were attended by 27 people. 15 lectures and talks were given at meetings of farmers, schools and the S. A. Defense Force. These were attended by 2 287 people.

#### Game and Game Products

##### Trophy hunting

Prices of trophies increased on average by 10% as compared to those of 1978. Prices for accommodation, transport and other services varied from R50, 00 to R250, 00 per day

and visits varied in length from five to 30 days. The average prices for trophies were as follows:

Kudu	R 110	Gemsbok	R105
Springbok	R 80	Warthog	R 60
Duiker	R 55	Impala	R 100
Hartebeest	R 160	Eland	R 300
Blue wildebeest	R 200	White rhinoceros	R 3 000
Zebra	R 250	Steenbok	R 55
Ostrich	R 90	Blesbok	R 120

Because the farmer usually kept the meat, the prices were satisfactory.

The following animals were shot by trophy hunters, and the trophies were exported:

Kudu	537	Gemsbok	958
Springbok	963	Warthog	1 421
Duiker	102	Eland	109
Hartebeest	688	Impala	36
Blue wildebeest	22	White rhinoceros	1
Zebra	369	Steenbok	321
Ostrich	44	Blesbok	80

The number of hunting farms, professional hunters and hunting guides increased considerably this year. The number of trophy hunters increased by 350 compared to 1978. There were however a number of trophy hunters who hunted illegally on the farms. The farmers exported their trophies in these cases ostensibly as presents.

The following list is a summary of the number of games presented as gifts during the past two years:

	1978		1979	
Kudu	80		258	
Gemsbok	64		167	
Springbok	68		152	
Warthog	48	teeth	172	teeth
Steenbok			12	
Duiker			2	
Eland	2		13	
Hartebeest	6		30	
Impala	2		5	

Blue wildebeest		7
Zebra	9	26
Blesbok		5
Ostrich	2	

The above figures by no means represent a picture of illegal hunting, because a considerable number were bonafide gifts. It is impossible to determine the exact magnitude of illegal trophy hunting. Steps are considered to remedy the situation.

Exports of horns to the R. S. A. were:

Duiker	4	Hartebeest	10
Blesbok	1	Eland	11
Kudu	277	Steenbok	1
Springbok	77	Warthog	3

Protected and specially protected game

Permission to shoot protected or specifically protected game so as to conserve grazing, to maintain the correct sex ratio or to protect live-stock and property was given for the following number of games:

Zebra	951	Duiker	21
Hartebeest	541	Blue wildebeest	2
Ostrich	1 337	Steenbok	1
Eland	580	Giraffe	30
Cheetah	1		

In most cases the game meat was utilised by the farmers themselves, who sold a large percentage to biltong factories and other concerns. The value of the meat of these animals was R288 300, 00.

The following game skins were exported:

Cheetah	297	Other cats	723
Leopard	292	Hartebeest	936
Python	19	Giraffe	38
Ostrich	1 661	Blue wildebeest	108
Aardwolf	2	Steenbok	3
Eland	129	Lion	24
Kudu	9 772	Duiker	12

Zebra	1 608	Black-backed jackal	2 298
Gemsbok	2 554	Springbok	37 927
Lynx	2 868		

Apart from these 372 warthog teeth were exported. The number of zebras, ostrich and other skins which were confiscated and sold on tender, are included in the above figures. The value of these skins was R597 367, 00.

The prices of problem animal skins rose steeply and on 16 November the skins of black-backed jackal were fetching from R15, 00 to R27, 00, whereas the prices of lynx skins varied between R4, 50 and R11, 35. Cape wild cat skins reached R11, 00 and genet skins R7, 00 at the London auction.

### Game harvesting

It is difficult to estimate the number of game shot by biltong hunters, and the figures hereunder only represented the value of the carcasses which were exported to the R. S. A. Under permits. This should not be considered as entirely correct, since many hunters only export raw meat or Biltong. Permits were not required for this. Permits were only required when skins and/or horns were exported, and only these animals were brought into account. There was no record of game shot by resident biltong hunters of Southwest Africa, and the calculated figure of R72 500, 00 should in all probability be a lot higher.

During game culling at night the following animals were shot:

43 665 springbok, 3 547 kudu and 3 020 gemsboks.

