

Fig. 1

age of the modifications. Elephant densities in these habitats were observed to reach 2.6 animals per km² on average in comparison with primary forests, where densities are under 0.5 animals per km².

There is a distinct attraction to areas which are influenced by logging activities. The preference of the secondary rain forests can be confirmed by the χ^2 test. As a result of the clearing of the original forest a new heliophile vegetation has produced a richer range of fodder plants containing a greater amount of crude protein than sciaphile species. A nutritive analysis of heliophile fodder plants selected by elephants shows a crude protein content of 18% compared with 10% in plants of the primary rain forest, which are much less used by the elephant. Furthermore, the alternating occurrence of open, grass-covered areas and dense vegetation is highly appreciated by the forest elephant.

Gunter Merz
University of Juba

RHINO WORKSHOP AT PILANESBERG

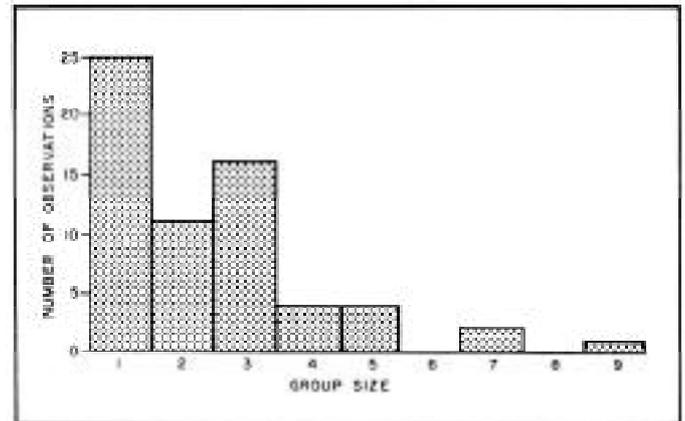


Fig. 2

News in Brief

Following an initial suggestion by Peter Hitchins, that the status of rhinos in southern Africa should be investigated, a workshop on the topic was sponsored by the Endangered Wildlife Trust and hosted by the Pilanesberg Game Reserve in Bophuthatswana. Fifteen delegates, including a colonel of the South African Police, several officers of nature conservation authorities, zoological gardens and non-government organisations, gathered in February 1984 for two full days of discussion on the rhinos of South Africa and Namibia. The main focus of attention of course was the black rhinoceros whose statistics in South Africa have been largely covered by Martin Brooks in the previous newsletter.

Three subspecies of the black rhino occur in the two countries. About 610 animals of the *minor* subspecies were estimated for South Africa (including 21 in Pilanesberg), and the

Natal population has 19 animals per year for translocation. The population in the Kruger National Park, currently estimated at 110 animals, has a great potential for expansion. South Africa also holds 14 *michaeli* rhinos in the Addo Elephant National Park; these are genetically pure as hybrids have been removed (and one *minor* bull castrated).

About 400 animals of the nominate subspecies are estimated for Namibia, of which 350 occur in the Etosha National Park. This latter population is expanding and animals could be translocated to three other game reserves in the north of the country. Meanwhile, the desert rhinos of Damaraland and Kaokoland have declined to an estimated 50 and .5 animals respectively. These animals live on communally-owned land, and they are very vulnerable to poaching; they are the only black rhinos not in a game reserve. There is considerable concern over their future, and as befits

a unique population of animals, it was agreed that they should receive special attention and be conserved *in situ* rather than be translocated.

The southern subspecies of the white rhino is considered safe, and little concern was voiced for its future. Its numbers were estimated at nearly 3,000 in South Africa, 70 in Namibia and 217 in Pilanesberg. In contrast to the distribution of the black rhino, the white rhino occurs widely throughout South Africa, as a good proportion of its numbers (estimated 530) now lives on private game ranches, albeit usually in small numbers per ranch. The white rhino population in Natal allows about 130 animals per year for translocation.

It was agreed that zoos have a definite role to play in the conservation of both species of rhino, particularly with regard to public education and to maintaining a viable captive population. There are at least 200 black rhinos in the world's zoos (only three in South Africa), and they are now breeding. But the workshop called on zoo directors to maintain genetic purity of subspecies if breeding is to be attempted. However it was admitted that whilst distinguishing '*michaeli*' and '*minor*' is fairly easy, it is not with '*bicornis*' and '*minor*'.

