



## Conservation Status of Aberdare Cisticola in Mau Narok/Molo Grasslands Important Bird Area in Kenya.

### PROJECT REPORT: June to October 2006

The project commenced in June 2006 and since then all the planned activities have continued quite successfully as was scheduled in the original proposal. So far two field visits have been made to the sites. The first visit which was in June 2006 was meant for preliminary survey. A summary of the findings of this first survey was sent to BP and then published on the BP website. The same was also published in the Kenya Birds magazine to let the public know the situation of the species on the ground. To date we have established habitat selection for the species, population and threats impinging on the species population. Brief assessment of the local community attitude on conservation in general and specific to birds has been conducted only to some extent. Education and public awareness for the conservation of the Aberdare cisticola has reached various stages of completion. The following are our planned activities for the next visits.

- Develop materials for public awareness and distribute e.g. pamphlets, checklists for avifauna of the area, of threats etc
- Identify locals for capacity building and further training in field surveys who will help in post project monitoring and gathering data
- Public awareness of need to conserve species and the habitat, carry out interviews to assess local perception and bird conservation.

The survey has already confirmed the presence of the species at both study sites. The habitat surveys have been conducted successfully at both sites and the status of the habitats and the remaining suitable habitats has been established by this survey. Breeding attempt by the species in the habitat was also confirmed by this survey (photo below) through nest searches and observations of juveniles. The species populations, habitat requirements, potential threats and general status have been established while local attitudes and community awareness and education will still continue in the next coming months.



*Nest of the Aberdare cisticola. Tussocks are very important sites for placing nests*

During this period a number of individuals joined in order to assist with the volume and intensity of the fieldwork. The individual most of who were students from various institutions have gained field experience during the training sessions which were done prior to every survey and the brief community conservation awareness initiatives during the field work. The contribution of all the participants was invaluable to the projects success to date (brief academic profiles and photos of participants are provided at the end of the report).

In the coming months we plan to concentrate more on community outreach programmes beginning March 2007. To achieve this we plan to hold public workshops for school children around the sites and also to the land owners. For this objective we shall design posters and fliers which will be distributed and to the schools. As much as possible both local and English language will be used on the posters and fliers to pass the message across all categories of the community members. The outreach programmes (campaigns and awareness) will involve both school going age groups and older members of the communities.

## **Field Work:**

### **Habitat survey (grassland cover and species distribution and threats)**

Measures of grassland quality were recorded within a plot of 25m radius using a system developed for monitoring grassland habitat in Kinangop (Muchai S.M 1998). At the centre of the plot, different vegetation characteristics were measured: i.e. grass height, cover and percentage cover of tussocks, tussock height and percentage cover, average grass height, bush height. The same attributes were also recorded where the species was encountered in order to establish habitat selection for the species. A representative survey of the rivers was undertaken.

Mau Narok still has extensive grassland that occur as large continuous patches (often broken by extensive monocultures) favouring the existence of the *Aberdare cisticola*. The species was found to occur more in areas of extensive grasslands in Mau Narok as compared to Molo. The distribution of the *Aberdare cisticola* was closely related to the topography of the grassland habitats and drainage pattern of the study area. They were present in areas within valleys or water sources such as dams or swamps. The distribution of the species was mainly restricted to valleyed landscapes and also areas where there were some herbaceous plants sprouting in between the grasslands and sometimes these were used for perching, making calls within the habitat.

Results of the survey suggest that good numbers of the *Aberdare cisticola* exist in the remnant grasslands of the study area. The *Aberdare cisticola* occurred in grassland patches that were surrounded by cultivated land, and were greatly isolated from other grasslands. The birds are being pushed in the few grassland remnants by the unfavourable land uses that now occupy larger proportions of the study area. The birds were mostly associated with areas of tussock that was either evenly or sparsely distributed with bushes and tussock grass, especially around the river valleys,

Areas of natural grasslands was estimated to cover 25.8% ( 11180) which is less than a third of the total estimated by (c. 13,000 ha: Ndanganga and Mulwa 2002 ) of the estimated area (c. 40,000 ha; Bennun and Njoroge, 1999) of the Mau Narok/Molo Grasslands Important Bird Area (IBA). The sizes of grasslands in the study sites were very small ranging from 2ha to 30ha in Mau Narok and 2.3ha to 20 ha in Molo, all these occurred in between cultivations. None of the *cisticola* observations was made in the cultivated areas. Continuous grasslands were mostly spared along the normally sloppy and shallow drainage valleys. Most of the surveyed grassland patches were found along river or stream valleys.