The total mass of the animals was 1 473 004 kg and the gross income for the Territory from this was R2 756 741, 00.

The following animals were shot by farmers themselves during the day and then sold:

Kudu	1 528	Hartebeest	615
Eland	47	Gemsbok	1 460
Springbok	1 205		

The gross value of these animals was R422 660, 00.

### Live game

The demand for live game remained high, locally as well as abroad. The following animals were exported abroad:



Blesbok	1	Tortoise	100
Black-backed jackal	2	Rock-rabbit	9
Kudu	13	Suricate	45
Lynx	24	Porcupine	4
Hyena	4	Hartebeest	14
Iguana	7	Leopard	2
Scaly anteater	2	Impala	2
African ant-bear	2	Zebra	4
Cheetah	114	Genet	1
Giraffe	2	Cape hunting-dog	16

The gross value of these was R226 228, 00.

Game exported by farmers and game dealers to the R. S. A. Was as follows:

Eland	209	Lynx	5	
Cheetah	29	Mountain zebra		121
Giraffe	15	Suricate	6	
Burchell's zebra		Gemsbok		415
Ostrich	10	Kudu	165	
Hartebeest	306	Tortoise	2	
Leopard	1	Springbok	326	

The gross income from these animals was R604 100, 00.

Instead of slaughtering their own stock for their employees, several farmers supply them with game meat as part of their rations.

An estimated 10% of these skins never reach the market. In order to calculate how many game farmers shot for their own use, the number of marketed game skins of hunt able game was used, and the average value calculated at current market prices. Game which was shot under permit to conserve grazing was left out, as the value thereof was accounted for elsewhere. The calculated value of game, which was shot for own use, was R2 014 520, 00.

The gross turnover of game for 1979 amounted to the following:

Income from hunting for trophies	R 4 067 250, 00
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Trophy licenses	R 36 975, 00
Game shot and sold by farmers	R 422 660, 00
Gross income from culling at night	R 2 756 741, 00
Game shot by the Division	R 41 453, 00
Game shot by farmers for their own use	R 2 014 520, 00
Hunting for remuneration (trophies excluded)	R 72 500, 00
Hunting for conservation of grazing	R 288 300, 00
Export of game skins	R 597 367, 00
Levy on game skins	R 10 872, 00
Live game exported abroad	R 226 228, 00
Live game exported to the R. S. A	R 604 100, 00
Live game sold by the Administration	R 28 640, 00
Export of horns by culling teams and traders	R 13 124, 00
Hunting at the von Bach Recreation Resort	R 740, 00
Estimated value of poached game	R 13 440, 00
	R11 194 910, 00

## Research

### Research projects

The project on the population dynamics, behavior, and ecology of the blue wildebeest in Etosha was completed and a final report will be submitted soon.

Of the different aspects which were examined the following emerged at this stage:

- (i) The blue wildebeest of Etosha spends 53% of its time resting, 33% grazing, 12% moving around, 1 – 1 ½% on social behavior and less than 0, 5% drinking water and sucking its young.
- (ii) The digestibility to the blue wildebeest of Etosha's grass is 53, 5%, which falls in the acceptable limits.
- (iii) When the critical factors i.e. the quality of the food, the moisture content of the food and the availability of drinking water are taken into consideration, it becomes clear that Etosha's blue wildebeest has ideal circumstances for four months of the year (January to April). For the remaining eight months they find it increasingly difficult to find high quality food because of the limited supply of permanent water. During years with average or above average rainfall, food is therefore no problem but in a dry season a critical food shortage might develop for the wildebeest.

- (iv) Regarding diseases and parasites anthrax is one of the main reasons for the decrease in numbers and continued research is essential. Gedoelstiase and infectious pustulary vulvovaginitis (IPV) are potentially dangerous but is no problem yet.

It is doubtful whether the blue wildebeest numbers will return to what they previously were mainly due to changed circumstances. Management, therefore, must have as an objective the maintaining of present numbers.

The project on the population dynamics, behavior, and ecology of the elephant in the Etosha National Park was progressing well. A plant surveying technique was developed to determine the effect of the elephants on the tree stratum of all the veld types of Etosha. It emerged from the survey that mopane trees recover relatively quickly and that mopane trees recover relatively quickly and that the damage to *Terminalia prunioides* is small. These two species are the main components of the tree stratum of Etosha.