Several resolutions were suggested with regard to the trade in rhino products. The workshop called on the IUCN to continue monitoring the international trade, and requested that CITES take more interest in it and investigate the possibility of using disciplinary action against members not conforming. At a regional level, the workshop will recommend that rhino products be stockpiled until further notice, that nature con-



Desert rhino, Namibia [Koos Bothma]

servations ordinances and fines with regard to the rhino be rationalised throughout, and that a wildlife trade investigating officer be set up somewhere in southern Africa. Very importantly, SWA/Namibia announced that it has now stopped auctions of rhino products, and although not a member of CITES it will comply with regulations.

We expect to issue a fuller account of the proceedings for distribution to the appropriate authorities and other interested bodies.

P.J. Mundy
Endangered Wildlife Trust

ELEPHANT POACHING IN THE CHOBE NATIONAL PARK, BOTSWANA

Botswana's Chobe National Park has for the last two years experienced an upsurge in the killing of elephant by poachers from the eastern Caprivi in Namibia.

It was two years ago that Botswana's Department of Wildlife, National Parks and Tourism placed a ban on all elephant hunting in order to arrest poaching from within Botswana and to take a careful look at its elephant populations.

The Endangered Wildlife Trust and the University of the Witwatersrand were asked to assist in surveys to determine numbers and to date some 22,000 elephants have been estimated in the north excluding the Okavango Delta and Moremi Wildlife Reserve.

Clive Walker
Director, Endangered Wildlife Trust

SUDAN ELEPHANT CAMPAIGN EFFECTIVE

The alarming slaughter of elephants in South Sudan last year impelled the AERSG to launch a series of diplomatic and publicity campaigns aimed at urging Sudan to control the poaching. In response to these initiatives, Sudan banned the export of raw ivory by ministerial order from 1 January 1984. AERSG has warmly congratulated the Sudan Government on their action.

L. Vigne

DESERT ELEPHANT AND RHINO: EWT HELPS

Plans to have four million hectares of the Damaraland region of Namibia proclaimed as a Park collapsed earlier in the year, causing concern for the continued protection of the elephant and rhino.

Since 1978, the Endangered Wildlife Trust had assisted the Namibia Wildlife Trust's good work with aerial surveys, research and anti-poaching measures. Now, EWT is to take responsibility for the security of Damaraland's wildlife, with Garth Owen-Smith as Senior Field Officer along with his assistant and six game scouts from the Department of Agriculture and Nature Conservation.

The Trust held talks with senior officials in Xhoniixas, the Damaraland administrative centre, on 5 April 1984, and again in Windhoek with the Department of Agriculture and Conservation, which will be ready to take over control from EWT at the end of 1984.

Continued co-operation of all involved is essential for maintaining the protection of the uniquely adapted desert rhinos and elephants of Damaraland.

L. Vigne

RHINO BIBLIOGRAPHY

A bibliography of publications on rhinos, gathered by Kes Hillman, is stored on the computer at the Species Conservation Monitoring Unit and print outs are available on request to: Jane Thornback, SCMU, 219c Huntingdon Road, Cambridge, England.

NORTH YEMEN NOW TAKES ONE HALF OF ALL RHINO HORN

The North Yemen Government outlawed all imports of rhino horn on 22 August 1982. Esmond Bradley Martin, on behalf of the African Wildlife Foundation, recently visited North Yemen and found that more than 50% of the rhino horn available each year on the world market was being exported to North Yemen, as opposed to 40% six years ago, and despite the official ban.

The horn comes mainly from Khartoum, even though Sudan is a signatory to the CITES Agreement. North Yemeni and Sudanese traders bring the 'black gold' through Sana'a Customs, often in their hand baggage. Some customs officials say they do not know about the ban. Smuggling of many goods is rife and uncontrollable in North Yemen. Esmond Bradley Martin states that all customs officers should at least be told about the ban, and asked to enforce it.

