MONITORING AND HABITAT REHABILITATION FOR
Sharpe's Longclaw IN KINANGOP KENYA

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FINAL REPORT- PROJECT NO 1422
MONITORING AND HABITAT REHABILITATION FOR
Sharpe's Longclaw IN KINANGOP KENYA

The Aim of this Project was to Build Capacity and Involve Local Youths and Grassland Owners in Conserving and Monitoring Sharpe's Longclaw and its Grassland Habitat in Kinangop.

(01/11/2020 – 18/8/2021)

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4 of 5 Team Members: from left; Maryanne Muriuki, Martin Mwangi, John Gitogo and Cynthia Gichimu, March 2021

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Acknowledgements

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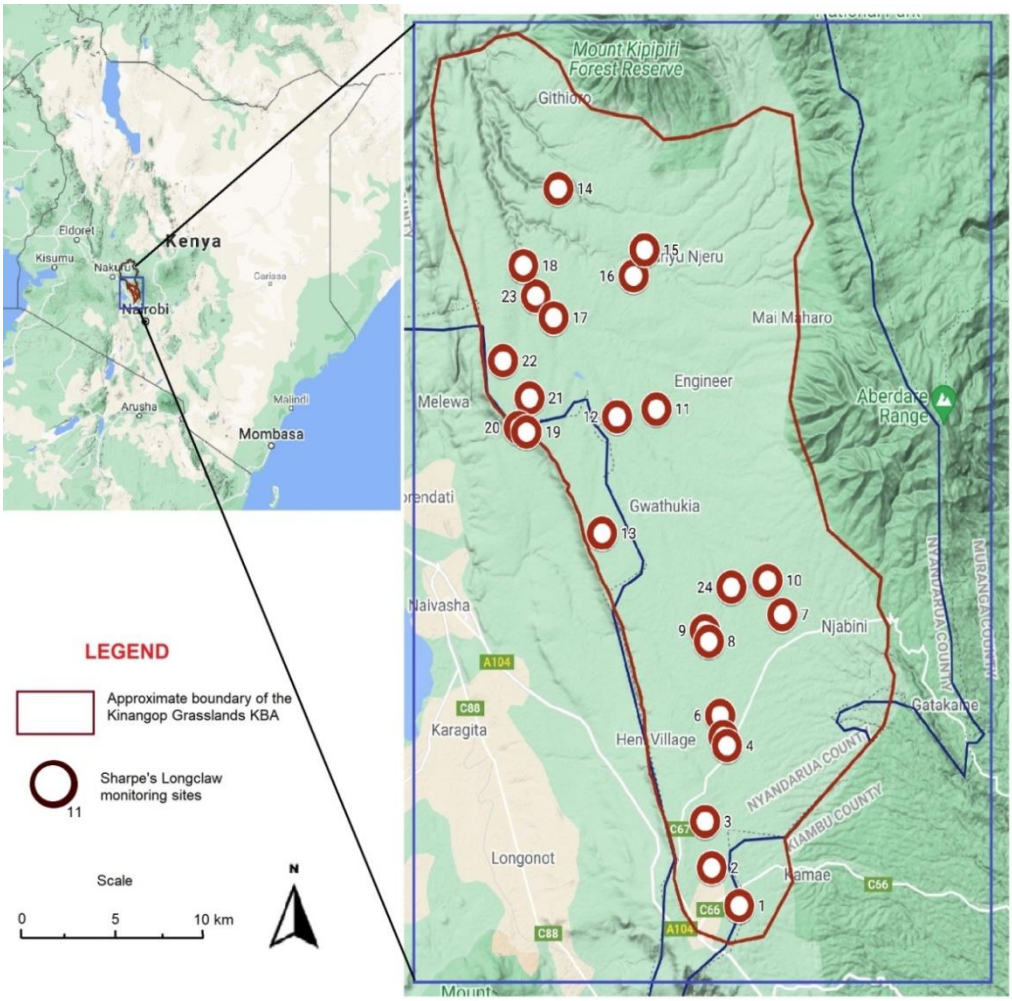
1.0 Summary

Over the last 50 years over 90% of the unique Kinangop highland grasslands have been lost as a result of change in land use, poor management and fragmentation. This is despite being an Important Bird Area (IBA) and hosting endangered Sharpe's Longclaw *Macronyx sharpei* among other threatened biodiversity. This project aimed to build capacity and involve local youths and grassland owners in conserving and monitoring Sharpe's Longclaw and its grassland habitat in kinangop. We held workshops with grassland owners and farmers educating them on good grassland management. Participants were also directly engaged in management of grasslands by physically managing weed and overgrown tussocks in 760 acres. Grassland owners also influenced their own grasslands, 850 acres. Training to 23 local youth and other residents on biodiversity monitoring was done. The training was facilitated by bird experts from Birdlife International, National Museums of Kenya and Nature Kenya and culminated to development of Sharpe's Longclaw monitoring protocol. Following the procedures laid in the protocol, survey was done with the result showing a serious decline to the population of Sharpe's Longclaw and the grasslands in Kinangop. The survey report has since been accepted for publication by African Bird Club Bulletin and will be out in March 2022. To positively influence decisions of more grassland managers and farmers, environmental awareness and education was done. We recommend promotion of traditional livestock rearing through establishment of sheep gene bank in Kinangop to avail good quality sheep breed and support willing farmers into livestock rearing. We recommend development of a Sharpe's Longclaw conservation action plan. We also recommend further capacity building on more conservation skills and awareness to more Kinangop residents and piloting of vertical farming which uses less space to produce more.