In addition, an aerial census testing a new counting method was done. According to this the elephant population of Etosha mounted to 1876. The distribution areas of the elephants were determined, and these can be divided into three sub-populations, namely a western, central and eastern population.

Seasonal distribution maps were compiled, and it appeared that the elephants' movements were simply a concentration around permanent waters during the dry period and a scattered permanent water during the wet period when veld water was available. The floristic composition of each plant community was determined as well as the eating habitats and food preferences. It emerged from this that it was only during the warm dry season that tress played an important role in the diet and that grass was the most important ingredient of the diet during the warm and wet season. This information will be used to determine the carrying of the game reserve as regards elephants.

The monitoring of the availability, quality, and utilization of the grazing on the gravel plains and dunes of the Kuiseb study area as part of the Kuiseb River Environmental Project was progressing well. The percentage of the basal covering decreases in plant frequency and utilization surveys were determined. The yield was determined. The processing of these particulars will be used to determine the carrying capacity of the game reserve. A yearly rainfall distribution maps were drawn up. Chemical analyses of the grazing and the ground were done, and the ground moisture was monitored on a monthly basis.

A fair amount of work was done on the promotion of the economical exploitation of the rock-rabbit. In cooperation with Organized Agriculture a trial consignment of 346 skins was sent to fur markets abroad, in conjunction with similar concerns in the R. S. A. which had also sent off trial consignments. The export levy on raw skins was lifted. After it has been proved that there is a market for the skins, effective culling methods will be examined.

The planning of a project for the relocation of Cape hunting-dogs in the game reserves of northern Southwest Africa was started with in 1979 but was postponed due to other priorities.

The field work of the research project on the problem of kudu on roads was completed during the year. The information is at present being processed with a view to preparing a final report. Several interesting conclusions have already been drawn namely that reflectors are of no value in controlling the kudu, that the incidences of collisions with kudu on the roads do not follow the same seasonal pattern but have a cycle of its own.

An experiment, which was the first of its kind, using a helicopter to control the black-backed jackal was planned in cooperation with the Karasburg District Agricultural Union and partially concluded. The experiment had economical implications in that the cost of controlling jackal with a helicopter was compared to the cost of controlling them with coyote getters. The experiment will be completed during 1980.

The project for monitoring of changes in the vegetation composition and the utilization of grazing at the Waterberg Plateau Park was continued and ten additional measuring points in the rock community were added. The yield of phase of the grass stratum is determined twice a year. The computer phase of this project was progressing well and it was only the data on the utilization of shrubs that still needed to be processed.

Initial steps were taken in the testing of fires on the Waterberg Plateau to determine the influence of fires on the vegetation as well as to determine whether controlled burning could be used as part of game reserve management.

The research project on birds of the coastal area was completed and some of the results will be prepared for publication.

Further research was concerned with vulture biology and 20 lappet-faced vulture chicks were ringed in the Namib-Naukluft Park. Several ringed birds of previous years were observed by officials in the park.

During the year, the regulations regarding caged birds were reviewed. The large increase in applications from licensed game traders to catch birds was cause for concern.

The drug R33 799 was tested on kudu for the first time with favorable results and a safe and effective dose of the drug was finally determined for black rhinoceros. It was also found that R33 799 was critical for giraffe and should therefore not be used on these animals.

Experiments with tranquilizers with long-working effects were continued on black-faced impala and the side effects that often follow tranquillization were effectively controlled with an antidote.

In cooperation with the Division of Veterinary services (Directorate of Agriculture and Forestry) and the Research Institute for Veterinary Science, Onderstepoort, a comprehensive examination was done of the blue wildebeest syndrome in Etosha, and the results will be published.

Of the total number of deaths which were observed in Etosha, 17, 5% were caused by anthrax. The most serious outbreak was in the Okaukuejo area. There were no incidents in the Halali and Andoni areas. It seems that the occurrence of anthrax in the Namutoni area is increasing.

The assistance of the state veteran, Okaukuejo, was officially requested by the Department of Nature Conservation of Sri Lanka to assist with the drugging and relocation of a group of Asiatic elephants. Because this group of elephants was limited to a 300-ha forest, they frequently caused havoc in neighboring fields and sporadically hunted them down, to such an extent that their number decreased from over a hundred to approximately 15. Ten of these were successfully transferred to the Wilpattu National Park 120 km away and a calf was transferred to a zoo. As far as is known this was the first operation of its kind.