*Member of the team conducting habitat assessment: This kind of habitat is also preferred by *Aberdare cisiticola*. The small bushes on the foreground are very important for perching during feeding and making contact calls and the surrounding tussocks for cover and placing nests.*

### **Bird Census**

Population was estimated and distribution determined through repeated transect counts, randomised across the study sites (Pomeroy, 1992). This was established by walking along transects which ranged from 0.8km to 1.5km depending on the size of the plots. The same transects used for recording habitat parameters were also used for the census survey. All the *Aberdare Cisticolas* encountered including other bird species were counted and their perpendicular distances to the transect recorded following Buckland *et al* (1993). The presence and density surveys were completed by November 2006. The population estimate was 127 individuals at the Mau Narok study sites and 68 in Molo study site giving a total population of 195 birds. The total population estimate was  $1750 \pm 60$  in the remaining grasslands.



### **Land use survey**

The aspects of human land use activities were identified and quantified and recorded in each study plot. Relative proportions of different land uses in the study area including settlements, cultivations, natural areas, wetlands, grasslands, indigenous forests, tree plantations etc. This was achieved by estimating the percentage cover of each land use category around a point. Land use included areas of farmlands and these were much extensive in Mau Narok with large plantations of barley, wheat etc, wetland areas, settlements and tree plantations. In Molo, they only practiced smallholder farming and wheat was mostly common in addition to maize, potatoes and cabbages. The land in Molo is already subdivided into very small units than Mau Narok where you find extensive areas of grasslands.

Molo is mainly inhabited by the agriculturally based communities whereas Mau Narok mainly occupied by the Maasai community, who practise pastoralism, and have a tendency of leaving extensive pasture for their livestock. This practice is, however, being broken by the influx of large-scale Barley and wheat production posing a major threat especially to the large grassland areas. With this reduction in pastureland, the remaining grasslands are subjected to heavy grazing due to large livestock herds kept by the pastoral community. From the interactions with the locals, this study also revealed a large influx of new comers purchasing land from the original inhabitant

who are pastoralists for cereal (mainly wheat and barley) farming, which is a very lucrative enterprise. With encouragement from the East African Breweries who are the major consumers of barley, the pastoral communities are also turning to barley farming. This poses a major threat especially to the large grassland patches on the southern side of Mau Narok. This survey showed that flat areas are often prioritized by farmers for cultivation. Grasslands are spared on areas that are sloppy and shallow-soiled along river/stream valleys and dam areas. However, such areas may be extensive since they may transverse through many farms. Most of them are, however, poorly configured (long and narrow) and may not be preferred by grassland birds.

Further observations revealed different types of land management practices. Evidence of burning on grasslands revealed that this is a major management practice in the study area especially in Mau Narok. Most of the grassland areas, >70% (n=31) had been subjected to burning in previous seasons and during our survey 20% of the grassland area were newly subjected to burning. This is practiced by the farmers in order to improve grass quality for their livestock and usually applied repeatedly with the onset of rainy seasons, which may also coincide with the breeding seasons of the grassland species. The survival of the *Aberdare cisticola* in the Mau Narok Molo IBA to some degree will depend on how the farmers manage their land. There is need to advise farmers on appropriate land use and management practices that would favour the existence of the grassland specialists in this IBA. Land management practices compatible with the conservation of the grasslands are highly needed. The high population densities in Molo have led to a high number of farms being fenced. This land division into tiny parcels could result into fragmentation thus reducing grassland patch size that would not contain the species. Grazing is another practice that is not well defined. Proper grazing treatments (intensity and period) should be recommended. The survey revealed that the birds are seriously being affected by the land uses. The expansions of cultivated fields are likely to be responsible for the status of the species.



