Rhino and Elephant Poaching Trends in the Selous Game Reserve

M. Borner
Frankfurt Zoological Society, P.O. Box 3134, Arusha, Tanzania

E. Severre
Serengeti Wildlife Research Institute, P.O. Box 661, Arusha, Tanzania

INTRODUCTION

The Selous Game Reserve covers an area of 55 000 km^2 and is the largest Game Reserve in Africa. In 1981 it harboured the largest elephant and black rhino populations on the African continent (85 000 elephant and 3 000 black rhino; Borner, 1981).

The vastness and inaccessibility of the Selous Game Reserve were the best protection for wildlife living within it and, although the area is very difficult to patrol, poaching was minimal during the seventies (Douglas-Hamilton, 1976). Poaching for trophies began to increase by 1981 (Borner, 1981; Douglas-Hamilton, 1984). The Shell Company began prospecting for oil in the Selous five years ago (1981) and roads and tracks now criss-cross most of the north-eastern part of the Game Reserve. These roads make poaching much easier, both by vehicle in the dry season and on foot. The depressed economic situation of the country and rising prices of ivory and rhino horn were associated with a countrywide increase in poaching.

During the 1984 hunting season the authors received reports from professional hunters that poaching, both of elephants and rhinos, had increased alarmingly. Similar reports were received from the Wildlife Division Project Manager and from field staff in the reserve. These reports stimulated the present survey.

METHODS

Professional hunters, staff and clients of the Tanzania Wildlife Corporation (Tawico) and staff of the Wildlife Division were interviewed during 1984. A standard questionnaire form was used as the basis for the interview. Each of the persons interviewed had accompanied a 21 day hunting safari in any of the years 1981 to 1984. In most cases only one person per safari was interviewed. In some cases the Wildlife Division warden, who carried out patrols from the safari hunter's camp, was also interviewed. In such cases two sets of data were collected from the same safari. The indices of live or poached animals seen, or of poaching incidents and sign, are the number seen by one observer during a 21 day safari.

A weak point in our observations is that some of the data depended on memory; most of the professional hunters kept written records, while some of the information provided by Wildlife Division staff was based on memory. Information on anti-poaching activities was provided by the Project Manager and one (If us (E.S.) visited hunting camps and all the sector headquarters.

The time of data collection did not correspond with the main poaching season. Data were collected during the hunting season which runs from July to December while the main poaching activity occurs from January to March, during the rains, when there is no hunting and the road system is largely closed even to vehicles of the Wildlife Department.

The results reported here refer mainly to the central part of the Game Reserve. The north is reserved for photographic safaris and these camps were not visited while early rains meant that fewer camps were accessible in the southern (Liwale) sector of the reserve.

RESULTS

The indices of poaching activity within the Selous show a clear increase between 1981 and 1984 (Table 1 and Figure 1). The index for numbers of elephant poached also shows a clear upward trend over the four year period (Table 2 and Figure 1).

The number of live rhino seen per safari observer shows a marked decline while the index for poached rhino found showed no change

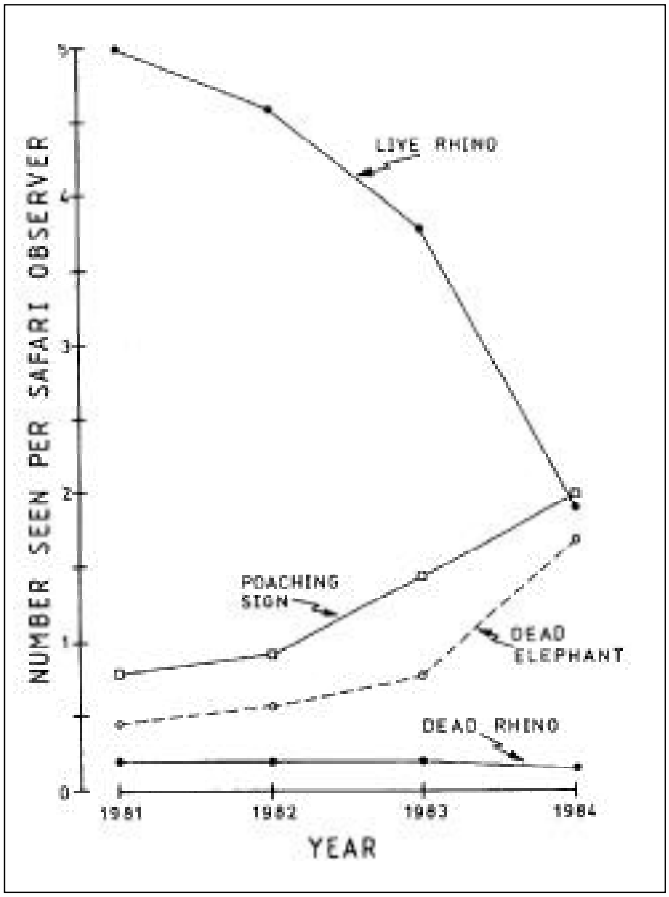

Figure 1. Trends in poaching of elephant and rhino in Selous Game Reserve, shown as the numbers of animals seen or frequency of poaching sign encountered per safari observer on a 21 day safari, in different years.

Table 1. Poachers and poaching sign encountered each year by observers on 21 day safaris

Sign	1981	1982	1983	1984
Poachers seen	5	3	10	38
Poaching camps	2	5	7	14
Poachers' tree caches	0	0	2	11
Snare and trap lines	2	7	18	37
Tree felling	5	6	14	37
Fire	9	12	21	47
Total poaching sign	23	33	72	148
Safari observers	29	36	50	93
Sign/safari observer	0.79	0.92	1.44	2.00

during the four year period (Table 3 and Figure 1). These data suggest a high constant offtake and that the population was being depleted at an increasing rate (with declines in the index of rhino seen of 9%, 16% and 51% over the periods 1981-82, 1982-83 and 1983-84 respectively). The ratio of live to dead rhino encountered on safaris also showed a marked decline (Table 3).