Craftsmen carve the horn into elaborate traditional dagger handles for North Yemeni men. Dealers collect the horn shavings and export them to the Orient for medicine. Banning this secondary trade, Esmond Bradley Martin suggests, would help lower the demand and threat to the rhino.

The population of North Yemen is increasing and given that 7.75% of males from the age of 12 require and can afford new rhino-horn dagger handles, two tonnes of horn a year are needed to meet the demand, excluding that from the 24,000 tourists to North Yemen who may be offered daggers as souvenirs. The media should impress upon the newly rich Yemenis and on the tourist trade the endangered state of the rhino.

The most effective measure which should be taken against the trade, however, would be stricter control on exports from source countries, especially via the Khartoum connection, Esmond Bradley Martin states.

L. Vigne

AERIAL SURVEY ANALYSIS COMPUTER PROGRAMME

There has been a need for some years for a simple programme for the analysis of systematic aerial reconnaissance surveys available to wildlife biologists and workers.

Iain Douglas-Hamilton has now developed such a programme, written by Anne Burrill, which is suitable for most aerial sample surveys that follow the methods described by Norton-Griffiths in

Counting Animals, produced by African Wildlife Foundation, 1978.

The programme can extract and analyse portions of census zones and also merge different areas of the census zone. A more complete description is available on request, and copies can be obtained for the price of postage and disc or photocopying by contacting Dr Iain Douglas-Hamilton, P.O. Box 54667, Nairobi.

Iain Douglas-Hamilton



North Yemeni carver at work [Esmond Bradley Martin]

WWF/IUCN RENEWS SUPPORT FOR SELOUS

The Selous Game Reserve in Tanzania is undoubtedly the most important woodland savanna reserve in Africa. Its vast 55,000km² support the largest coherent populations of elephants, black rhinos, crocodiles, buffaloes and hippos in the world. There are approximately 1 00,000 elephants and 3,000 black rhinos within the Reserve. In addition, some 350 species of birds and over 2,000 species of plants have been recorded. As a result of these tremendous biological values, the Selous was recently declared a UNESCO World Heritage Site. The Selous has also been accorded the highest priority for field action by the African Elephant & Rhino Specialist Group.

To date, the vastness and inaccessibility of the Reserve have protected it from the human encroachment and poaching that have become so characteristic of other East African conservation areas. However, it is inevitable that human pressures upon the Reserve will grow, and have an increasingly severe impact. It is essential that the Tanzania Wildlife Division which is charged with the protection and management of the area, be adequately equipped to deal with these growing pressures.

Under a recently initiated project (No. 3173), WWF/IUCN is continuing its support to the Selous, and is helping to meet the most immediate needs of the Reserve. Spare parts for vehicles and aircraft are being purchased. Ranger equipment, medical supplies, radios, vehicles and motorcycles are also being provided. Although the original budget is for an initial period of two years, it is hoped that Project 3173 will evolve into a long-term support programme for this strategic wildlife stronghold.

Scott Perkin
Projects Officer, WWF/IUCN Regional Office, Eastern Africa

WORK PROGRESS IN GARAMBA NATIONAL PARK

At the very end of April we began the project in Garamba National Park to monitor the remaining northern white rhinos. The objectives of the preliminary work are to: (1) find out how many rhinos remain and of what sexes and ages; (2) evaluate the logistics of conserving them.

From ground and aerial survey work we can thus far identify 11 different individuals. The known individuals comprise: 4 adult males; 3 probably 4 adult females; 1 unsexed sub-adult; 1 male calf under 1 year old; 1 unsexed calf under 1 year old.

We do not know enough at this stage to draw any conclusions as to the exact number of rhinos remaining. Our immediate plans are to continue with intensive groundwork to verify further individuals and gather information on their behaviour and ecology, and to ensure that reliable guards are patrolling the rhino areas. Some further development of the monitoring programme will be carried out. The grass is roughly 1 to 1.5m tall at present.

We are extremely grateful to the many organisations and individuals who have made this preliminary and urgent work possible and effective. Acknowledgements will be made in the full report.