The Kuiseb Environmental project progressed according to schedule. During January an additional research project was launched by the ecological planning panel. The objectives of this project were to determine the plant and pod production of the river-bank vegetation as well as the degree of utilization thereof by the game of the Namib Desert. The effect of the livestock which belongs to the Topnaar squatters on the riverbank was also determined. There were even eleven ecological projects that were receiving attention.

The incidence of rabies among kudu in the Okahandja district during 1978 reached epidemic proportions during 1979. The diseases spreaded northwards to the Otjiwarongo district, southwards to the Khomas Hochland and eastwards towards Gobabis. Consequently, a joint research project was launched by the Division of veterinary Services (Directorate of Agriculture and Forestry) the Division of Nature Conservation and Tourism and the Research Institute for Veterinary Sciences, Onderstepoort to try and find a solution to the problem. For this purpose, 27 kudus were caught at Hardap and transferred to the quarantine camp at Daan Viljoen. The first group of kudus will be immunized early in 1980 and as soon as a suitable sick animal is found the experiment will be continued. Comprehensive questionnaires were delivered by stock inspectors to all farmers in the areas concerned to determine how many kudus died of the disease thus far.

During April a work session was held at the Namib Research Station at Gobabeb. Scientists from all over the country who were involved in the different research projects pertaining to the Kuiseb Environmental Project participated. Scientists who had similar study areas, although they were not involved in the Kuiseb Environmental Project, were also invited to attend as objective observers and to voice their opinions if necessary. Two days were spent visiting the various study sites after which a successful one-day work session was held.

Namib Research Institute, Gobabeb

The Division continued giving support to visiting scientists to the Institute. Thirteen scientists came to the Institute to do research, while eight visited the Institute in lieu of future visits to do research. Research material was sent to twelve scientists. About half of these scientists were attached to universities and/or institutes abroad.

### Game catching

The game catching which was caught by the game catching unit during 1979 is summarized in the table below.

ANIMAL	LOCALITY						Total
	Daan Vil-joen	Water-berg	Kaross/Khoá-bendes	Har-dap	Admin. Game Park	Farms	
Gemsbok	89		3				
Hartebeest	27		1	38			130
Eland		64	50	62		11	101
Mountain zebra	11			19		11	144
Giraffe			146				11
Kudu		6	8	43		52	146
Black rhinoceros			5				109
Roan antelope			38				5
Black-faced impala			101				38
Plains zebra			3			7	101
Springbok				196	10	10	10
Ordinary impala					7		7
Blesbuck						7	7
Blue wildebeest						10	10
Buffalo						2	2
<b>Total</b>	<b>127</b>	<b>70</b>	<b>355</b>	<b>358</b>	<b>17</b>	<b>110</b>	<b>1 037</b>

Of these animals 481 were sold for a total amount of R24 533, 50 and the rest relocated elsewhere.

Eight black-faced impalas were donated to the National Zoo of Pretoria and eleven kudu, ten eland and ten red hartebeest were donated to the Bophuthatswana Government for the Pilanesberg National Park.

One brown hyaena was presented to the Division and another four were purchased from farmers for relocation in the Namib-Naukluft Park.

The average mortality during these operations was 4, 9%.



## Publications

During 1979 two issues of the Division's scientific magazine *Madoqua* were published, with the following contents:

### *Madoqua* Volume 11 No. 2

Two new *Batrocobdella* species from southern Africa and a redescription of *Batrocobdella disjuncta* (Moore, 1939) comb. Nov. (Hirudinea: Glossiphoniidae) by J H Oosthuizen.

Background aerosol composition at Gobabeb, Southwest Africa by H J Annegarm, R E van Grieken, P van Espen, F von Blottnitz, J P F Sellschop, J W Winchester & W Maehaut.

Notes on the western striped squirrel *Funisciurus congicus* (Kuhl 1820) by S Viljoen

Aspects of renal physiology, nutrition, and thermoregulation in the ground squirrel *Xerus inauris* by A C March, G Louw & H H Berry.

