

Environmental interpretation in Uganda's national parks

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Abstract

A study was undertaken in three of Uganda's forested national parks to provide information on the status of environmental interpretation. Sixty questionnaires were administered to range guides and park wardens in Kibale, Rwenzori, and Mount Elgon National Parks to collect information on job description of rangers and wardens involved in environmental interpretation. Additional information was collected on the extent of their work, their training backgrounds, experience, facilities used, those required, and the qualities that interpreters are expected to have. It was found that interpretation is little understood and the range guides have not had formal training in interpretive work. Uganda's national parks do not have clearly stated objectives on interpretation. Even at the highest level, the Uganda Wildlife Authority (UWA) does not have any policy on environmental interpretation. Thus there is a need for a national programme of environmental interpretation to promote conservation of biological resources and development of ecotourism in protected areas.

Key words: Interpretation, ecotourism, national park, ranger-guide, Uganda

Introduction

Environmental interpretation is a relatively new phenomenon. Earlier studies (e.g. Graybill, 1976; Tilden, 1977; Stevens, 1982; Bitgood et. al., 1991) suggest that interpretation is an educational activity that seeks to improve human understanding of the environment. Seabrooke and Miles (1993) have summarised the primary purposes of environmental interpretation as follows:

- to provide an enjoyable and rewarding educational experience for visitors;
- to enhance visitors' appreciation and understanding of the site;
- to maximise the recreation carrying capacity of the site and minimise the impact of visitors; and
- to promote an understanding of the agency providing or operating the site.

Expansion of protected areas and introduction of ecotourism in Uganda over the past few years have created

the need for proper environmental interpretation. However, little is known about the concept of environmental interpretation in Uganda despite strong government support for programmes in environmental protection and biodiversity conservation. Environmental interpretation is an essential process in conservation and there is a need for natural resource managers to know what it entails and to understand how it is applied.

The fast recovery of Uganda's tourism industry in recent years and the growing interest in development of ecotourism in protected areas has placed enormous demand on protected area managers to find a balance between ecotourism and conservation. Establishment of proper interpretation systems both at the national level and in protected areas would help in the achievement of such a balance. It was against this background that a survey was carried out in Kibale, Rwenzori, and Mount Elgon National Parks to collect information on the rangers and

wardens involved in environmental interpretation, the extent of their work, their training backgrounds, experience, facilities used, those required, and the qualities that interpreters are expected to have. Literature on tourism is explicit on the importance of interpretation in enhancing visit experience and increasing visitors' appreciation and understanding of natural ecosystems. The primary purpose of the survey was to provide basic information on the status of interpretation in Uganda's national parks where ecotourism has been introduced.

Methodology

Questionnaire design and administration

The postal questionnaire survey method was used to collect the information mentioned above. It contained 13 questions covering topics such as job description, qualities to look for when employing an interpreter, facilities being used for interpretation work, and management skills expected of interpretation staff. Eight predetermined management skills were listed and respondents were asked to indicate those skills necessary for their current interpretation work.

A total of 60 questionnaires together with covering letters were sent out to wardens and ranger guides of Kibale, Rwenzori and Mount Elgon National Parks. Part I of the questionnaire was to be answered by wardens. Part II of the questionnaire was to be answered by ranger guides. It contained 23 questions divided into two sections. Section A titled "Your Work and Training" included a mixture of 10 questions designed to obtain information about rangers' professional and educational background. Section B titled "Analysis of your Job" contained 11 questions. It was aimed at establishing the qualities of an interpreter, job motivation, monthly salary and perceived status of environmental interpretation within respective national parks.

Data analysis

The small sample size (N=40) could not allow rigorous statistical analysis of data. Thus, only frequency summaries and percentages are reported.

Results

Response to the survey

Forty questionnaires were eventually returned following numerous reminder letters. Of these eight were from park wardens and 32 from ranger guides. The response rate of 66.7% was considered satisfactory as it was above the average for this method of survey (Burton, 1971).

Training and background of the ranger guides

It is clear from the responses to questions on educational background that 75% of the rangers had secondary school education and the rest had primary school education only. Many were recruited as general rangers but were eventually assigned to do environmental interpretation without appropriate skills. Four respondents claimed they had received in-service training on environmental interpretation (Table 1).