Kes Hillman and Mankoto ma Oyisenzoo

SOME POSITIVE NEWS FROM KENYA

One woman's wish to save rhinos has led to the construction of a rhino sanctuary in northern Kenya. Anna Merz visited the Craigs' acacia-savanna ranch in 1982, and discussed with them the possibility of a rhino sanctuary. With the Craigs' provision of 5,000 acres on Lewa Downs, Anna Merz paid for a 20km long fence from the "Ehefence" company to enclose the area for rhinos. Preparations for the sanctuary took a year to complete. The fence now stands at 2.40m and has seven electric wires, each one carrying 5000 volts. The fence is to provide the dual function of keeping rhinos in and poachers out, and also there is strict guard security.

By February 1984, black rhino translocation to Lewa Downs was able to begin, with the full support throughout of Daniel Sindiyo, Director of the Wildlife Conservation and Management Department. Invaluable help and hard work continue from Peter Jenkins, Senior Warden (Planning North) in the Department, and Francis Dyer, Sanctuary Manager, as well as the Craigs themselves. First to be brought to the sanctuary was a male rhino, captured near Nairobi National Park by the Capture Unit. The second rhino was a female, found by Anna Merz, the last rhino in Shaba Reserve. For four months, four guards protected her in Shaba, but despite this, there was fear that bandits might kill her and she was moved, still wild and desperate, to the safety of Lewa Downs. In the holding boma Anna Merz calmed her by the unique expedient of reading aloud to her for three days. Another male arrived from the Nairobi Park Orphanage. Finally, two more males and one female were brought by the Department Capture Unit from the Prettejohns' ranch, near Mweiga into the sanctuary. So far, therefore, Lewa Downs rhino sanctuary protects four males and two females and mating has already been observed once. Anna Merz is hoping to bring in three more black rhino females.

There are not only black rhinos in the sanctuary. A southern white rhino from California was recently introduced to the tame group of southern whites in Meru National Park to provide new blood, and the non-breeding male at Meru was transferred to Lewa. Possibly, Anna Merz says, some more whites may be introduced to Lewa to breed with the solitary male.

The vegetation in the sanctuary has been surveyed by Hugh Lamprey, and any changes since the introduction of the rhinos will be monitored.

What plans for the future? The gestation period for black rhinos is 15-18 months, and if breeding proves successful, Anna Merz hopes that funds could be raised to enclose eventually the whole 45-48,000 acres of Lewa Downs. One day when the demand for the horn has been successfully curbed, Anna Merz wishes to open the fence to the largely uninhabited dry north and repopulate northern Kenya with black rhinos. Until that time, this "holding action" is the best safeguard for the rhinos.

L. Vigne

Book Reviews

Ivory Crisis, by Ian Parker and Mohamed Amin (Chatto & Windus, London 1983) £14.95

I was delighted to be asked to review Ian Parker's book; having seen Nigel Sitwell's caustic review in the *IUCN Bulletin*, September 1983, (reprinted from *New Scientist* 30 June 1983). I was confident that I would be able to pan it and bring Parker down a peg or two. I therefore reached eagerly for the copy that had been roosting unread on my shelf; but as I read, my spirits fell. For one thing, Parker has resisted the tendency of his prose to become turgid and polemical and the book's style is clear and straightforward. For another the book is informative and, for most of the way, uncontentious.

The book falls into three main sections. The first, taking up about half the text, is Parker's account of his own involvement with wildlife, starting with his entry into the Kenya Game Department in 1956, and covering his participation in the Tsavo anti-poaching operation and his early contacts with the

Walian-gulu elephant hunters, his initiation of the Galana Game Management Scheme, the Uganda culling, the Tsavo controversy, the Rwanda elephant extermination, and his association with the ivory trade. This section establishes Parker's credentials as having been in on the ground floor of many of the key events of recent East African conservation history. It also documents his growing concern that much of the theory and practice of conservation in East Africa has been muddled, insincere and inappropriate. My only complaint about this section is that it is too short. I would have liked more of the anecdotal detail that, for me, made the account of the surreal 1973 Juba ivory auction the highpoint of the book.

The second section consists of a historical review of the ivory trade from pre-classical times to the present. Here Parker has distilled a mass of diffuse documentation and dovetailed it with his own detailed studies of the current trade to produce an intriguing and readable account. It is easy to forget that before Parker pioneered the study of the ivory trade in the 1970s, this