Waders (Charadrii) and other birds on the Namib Coast: counts and conservation priorities by a D A Whitelaw, L G Underhill, J Cooper & C F Clinning.

Relict vlei silt of the middle Kuiseb River valley, Southwest Africa by M E Marker & Marker & D Muller.

"*Echidnopsis atlantica*" Dinter: a natural intergeneric hybrid? By G S Barad & J J Lavranos.

### *Madoqua* Volume 11 No. 3

Changes in the social behavior of Southwest African cheetah by R Mc Vittie.

The Anura of the Etosha National Park by J D Jurgens.

Five new species of *Sergentomyia* (Diptera: Psychodidae: Phlebotominae) from southern Africa by I H Davidson.

Studies of southern African sandflies (Diptera: Psychodidae: Phlebotominae): the subgenus *Suetonius* of *Sergentomyia* with description of a new subgenus by I H Davidson.

Ecology of a small mammal community on a rocky outcrop of the Namib Desert by P C Withers.

Additiopns to the bird checklist of Kaokoland and the Skeleton Coast by C F Clinning & R A C Jensen.

Notes on the adaptive ecology and behaviour of four species of Rhoptropus (Gekkonidae) from the Namib Desert with special reference to a thermoregulatory mechanism employed by Rhoptropus after by F J Odendaal.

On Pterocles Namaqua (Gmelin) in Southwest Africa by P A Clancey.

The following visits were made by officials of the Division to other institutions:

The botanist visited the Kruger National Park where fire research policy and usages were examined.

The problem animal official visited the Transvaal and Orange Free State as a member of the Problem Animal Committee of the karakul producers and small stock Association to examine cooperative problem animal control.

The State Veterinarian visited the Kruger National Park to obtain firsthand information pertaining to anthrax and anthrax research.

The following lectures and papers were delivered:

Research officials gave informal discussions and instruction on a few subjects at farmers' meetings.

The regional office at Keetmanshoop was supplied with information for lectures for farmers and all these lectures, except for one which was presented to the Southern Namib Farmers Association, were presented by officials of the regional office.

Formal lectures covering a wide range of subjects as well as practical demonstrations were presented at Land Service Camps at Hardap to the Vroortrekkers and Padvinders.

Two radio interviews (one in Afrikaans and one in English) were conducted on the catching and immobilization of game. Three interviews were broadcasted on Radio SwA on the capturing and relocation of elephant in Sri Lanka.

Two talks which were illustrated by slides were given in Sri Lanka on Etosha and game capturing methods.

A lecture was given at the annual dinner of the Rapportryers in Otjiwarongo.

A lecture on nature conservation principles was given at the school leavers camp at Okahandja.

The annual professional officers meeting where the officials of the Division report on their respective research projects was open to the press and the public this year. Other bodies, such as

the State Museum, Windhoek and the Department of Agriculture and Forestry also contributed. A total of 37 papers were delivered. The proceedings were opened by Mr. A. Brinkman, M. E. C and Prof R. Siegfried of the Percy Fitzpatrick Institute for African Ornithology delivered the opening address, as well as a commentary on the quality of the work, at the end of the proceedings. The meeting was given favorable coverage by the press.

#### Administrative

During 1979 the Nature Conservation and Tourism Division submitted a total of 218 memoranda to the Executive Committee.

#### Proclamations

The Namib-Naukluft Park which was announced during 1978 was proclaimed a game reserve by Government Notice No. 118 of 1 August 1979.

In the course of 1979 seven private game reserves and/or private game parks with a total area of 51 142 ha were proclaimed. This brings the total surface area of private game reserves/ private game parks to 1 493 049 ha and is made up of 223 farms or sections of farms.

Eleven farms or sections of farms which have a surface area of 517 116 ha were deproclaimed as private game reserves and/or private game parks. Some of these have in the meantime been registered as hunting farms.

#### Honorary nature conservators

The three-year term of office for honorary nature conservators lapsed on 30 November 1979. The Executive Committee appointed 71 persons for a further three-year term of office and seven new honorary nature conservators were nominated. Together with the ten members of the Nature Conservation Board there were a total of 88 honorary nature conservators. These honorary nature conservators fulfill a valuable service.

#### Hunting farms

35 new farms were registered as hunting farms which brought the total to 260 farms.