Table 1. Educational background of rangers involved in environmental interpretation (N=32)

Training and Educational background	f	%
Level of education		
Primary school	8	25.0
Secondary school	24	75.0
Post secondary school training		
Teacher training (Grade III)	2	6.3
Forest ranger	1	3.1
In-service courses		
None	16	50.0
Environmental education	2	6.3
Biodiversity conservation	3	9.3
Environmental interpretation	4	12.3
Agroforestry	1	3.1
Nature conservation	1	3.1
Wildlife conservation	5	15.6

Six per cent said they had attended in-service courses in biodiversity conservation although it is unlikely that the courses may have contained teaching on environmental interpretation. Fifty per cent had not received any form of in-service training. Of the three who underwent post secondary school training, two were Grade III teachers and one was a forest ranger.

Terms of employment of the ranger guides

All the respondents were full time employees of the Uganda Wildlife Authority. Half had worked for about three to five years (Table 2). The majority were doing interpretation as part of their jobs. This shows the multifaceted nature of park rangers' work. About one third were doing general work and one fifth were involved in trail development and maintenance. Almost as many were working as tour guides and 10% were involved in law enforcement. In Rwenzori Mountains National Park, some rangers were specialised in mountain rescue work.

The actual number of hours spent on environmental interpretation varied from up to 40 hours in a week for full-time ranger guides, to 9-24 hours for 46.9%, and 0-8 hours for another 46.9% of those doing environmental interpretation as part of their job. Based on these figures, it was estimated that between 336-2,520 man hours per week were spent on environmental interpretation by rangers doing it as part of their wider functions. This means that heavy demands from other duties can significantly reduce the amount of time available to rangers for environmental interpretation. This factor needs to be considered in the national park management planning if environmental interpretation is expected to remain an effective tool for managing ecotourism and conservation.

Reading materials and areas of present involvement in environmental interpretation

The titles of reading materials mentioned were "Field Guide to Plants and Trees of East Africa", "Collins East Africa Bird Guidebook", "Uganda Forest Trees" and "Primate Societies." The majority (71.9%) of staff involved with environmental interpretation did not have enough reading materials to keep them up-to-date with the theory and

Table 2. Job description of the rangers (N=32)

Job description	f	%
General work	12	37.5
Trail development and maintenance	5	23.4
Visitor guide	7	21.9
Research and primate habituation	6	18.8
Law enforcement	2	6.2
Years worked		
1 - 2	14	43.8
3 - 5	16	50.0
6 - 8	1	3.1
Over 8	1	3.1
Hours worked per week		
0 - 8	2	6.29
9 - 24	15	46.9
25 - 40	15	46.9

practice of interpretation work although the titles of the few publications mentioned clearly showed that they were directly relevant to interpretation.

Table 3 shows that about half of the rangers were working as guides and about one third claimed they were involved in other activities related to environmental interpretation, for instance, planning (31%), administration and co-ordination of interpretation (28%). Very few (18.8%) claimed they were involved in design and display of exhibits. Another one third said they were involved in training other rangers on environmental interpretation, but this is unlikely to amount to much because environmental interpretation generally is still very weak in Uganda's national parks. Moreover, the survey has shown that little has been done to train park rangers in environmental interpretation. Since the rangers themselves have not been trained, they cannot claim to be significantly involved in training others (Table 3). It was also doubtful whether rangers were really involved in monitoring and evaluating environmental interpretation in the respective national parks, although a few rangers were involved in some research.

Table 3. Areas of present involvement in environmental interpretation by rangers (N=32)

Area of interpretation	f	%
Field guide	17	53.1
Giving talks to visitors	15	46.9
Research	15	46.9
Training other staff in interpretation work	11	34.4
Participating in planning interpretation	10	31.3
Administration and co-ordination of interpretation work	9	28.1
Monitoring and evaluation of interpretation	7	21.9
Exhibit design and display	6	18.8
Participating in policy making through meetings etc	6	18.8

Management skills required for environmental interpretation

More than 80% listed knowledge of environmental protection/natural resource conservation. Two thirds

indicated knowledge of wildlife ecology and management, and 62.5% mentioned forestry. Knowledge of tourism management was listed by about half and almost the same proportion indicated knowledge of local culture, history and geography. This reflects the varied nature of knowledge rangers would like to have in order to be able to undertake interpretation work. A substantial proportion (40.6%) mentioned the ability to handle the public. Knowledge of law was the least favoured skill (Table 4). On the basis of these results it can be inferred that rangers who expect to get involved in interpretative work require

Table 4. Multiple response by rangers to question on skills required for environmental interpretation (N=32)

Areas where knowledge is required	f	%
Environmental protection/resource conservation	27	84.4
Wildlife ecology and management	21	65.6
Forestry	20	62.5
Tourism management	16	50.0
Local culture	15	46.9
Local culture, history and geography	15	46.9
Ability to handle the public	13	40.6
Law	8	25.0

knowledge in three main areas namely, wildlife ecology, forestry and tourism management.