Table 2. Numbers of poached elephant seen each year by observers on 21 day safaris

	1981	1982	1983	1984
Poached elephant seen	13	21	39	158
Safari observers	29	36	50	93
Poached elephant/safari observer	0.45	0.58	0.78	1.70

Table 3. Numbers of live and poached rhino seen each year by observers on 21 day safaris

	1981	1982	1983	1984
Live rhino seen	145	164	192	175
Poached rhino seen	6	8	10	13
Safari observers	29	36	50	93
Live rhino/safari observer	5.0	4.6	3.8	1.9
Dead rhino/safari observer	0.2	0.2	0.2	0.14
Ratio live/dead rhino	24.2	20.5	19.2	13.46

DISCUSSION

The elephant population of the Selous Game Reserve showed nearly identical densities in surveys carried out in 1976 and 1981 (Douglas-Hamilton, 1976; Borner, 1981) suggesting a stable population. Since 1981, there is little doubt that elephant poaching has increased drastically.

The data gathered on rhino are less conclusive, mainly because rhino numbers are much lower and observations of live and poached rhino are accordingly rare. The available data nevertheless suggest an alarming rate of decline in the rhino population. In October, 1985, a recount was made on the ground by the Mweka College of African Wildlife Management of some blocks that had been counted in 1981 (Borner, 1981). In the largest block (54.8 km^2), near Behobeho, where 15 rhino had been seen in 1981, none were seen in the recount, nor any rhino sign. During the College researchers' entire trip through eastern and northern parts of the Reserve, no rhino were seen.

According to the Reserve administration and the safari hunters, poachers enter the Selous mainly for ivory as the elephants are easy to find and the ivory can be disposed of more readily than rhino horn. While the poachers may take elephant as their main target they are unlikely to spare a rhino when they find one.

Several factors have contributed to the increase of commercial poaching in the Selous.

1. The difficult economic situation in the country combined with high prices for ivory and rhino horn have provided an increasing incentive for poachers.

2. The local ivory carving market provides a ready outlet for illegal ivory and rhino horn. There are numerous licensed ivory carvers who indulge in illegal business. Existing regulations are not effectively policed or are difficult to enforce and numbers of influential people are involved in the illegal trade. These problems are less prevalent with the export of raw ivory, which is under more centralised control.

3. One of the main factors previously protecting the reserve, its inaccessibility, is no longer effective. Oil exploration by Shell Company has opened the southern and eastern sectors of the reserve to both foot and motorised poaching. In 1981 and 1982 there were no records of motorised poaching while in 1983 two cases were recorded and in 1984 nine cases.

4. Declining financial resources and operational equipment have meant that the Reserve management has not been able to meet the challenge of increased poaching. Funds available for paying the per diem allowance for overnight patrols in 1984 were one seventh of those available in 1980. Even more serious is the lack of equipment for anti-poaching activities such as vehicles, road building machinery, camping gear, radios, uniforms and firearms. It is simply impossible to control effectively an area larger than Switzerland with five Landrovers or with allowances that cater for only two patrol nights per ranger per year.

CONCLUSION AND RECOMMENDATIONS

The results of this survey, and reports from safari operators and field staff during 1985, suggest that the rhino and elephant populations of the Selous Game Reserve have entered a critical phase. The Tanzanian Government is determined to face the responsibility of protection but has difficulty increasing its support for the Reserve. A large input of funds and equipment is needed very soon if the poaching trends in the Game Reserve are to be reversed.

Thus, a concerted effort by conservation organisations to assist the Selous is imperative. The Shell Company could also assist.

The most urgent requirements for the Selous Game Reserve are:

1. Two anti-poaching vehicles for each of the six Section HQ's;
2. Funds for patrol allowances and fuel;
3. Equipment (uniforms and camping gear) for rangers;
4. An improved radio communications network;
5. Spares for road building equipment and vehicles;
6. Establishment of an ecological monitoring programme;
7. A management plan for the reserve and its buffer zones;
8. Closure of the internal ivory market by withdrawing all ivory carvers licenses.

ACKNOWLEDGEMENTS

We would like to thank the Frankfurt Zoological Society for providing funds for this survey, the Wildlife Division for the provision of an aircraft and the Serengeti Wildlife Research Institute for providing a Landrover.

We are indebted to Dr. R. Faust, Director of FZS, who initiated the survey and gave his full support, and to all those who supplied information.

Finally we would like to thank SWRI for permission to carry out the survey.

REFERENCES

BORN ER, M. (1981). Selous Census 1981. Ministry of Natural Resources and Tourism, Wildlife Division, Tanzania. Typescript. 95p.

DOUGLAS-HAMILTON, I. (1976) Selous Elephant and Wildlife Survey. Danida and IUCN. Typescript. 70p.

DOUGLAS-HAMILTON, I. (1984). Elephant and rhino population trends in Selous. Pachyderm, No. 4:18.

From P.Z.(Chairman's Report)

From page 2 (Chairman's Report)

REFERENCES

BELL, R.H.V. (1983). Illegal activity and law enforcement. Guidelines for their analysis and monitoring in African conservation areas. Notes prepared for the AERSG, Aug. 1983. Typescript. 34 p.

CONWAY, A.J. (1984). Anti-poaching measures in Chirisa Safari Area, Zimbabwe. In: (Eds.) Cumming, D.H.M. and Jackson, P. The Status and Conservation of Africa's Elephants and Rhinos. 164-181. IUCN.