#### Permits

The activities of Subsection Legislation, Personnel and Library increased considerably and in the course of 1979 31% more permits were issued as compared to 1978.

1 387 gratis permits as compared to 1 059 during 1978 were issued in the course of 1979 to officials of other divisions, government departments and private contractors to visit recreation resorts and game parks on official business.

In the year 1 479 permits to hunt trophies were issued, as compared to 1 129 during 1978. This is an increase of 31%.

The National coordinating Advisory Board for Nature and Environmental Conservation.

His Excellency the Administrator General for Southwest Africa brought into being the National Coordinating Advisory Board for Nature and Environmental Conservation towards the end of 1978, in order to promote and coordinate nature and environment conservation in the Territory. The secretariat of NKANO as well as that of the three standing committees which were appointed to advise the Advisory Board are being handled by the S Division. The Advisory Board and the respective committees held altogether twelve meetings in the course of 1979.

#### Accommodation establishments

231 accommodation establishments were inspected by inspectors of the Division in the course of 1979. Two hotels and one rest-camp were graded, which brought the total of graded establishments in Southwest Africa to 86. The establishments were graded as follows:

51	one-star hotels
8	two-star hotels
4	three-star hotels
1	one-star motel
1	two-star motel
1	one-star guest farm
6	two-star guest farms
2	three-star guest farms
3	one-star rest-camps
2	two-star rest-camps
1	three-star rest-camp
1	one-star safari enterprise
2	three-star safari enterprise

The Grand Hotel in Windhoek Which had 141 beds closed and its registration as an accommodation establishment was withdrawn. Two new guest farms were established but have not yet been put into commission.

There are several newly opened accommodation establishments which will be inspected early in 1980 so that they can be graded.

During 1979 there was a decrease of 13, 7% (45 728) in bed occupation and 9, 7% (23 186) in room occupation in accommodation establishments in the Territory.

The question of inservice training of hotel staff will be finalized were long. The chief training official of the R. S. A. Hotel Board will be visiting Southwest Africa shortly to explain the inservice training programmes of the Board to officials of the Division and hoteliers in the Territory. It is hoped that he will also initiate the programmes.

During 1979 the Nature Conservation Board had three meetings while the Advisory Board on Accomodation Establishments and Tourism had four meetings.

Four loans amounting to R385 000 were granted to accomodation establishments during 1979 of which R379 000 were paid out. The purpose of these loans was to finance extensions and improvements to existing establishments.

Only two applications for bursaries for training in the hotel industry were received. Both applicants were successful. The bursaries were for training hotel management and catering respectively.

During 1979 there was one amendment to one article of the Ordinance on Accomodation Establishments and Tourism whereas 28 regulations of the Regulations concerning Nature Conservation, the regulations concerning Tourist Recreational Areas and the regulations concerning Accommodation Establishments and Tourism were amended.

As from 1 July 1979 the Administration took over the control and the management of the Canyon Hotel, Keetmanshoop, in accordance with Article 40 of the Ordinance on Accomodation Establishments and Tourism. Subsequently the management of the hotel was handled by the inspectorate of accommodation establishments and the financial position of the hotel has improved considerably.

Committees of enquiry into the hotel and tourism industries.

A committee of enquiry into the hotel industry was appointed on the recommendation of the National Coordinating Advisory Board for Nature and Environmental Conservation by his Excellency the Administrator General. The committee was instructed to:

- (i) determine whether the hotel industry attains its objectives and if not, what the failings are.
- (ii) Identify which factors are impeding the hotel industry, and
- (iii) Determine which measures are necessary and justifiable to enable the hotel industry to obtain its objectives.

A committee of inquiry into tourism was appointed on recommendation of the Tourism Board by the Executive Committee with the instruction to -

- (iv) Take stock of the tourism industry and to determine whether the authorities's short- and long-term policies pertaining to the stimulation of tourism as an important component of the national income are attaining the objective and if not to find what the reasons are.
- (v) Identify the factors which are restraining the tourism industry; and
- (vi) Recommend measures which are necessary and justifiable to stimulate the tourism industry.

### Publicity

The purchase of Duwisib Castle received favorable comments from the press. Several newspapers carried articles on the subject.