*Left: Conducting land use surveys. This shows large (highly mechanised) wheat farms on the background.  
Right: Photo showing overgrazed grasslands*

### **Survey of local perception towards conservation**

Brief informal interviews with local people and especially landowners have so far been made to identify possible future collaborators and contact persons. This was conducted in order to assess their perceptions towards conservation in general and also specific to birds ( Appendix 1). During the coming months formal visits will be

made to schools (both primary and secondary) and landowners to reach the community while creating awareness aimed at conserving biodiversity. Workshops and meetings will be planned for villages within the study area, so that we may impart information to the locals. Posters will be designed to be distributed to schools and larger institutions.



*Local community members with some of the team members. We occasionally conducted brief demonstrations on our activities and bird identification skills in addition to creating awareness.*

### **Other surveys**

Opportunistic nest searches were conducted in the grasslands for evidences of breeding birds. The survey established the importance of the IBA for other species both grassland and non grassland was exhibited by the common occurrence of the Near-threatened Jackson's Widowbird, Sharpe's Longclaw and other grassland specialties, e.g. Wing-snapping Cisticola, Hunter's cisticola, Laveillants Cisticola, Red-capped Lark and Grassland Pipit. Other birds though non grassland species recorded were the great Crested Grebe also Regionally threatened ( Critically) was encountered with its juveniles and Maccoa Duck ( also regionally threatened and endangered) among others were also recorded both at Kenyatta Dam in Molo. Sound recordings for the cisticola were taken during the survey, however, the species did not respond effectively to the playback or probably we did not get the best calls, which the species could have responded. We intended to use the playbacks for the species survey. Where possible birds were captured and ringing. The ringing sessions revealed that the species is very rare since even catching them was not an easy task.



*Great crested grebe observed at kenyatta dam in molo*





*Left: Team preparing for mist netting  
Right: Mist net up and ready*



*Left: bird extractions  
Right: bird ringing and below showing Aberdare cisiticola ringed*

### **Project Participation by team members**

The survey involved a number of students from various academic backgrounds who were also attached to the Department of Ornithology, National Museums of Kenya. We did not maintain the team as was in the original proposal since by the time we commenced field work the two students from Tanzania and Sweden were not in the country since they had travelled home for other commitments. The two were however replaced. So far 8 students have participated in this survey under various capacities and in no doubt the survey has helped them gain practical field experience. We intend to incorporate others in this team. In total 10 people have participated many of whom shown interest in returning to work with us again. A number of locals have also shown interest in working with us some of whom we intend to incorporate in our next programme on education and awareness for the conservation of the species and the habitat. So far we have presented results to the Bird Committee of Nature Kenya (where Philista Malaki is a member) who also has interest in knowing the status of the species in the IBA.

Out of this we managed to write an article in the Kenya Birds magazine about the situation on the ground. A number of ornithologists and local scientists have since then showed an interest in doing some research in the IBA which in no doubt will assist in restoring the habitat if not saving the remaining habitats for the species survival.

It is hoped that the field-work aspect of this study will be completed by the end of June 2007, although follow up studies are being considered as recommended in our earlier report. A preliminary report has been compiled. A seminar is planned to present the findings of the project to local scientist which will also be presented to the international audience during the Society for Conservation Biology meeting in South Africa.

### **Fieldwork experience gained**

A wealth of field experience has so far been gained by the participating team. Various team members participated under various capacities and research backgrounds and were able to acquire relevant skills in research. The project provided the opportunity for team work, ecological research and exposure to the general biodiversity and habitat of Mau Narok and Molo area. Some of the members were seeing the species for the first time and even handling it on the hand. Being a very rare species and an endemic one not having been seen by many people this was a very exciting opportunity and experience for the team. Signs of stressful and tiredness can not be ruled out in such a survey especially when we had to walk transects up and down the valleys. In certain days walking without even observing the species was humiliating though in science we say this was still enough data to report. Generally the part of the field has also been encouraging, satisfying and valuable learning experience to all the team members.