Responses by wardens to a similar question were different. In their view, the most essential management skill required for interpretation is communication both verbally and in writing (Table 5). Most of the wardens felt that the ability to handle the public and to plan, develop and evaluate interpretation was important as well. Almost two

Table 5. Park wardens' views on management skills required for interpretation (N=8)

Management skills	f	%
Ability to communicate verbally and in writing	8	100.0
Planning and development of programmes	7	87.5
Evaluation of programmes and personnel	7	87.5
Supervision of work and personnel	7	87.5
Handling the public	7	87.5
Knowledge of Law	5	62.5
Training staff	5	62.5
Co-ordination of activities	5	62.5
Advice and counselling personnel	5	62.5
Budgeting and financial control	3	37.5
Delegation of duties	3	37.5
Research	2	25.0

thirds mentioned knowledge of law as an essential skill. Since the answers came from a very small sample it was difficult to make sufficiently well informed inferences from the findings.

Despite the small sample size, however, the results serve to illustrate that planning is an important aspect of interpretation. The least important skill indicated by the wardens was delegation of duties and ability to do research.

Qualities required for environmental interpretation

There was a common rank order of priorities (Table 6) and a general agreement in the rank priority given to qualities (2) and (8). Differences, however, were noted in the ranking of the other six qualities. Knowledge and understanding of resource conservation and management was ranked first priority by wardens, whilst knowledge of man-made and natural environments was ranked highest by rangers. More wardens than rangers considered the ability to use various communication skills and techniques as well as practical experience with use of interpretation materials and methods as important. The composite ranking of the qualities from the two surveys is consistent with information from

literature, all of which indicate that when employing interpreters, knowledge of resource conservation and communication skills would be the first qualities to look for.

Motivation

It is clear from the findings of the survey that rangers were first employed to do work other than interpretation. When asked what motivated them to take up their present jobs, more than 50% mentioned employment opportunity and over three quarters said it was because the job involves working with people (Table 7). About 13% stated personal challenge and 15.6% mentioned higher salary. Nearly two thirds said environmental concern whilst 46.9% thought the job would give them the opportunity to further their involvement with nature. These findings implied that in-service training on environmental interpretation will be well received because the rangers already have great interest

Table 6. Qualities to look for when employing an environmental interpreter. Average score and ranking by wardens (N=8) and percentage response by rangers (N=32)

Knowledge on	Av. score	Rank ¹	%	Rank ²	Sum. Av
1. Resource conservation and management	1.5	1	68.8	2	1.5
2. Communication skills and techniques	3.1	2	59.4	3	2.5
3. Man made and natural environment	3.5	3	71.8	1	2.0
4. Human behaviour	4.5	4	46.8	4	4.0
5. Use of interpretation materials and methods	4.5	4	43.8	5	4.5
6. Presentation of interpretation materials and methods	6.0	5	37.5	6	5.5
7. Ability to lead, motivate, and counsel staff	6.5	6	3.12	7	6.5
8. Ability to pursue a concept from its inception to implementation	6.5	6	43.8	6	5.5

Sum. av = summary average of ranking by rangers and wardens

1= ranking by wardens based on average score

2= ranking by rangers based on percentage

Table 7. Factors that motivated rangers to take up their present jobs (N=32)

Motivation factors	f	%
To work with people	25	78.1
Environmental concern	20	62.5
Employment opportunity	17	53.1
To further involvement with nature	15	46.9
Higher salary	5	15.6
Personal challenge	4	12.5

in activities related to nature conservation. When employing rangers in future, national parks may need to look for people who have some knowledge in these areas so that in-service training on interpretation would only serve to enhance their skills. Though 57.5% felt that interpretation received its rightful status within their respective national parks, it is very unlikely that this was the case because as already mentioned above, interpretation is still little understood in Uganda.

