

**A REASSESSMENT OF THE DISTRIBUTION AND CONSERVATION STATUS OF SHARPE'S LONGCLAW
(*MACRONYX SHARPEI*)**

**Report of activities and results
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Overview of the survey aims and of the fieldwork

This work is part of a broader project aimed at reassessing the conservation status of Sharpe's longclaw *Macronyx sharpei*, a highland grassland specialist endemic to Central and Western Kenya.

This research began in July 2008, with initial funding provided by the British Ecological Society and the Conservation Fund of the African Bird Club. In July-September 2008, we visited various locations in Central Kenya (Mt Kenya, the Aberdare National Park, the Kinangop plateau, Nyahururu-Gilgil area and Molo plateau). Further funding was awarded by the Birdfair/RSPB Small Grants for Research in February 2009, in order to allow visiting other key areas in the western part of the range of Sharpe's Longclaw (i.e. Mau-Narok, Uasin Gishu, Cherangani and Mt Elgon).

The aim of our survey was to reassess the status and distribution of *M. sharpei* over its entire range, particularly in areas (Mt Elgon, Uasin Gishu, Mau Narok Mt Kenya and Aberdare NPs) where the species was reported in past times, but from where no records have been obtained for years or decades.

Field methods

Sharpe's Longclaw was counted within natural highland grassland (the only habitat where the species is known to occur) using the flush and count method, in which a group of 3-5 observers walk a transect of 50m of width dragging a rope to flush the birds that hide in the grass (Muchai et al, 2002). We obtained a sample of 153 counts spread over the entire range of the species (from Mt Kenya 0°10'N 37°30'E to Mt Elgon 01°05'N 34°40'E; Fig 1). At each site, we recorded GPS coordinates, elevation, habitat structure (height of grass and percentage of tussocks) and an assessment of the perceived threats to the site.

Results

In total, between July 2008 and September 2009 we performed 152 transect counts, of which 53 provided records of Sharpe's Longclaw.

A positive result of this survey is that we did not find evidence of major declines on the extent of occurrence (as defined by IUCN 2001) of the species (Britton & Backhurst 1980). We actually were able to slightly expand the range of the species northwards in the **Cherangani hills** (Figure 1: area 2), where it had never been reported before.

Another positive result was the confirmed presence of the species in high altitude grasslands (above 3000m) in **Mt Kenya National Park** (one observation was recorded on 17/Jul/09 at 3592 m altitude by Dr Peter Njoroge; Fig 1: area 8). Another observation was recorded by us on 12/Sept/09 at 3460 m very close to, but slightly outside of the border of **Mt Elgon National Park**, just 5 km from the Ugandan Border (Fig 1: area 1). On the contrary, a visit to the **Aberdare National Park** in August 2008 did not produce any record. All these three areas had old (before 1970) records of longclaw, but no recent confirmation of continued presence was available. While these data confirm

that populations of Sharpe's Longclaw exist inside protected areas, the estimated densities (about 0.1 pair/ha), are very low, suggesting that the size of the population inside protected areas is very small. It is clear that protected area currently play only a minor role in the conservation of Sharpe's Longclaw.

At lower altitudes, Sharpe's Longclaw still persists in various areas where the species' presence had not been confirmed for several years, but signs of widespread and major reductions in area of occupancy (as defined by IUCN 2001) are obvious.

In the formerly extensive **Uasin Gishu** grasslands (Fig 1: area 3), despite 4 days of intensive searches (20 transects, 14.8 km total length surveyed), we were only able to obtain 3 records of Sharpe's Longclaw. The large majority of natural grasslands in this area have been converted to agriculture in recent years, and often even the remaining patches are not occupied by the Longclaw, which is sensitive to habitat fragmentation (Lens et al 2001). In Uasin Gishu, the Longclaw was observed in only 3 out of 20 natural grasslands surveyed, and, in the occupied habitats, it reached a density of 0.4 inds/ha (sample: 2.2 km of transect), which appears to be in the low end range of the densities usually shown by the species in appropriate habitats (Muchai et al. 2002).

The **Molo-Mau Narok** grasslands (Fig 1: area 4) are an important stronghold for Sharpe's Longclaw. This area was surveyed in 2001 (Ndang'ang'a et al 2003), and we were able to resurvey the same sites of the 2001 survey using a GPS to locate them; in total 18.1 km of transects were performed. Of 36 areas of natural grassland in 2001, 10 (28%) had been transformed into cultivations in 2009. Sharpe's longclaw was found in 13 of the remaining 26 grasslands, with a quite high average density (1.2 inds/ha, the same found by Ndang'ang'a et al (2003)), which shows that the remaining grassland in Molo-Mau area still has a good potential as a habitat for Sharpe's Longclaw. However, rates of conversion to agriculture are extremely rapid, and all sites that we visited in 2009 were surrounded by cultivations, suggesting that all of them are highly threatened by habitat change in the near future. No protected area exists in the Molo-Mau region, nor is there currently any plan to create one or to develop any conservation initiative in this area.

In the **Kinangop** plateau (Fig 1: area 5), the best-known site for Sharpe's Longclaw, we did transects in 21 grasslands, for a total length of 15.4km. Sharpe's Longclaw was found in 17 (81%) of the surveyed grasslands, with average densities (in occupied grassland only) of 1.3 inds/ha – similar to those observed in Molo-Mau Narok, the other stronghold of the species. Even in this area, rates of conversion of grassland to agriculture are high – data extracted from NatureKenya annual monitoring suggest 20% habitat loss since 2004.