### **Summarised team academic profile**

Following now are brief academic profiles for the team.



*Mery Mwanika , the student team during one of the surveys. She has a Bsc in Wildlife Management and currently pursuing an Msc course in GIS , the team wishes her all the best because the skills will be very important when applied to our project.*



*The team from left to right: Nicodemous Nalianya (Just complete a diploma course in Wildlife Management, Chege Kariuki , is a professional tour (Bird)guide holds a diploma in Environmental Management, Timothy Mwinami has a diploma in Wildlife Management and currently pursuing a degree course on the same in his second year and philista malaki completed an Msc in Dryland Biodiversity also has a Bsc in Natural Resource Management and aspiring to pursue a Phd ).*

Other team members not captured in the photo are;

- Josephine Nzilani completed a Bsc course in Wildlife Management in 2006 and is currently on internship program at the department of ornithology.
- Geoffrey Mwangi completed a Bsc course in Wildlife Management in 2005 and is currently on internship program at the department of ornithology.
- Benard Amakobe has varied experience in bird research having assisted research both local and international has will soon enroll for a diploma course in Environmental Management.
- Mary Warui completed a Bsc course in Wildlife Management in 2006 and is currently on internship program at the department of ornithology.
- Joseph Mwangi will this year complete a Bsc course in Wildlife Management and is also on internship program at the department of ornithology during vacation.

#### **Acknowledgement.**

To all who have contributed to the success of the project to date. The Department of Ornithology for all the logistic support. BP conservation programme for the financial support.

**Appendix 1: Mau - Narok Molo Grasslands *Aberdare cisticola* Survey – October 2006**

**Questionnaire used in assessing land-use and community attitude towards birds in and around the study area.**

***Section A: General information***

1. Personal Details

Name: \_\_\_\_\_ Name of the Property \_\_\_\_\_

Date: \_\_\_\_\_ Mode of ownership \_\_\_\_\_

2. What is your general feeling about birds?

Interested ( ) .Mildly interested ( )

Not specially interested ( )

3. Are birds of any special concern to your business? e.g. shooting rights, trapping rights

Yes ( ) No ( )

Please give specific examples

4. Are there any threats to your business from birds? e.g. hawks taking poultry, or birds spreading cattle diseases Yes ( ) No ( )

If yes, provide examples of birds for above cause

5. Do you hunt birds for sport? Yes ( ) No ( )

6. Do your workers ever trap birds for eating? Yes ( ) No ( )

If yes, provide examples of birds for above cause

7. Of what other reasons are birds important to you? e.g for sheer beauty

Mention all

***Section B: Specific to the *Aberdare cisticola****

1. Do you know the *Aberdare cisticola*? Yes ( ) No ( )

2. Where have you seen it, and when did you last see it? Please describe the habitat seen.

3. Do you know that this species is rare in Kenya and seriously threatened globally?

Yes ( ) No ( )



7. Are there areas in your property cleared for cultivation of food or cash crops, etc?

Yes ( ) No ( )

Could you give a rough assessment of the acreage devoted under each of these?

8. Do you ever harvest local trees for timber uses? Yes ( ) No ( )

9. In your replanting or reforestation plans, what trees are you planting? How many acres do you hope to plant annually?

10. Do the areas of wholly natural grassland, bush or forest in your property constitute any threat to you, your workers or your farming work, e.g. harbouring buffalo, snakes, leopard or other predators?

Yes ( ) No ( )

How?

Do these same areas contribute in anyway to your farm output so that you might like to conserve and even add to it? Yes ( ) No ( )

11. Do you practice any form of conservation on your land? Yes ( ) No ( )

If yes, how?

12. Whatever is your response to the above, would you ever consider leaving it as natural without any interference, simply as a conservation measure towards birds and the general habitat?

Yes ( ) No ( )