Status of environmental interpretation

The majority of wardens and rangers felt that national parks have clearly stated objectives on interpretation to guide their work. But this can be doubted because none of them

Table 8. Views by wardens and rangers on the status of interpretation in their respective national parks (N=40)

Responses	f	%
Does your organisation have clearly stated objectives on interpretation?		
Yes	27	67.5
No	6	15.0
No idea	7	17.5
Does interpretation have a rightful status in your organisation?		
Yes	23	57.5
No	13	32.5
No idea	4	10.0
Do you envisage increased use of interpretation?		
Yes	40	100.0
No	0	0
Do you have enough facilities/resources for interpretation?		
Yes	0	0
No	40	100.0

could state those objectives. Fifteen per cent admitted that the national parks do not have any policy on interpretation, a view shared by the author. Almost the same proportion had no idea (Table 8).

In the main, the rangers and wardens did not know how to influence the objectives of environmental interpretation (if there were such objectives) in their respective national parks. Even the wardens, who are more senior officers in national parks, have very little knowledge about interpretation although they envisage its increased use. There were suggestions that adequate resources should be provided and facilities made available for interpretation. Facilities required by rangers involved in environmental interpretation are audio visual equipment, binoculars, rain coat for field work, water proof boots for field work, cameras, reading materials on environmental interpretation, first aid kit for the mountain group. The terms of service expected by the rangers were higher salaries, transport, housing and medical allowances, further training, in-country study tour and visits within the Eastern Africa region.

Discussion and conclusions

This study has shown that the status of environmental interpretation in Uganda's national parks is still generally very poor and that the concept is little understood. Several reasons are responsible for this state of affairs. Firstly, it has become clear from the survey that Uganda's national parks, at this stage, do not have clearly stated objectives on environmental interpretation. Even at the highest level, it appears the Uganda Wildlife Authority (UWA) does not have any policy on environmental interpretation. Environmental interpretation has either been overlooked or is simply not given any priority in park management.

The rangers have fairly low educational backgrounds and never received training in environmental interpretation prior to being employed with national parks. As such they have little knowledge of environmental interpretation. Consequently, the rangers involved in interpretation work did not know at the time they were being employed that they would be involved in environmental interpretation. The fact that rangers were employed after completing primary or secondary school education only makes the situation even worse because they would not be able to understand certain aspects of ecology and biological conservation and at the same time interpret them well to visitors. There need for rangers to undergo proper training in interpretation before being assigned duties as guides. Even those who claimed to have attended courses on interpretation would require further training in order to enhance their interpretation skills.

As environmental interpreters in national park settings, rangers require knowledge of ecology, conservation and tourism management. They also need to be provided with adequate reading materials to keep them up-to-date with the theory and practice of interpretation. As noted by Seabrooke and Miles (1993), interpretation requires not only a subject to interpret, but also a medium for communicating the subject to the intended audience. To this end, proper visitors/interpretation centres need to be established in the national parks. Facilities such as audiovisual equipment, well designed posters and good information displays are essential in interpretation and should be provided as well although funding for such developments is a problem.

Training in environmental interpretation at the national level may be co-ordinated by the National Environment Management Authority (NEMA) whilst the UWA may be responsible for in-service training programmes for staff in the national parks directly involved in environmental interpretation work. Training may start with courses designed for trainers. Participants may be drawn from government departments and agencies whose activities involve environmental interpretation such as the Forest Department, UWA, the Uganda Museum, Department of Antiquities, the Botanical Garden, Uganda Wildlife Education Centre, Uganda Wildlife Society, tour companies and environmental NGOs. In the later stages, training may be decentralised to agency level so that individual agencies or departments can conduct courses appropriate to their needs.

At departmental or agency level, training may take place at one or more stages of staff appointment. As pointed out by Stevens (1982), the principal qualities sought in an interpreter are personality characteristics, but interpretation is a teachable art. Training may be given before service begins and may be academic or professionally oriented as a basis for long term career development. At the same time it may be given while in service as part of a skill foundation or career development programme, again in the form of in-service courses. On the other hand it may be included as part of curriculum for teaching in institutions carrying out training, for instance, in forestry, conservation biology, environment management, tourism and leisure and hospitality. Many graduates from such institutions usually obtain employment with organisations involved in natural resource management where environmental interpretation is essential.

Inter-agency or inter-departmental partnerships may also be developed to increase effectiveness of environmental interpretation. According to Capelle and Farrell (1991), developing and fostering a variety of resource agency partnerships is a major way of achieving greater interpretative effectiveness. Areas of interpretative partnerships may include institutional partnership (e.g. resource agency - university), intra-agency partnerships, and resource agency - private sector (consultant) partnerships.

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