In the **Nyahururu** area (Fig 1: area 6) we visited 31 grasslands (31.3 km of transects surveyed), and we found Sharpe's Longclaw in 10 sites (29%). Average densities in occupied sites were 0.7 individuals/ha, quite lower than those found in Kinangop and Molo-Mau. In particular, along the shores of Lake Ol Bolossat, that has very large patches of natural grassland (about 500 ha), recorded densities of Longclaw were only 0.2-0.4 inds/ha. Lake Ol Bolossat is an Important Bird Area (Bennun and Njoroge 1999), and has been proposed as a possible site for a national conservation area (Wamiti 2008). Unfortunately, low densities of Longclaw around Ol Bolossat (as well in the entire area) suggest that habitat quality is not optimum for the species. It is still unknown what factors contribute to the low density of Longclaw in this sector. Perhaps excessive grazing pressure by cattle and sheep are to blame for this.

In the very large **Solio Ranch** (Fig 1: area 7) approximately 20,000 ha of natural grassland remain. Sharpe's Longclaw here occurs at its lowest know altitude (1930 m), and with very low densities (0.1 inds/ha, sample: 6.8 km of transect). However, despite the low density, Solio Ranch might be an important site for Sharpe's Longclaw, considering the large size of this private ranch. Unfortunately, half of the area was recently sold to the Government of Kenya that plans to transform it into a large resettlement scheme that will eventually be entirely cultivated. At the time of our visit (September 2008), surveyor's stakes had already been placed on the area, suggesting that conversion to agriculture will be rapid.

In the area **North of Mt Kenya** (Fig 1: area 8), extensive natural grasslands existed, but have almost entirely been converted to agriculture. However, three large private farms (Emburi, Kisima

and Marania) still have approximately 1500 ha of natural grassland remaining, and the owners, with whom we were able to talk, told us they had no plans in the near future to convert these grasslands to agriculture. Estimated densities of Sharpe's Longclaw in this area are extremely high (2.0 inds/ha sample: 2.1 km of transect), suggesting that these three farms are a key area for the conservation of Sharpe's Longclaw.

Preliminary population estimates

Table 1 presents a preliminary attempt to estimate the size of the global population of Sharpe's Longclaw. We evaluated the amount of available habitat (natural grassland) through our own field GPS measurements, Landsat Satellite images of the years 2000-2003 and, for some areas, high-resolution air photos available through Google Earth. Estimated average densities are lower than those presented in the previous section, because for population estimated we averaged count results of all transects, including those where no bird was observed (in the previous section, we presented high-end estimates generated by averaging only the transects where at least one longclaw was observed).

In general, our population estimates (which are still preliminary and might change when more precise assessments of habitat area are done), suggest the following:

- 1) The global population of the species is confirmed to be in the order of 10-20,000 individuals, in accordance to previous estimates (BirdLife 2009)
- 2) Less than 10% of the global population of Sharpe's longclaw is protected inside Government managed conservation areas
- 3) The key zones for the species are Kinangop plateau, Molo-Mau and the Marania-Kisima-Embori farms. Together, these sites hold about 75% of the global population of the species. Of these three subpopulation, two (Kinangop and Molo-Mau) are probably in rapid decrease due to rampant rates of habitat destruction. The third one might be numerically stable, but still at risk due to the very small size of the area.
- 4) The Solio Ranch subpopulation deserves more fieldwork to assess its size with greater precision. If confirmed, this subpopulation has great conservation importance, but ongoing conversion of a big proportion of the Ranch to a resettlement scheme is cause of great concern
- 5) Causes for low average densities observed in Ol Bolossat should be investigated. If overgrazing of the grasslands by domestic cattle and sheep will be found to be the cause, this subpopulation has much potential for numerical growth if lower stocking densities of domestic herbivores are obtained.

Conclusions and recommendations for conservation

Our survey suggests the following actions as priorities for conservation:

- 1) Establishment of new conservation areas in order to increase the proportion of the global population under strict protection. Lake Ol Bolossat might be considered to this purpose, but further research is needed to understand the causes of the relatively low population density in this site
- 2) Increased attention towards previously little-known areas. In particular, sites in the surroundings of Mt Kenya (Solio Ranch and the Marania-Kisima-Embori farms) should be studied in better detail, and agreements should be pursued with the private owners of the land in order to better guarantee the conservation and correct management of highland grassland in these sites
- 3) In Kinangop and Molo-Mau, there seems to be little ground for the establishment of new conservation areas, because almost the entire area in these sectors is owned by numerous smallholder farmers. In these two sectors, that together hold >50% of the global population

of the species, alternative conservation strategies should be pursued, in particular to discourage agricultural conversion of the grassland. Alternative income generating activities should be developed, such as sheep farming for wool production. A pilot project of this kind is under way in the Kinangop plateau (<http://10000birds.com/njabini-april-2010-a-three-month-update.htm>), and we are actively involved into it.

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Table 1. Preliminary population estimates of Sharpe's Longclaw global population

Sector	Estimated area of grassland (ha)	Average density of Longclaw (inds/ha)	Estimated population (inds)
Mt Kenya NP	10,000	0.1	1,000
Aberdare NP	5,000	0.0	0
Mt Elgon NP	5,000	0.1	500
Marania-Kisima-Embori farms	1,500	2.0	3,000
Cherangani hills	2,000	0.15	300
Solio Ranch	20,000	0.1	2,000
Nyahururu-Ol Bolossat	3,000	0.15	450
Kinangop	5,000	1.0	5,000
Molo-Mau	10,000	0.3	3,000
Uasin Gishu	1,000	0.1	100
Total	67,500	0.4	15,350

Figure 1. Study area, and records of Sharpe's longclaw obtained during the survey.