	<u>Afrikaans</u>	<u>English</u>	<u>German</u>	<u>Total</u>
Etosha	2 842	4 140	4 144	11 126
Ai-Ais	1 020	2 142	1 602	4 764
Lüderitz	1 620	1 850	1 840	5 310
Hardap	3 220	4 250	3 360	10 830
Daan Viljoen	1 240	2 450	2 200	5 890
Gross-Barmen	1 340	2 150	1 740	5 230
Namib	1 186	1 800	1 466	4 452
Tourist guide	1 418	1 910	1 780	5 108
Tariff guide	1 650	1 734	1 500	4 884
Brochure sets	1 021	1 247	999	3 267
<b>Total</b>	<b>16 557</b>	<b>23 673</b>	<b>20 631</b>	<b>60 861</b>

Almost 7 000 less brochures were used in comparison to the previous year. As brochures are principally supplied to prospective tourists on demand as well as to travel agents, the increases in fuel prices and events in the north were the reasons for this decrease in demand. The Afrikaans brochures which mainly went to the Republic had a smaller distribution than the German brochures of which a lot went to West Germany. This tendency was also reflected in the number of visitors.

Although the Division's participation in the Windhoek Agricultural Show was nearly cancelled because of the resignation of the artist, nevertheless, was awarded a first prize. Films and slides were shown and an information brochure which contained information about the history, flora, fauna, objectives, and future of the park was compiled and distributed.

During the June/ July school holiday land service camps were held at Hardap, Naukluft, Swakopmund and along the West Coast. 69 children attended the camps.



In the year two filming teams visited the Etosha National Park. One of the teams completed their film entitled "Etosha" and it was released in November 1979. The film was shown to British television audiences and was seen by an estimated 200 million people. It received extremely favorable commentary in the press. An additional 13 films were brought from a firm in England and four copies of ENOK's film on SWA were ordered. 35 film shows/ lectures, three slide and six lectures were given. Several radio talks were also presented. The Division supported the S. A. Defense Force's nature conservation week by supplying them with articles for newspapers, talks, film shows and slide series. The Defense Force showed their appreciation by donating an amount of R1 000 to the Division, which will go towards providing a small museum at Terrace Bay.

Approximately 50 press releases were distributed to the news media in the year. Photographs, articles, and photo-articles were supplied to several concerns and the photo-library of the Division was considerably expanded. Two internal newsletters and a newsletter for honorary nature conservators were compiled and distributed to the employees of the Division and the honorary nature conservators.

An entry gate for the Von Bach Recreational Resort was Designed and the décor of Halali's restaurant was completed.

#### Technical Services

Altogether, 70 kilometers of new tourist roads and 54-kilometer fire-belts were constructed. 2 040 kilometers of tourist roads, fire-belts and boundary roads were maintained.

Eight airfields were renovated and the airfield at Duwisib Castle was extended and widened.

The dam at Daan Viljoen was cleaned and 46 074 m<sup>3</sup> of silt and clay was removed.

26 km of new boundary was bull-dozed on the borders of the Namib-Naukluft Park.

78 vehicles and road building machines were maintained.

The old mines at Toscanini and Terrace Bay were cleaned up and the debris was buried and covered.

An entry road for pleasure boats to the launching ramp in the bay near Wlotzkasbaken was built.

#### Conferences and Meetings

Officials from the Division attended the following conferences, meetings, and congresses in their official capacities:

- Annual meeting of the Standing Committee for Nature Conservation and Utilization and Management of SARCCUS (Southern African Regional Commission for the Conservation and Utilization of the soil), Malawi.
- National Committee for Nature Conservation, Windhoek.
- National Committee for Environmental Sciences, Pretoria.
- Congress of the South African Association of Veterinarians (SWA region), Windhoek.
- National and International Veterinarian Congress, Johannesburg.
- Annual meeting of professional officers of the Provincial Administrations and Southwest Africa, Bloemfontein.
- Annual meeting of the National Unit for Bird ringing, Johannesburg.
- Symposium on marine birds, Cape Town.
- Steering Committee For Desert Ecological Research, Windhoek.
- Steering Committee for the Kuseb River Environmental Project, Windhoek.

The Nature Conservation Board had three meetings during 1979, two in Windhoek and one in the Skeleton Coast Park. The Tourism Board had four meetings in Windhoek.