1.1 Background

Kinangop Highland Grasslands are internationally recognized Important Bird Area (IBA) in Kenya. They are home to threatened birds including Sharpe's Longclaw (endangered), Grey Crowned Crane (endangered), Aberdare Cisticola (Vulnerable), Jackson's and Long-tailed Widowbird (Range restricted) among a list of close to 200 other bird species. Despite their ecological importance, the highland grasslands are all in privately owned land and are not protected and have seen a sharp decline in extent and quality over the last 50 years. Now, it is estimated that only less than 10% of the original 77,000 ha is remaining and may be suitable habitat for Sharpe's Longclaw. Change of land use from the traditional livestock grazing to crop cultivation, exotic tree plantations, weed invasion and overgrowing of tussock are serious threats besides fragmentation as human population increases.



Map of Kinangop Plateau with pre-identified birds monitoring sites

Parallel to the decline of grasslands, are disproportionately higher declines of biodiversity and birds' populations including Sharpe's Longclaw. This is also subjecting the local community to increased vulnerability to climate change.

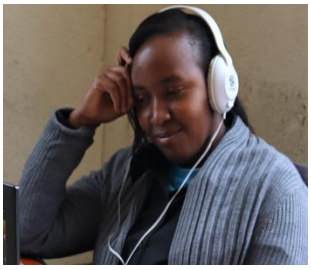
The project design was informed by the fact that these grasslands are privately owned and there is limited capacity by the grassland owners and farmers to participate in conserving the grasslands and biodiversity in it. The grasslands and its threatened biodiversity have received limited conservation, monitoring and research efforts besides once from Friends of Kinangop Plateau, a community based conservation organization.

Creating a foundation for biodiversity monitoring in Kinangop and involving the grassland owners and famers to manage their own grasslands optimally for the benefit of biodiversity and livestock is a great step towards sustainably managing the grasslands and also informing future conservation decisions.

1.2 Project Members

Martin Mwangi (Team Leader)

He is a conservation Scientist (32 years old) with a bachelor's Degree in Community Development and Environmental Awareness. He has volunteered many years to conserve grassland through engaging communities to conserve threatened grassland bird.



Maryanne Muriuki

She is an advocacy expert (31 years old) and a graduate of Disaster Management and International Diplomacy. She leads the Youth and Biodiversity Network Voluteership Program in Kenya. She has also trained peers and created environmental awareness to communities.

Cynthia Gichimu

She is a tourism expert (30 years old) with a Bachelor's Degree in Ecotourism Management. She has wide knowledge on sustainable tourism and community engagement with experience from the County Government and the Friends of Kinangop Plateau (FOKP).

John Gitogo

He is a self-trained bird observer and research assistant (34 years old). He has a Diploma in Technology; Environmental Resource Management. He currently leads Biodiversity Monitoring at FOKP and has worked in numerous conservation and research projects

Lucy Ngari

She is an aquaculture specialist (26 years old) with a Bachelor's Degree in Aquaculture and Fisheries Management. She has experience in data collection and educating communities on sustainable agricultural practices

2.0 Aim and Objectives

This project aimed to build capacity and involve local youths and grassland owners in conserving and monitoring Sharpe's Longclaw and its grassland habitat in Kinangop.

The objectives were:

1. Conserve of at least 1000 acres the unique Kinangop highland grasslands
2. Develop a biodiversity monitoring protocol in the grassland and produce a report on Sharpe's Longclaw status and updated Kinangop bird's checklist
3. Environmental awareness to atleast 150 grassland owners and 800 students
4. Five team and 10 FOKP members will gain leadership skills and knowledge to effectively lead biodiversity monitoring and raise environmental education awareness.

2.1 Changes to Original Project Plan

The project implementation was been done with close consultation and guide from the project advisers whose inputs helped shape decisions leading to implementation of the project to tight specifications as per the proposal. Due to the effects of Covid-19 pandemic some activities had to be modified to fit in the government regulation. Such activities included meetings and workshops that we proposed to invite over 100 participants per meeting and we only invited 40 participants in each to allow for social distancing but increased numbers of meeting.

We had proposed to carry out monitoring activities for Sharpe's Longclaw on monthly basis. During the workshop/training on biodiversity monitoring that brought together Kinangop residents volunteers, the 5 five project team members and bird experts from Birdlife International, National Museums of Kenya and Nature Kenya. The protocol developed agreed to a comprehensive standardized monitoring exercise done once every year. This is to ensure that the exercise is financially feasible and sustainable; not stretching the resources of participating organizations and individuals.

In our proposal, school visits were to be held between January and April 2021 which coincides with the first term of the school calendar. This changed as the school calendar was changed after schools were closed as a result of Covid 19. We resulted to doing the school visits from end of May to early August when schools resumed.

2.2 Methodology

To achieve the aforementioned objectives, the following methods were applied;

To manage grasslands for the benefits of biodiversity and livestock, the trained grassland owners were mobilized and further received onsite training. They were then involved in physical removal of weeds, overgrown tussocks and shrubs as management of the grasslands. They were then requested to practice the same in their private grasslands.

Participants of physical grassland management activity

On development of a biodiversity monitoring protocol, the project team, local youth, community members and grassland owners were invited for a workshop/training. The workshop saw the development of a monitoring protocol detailing when, where, what and by who. The training was facilitated by experts from Birdlife international, National Museums of Kenya and Nature Kenya beside the project team. The protocol was later used to monitor the status of Sharpe's Longclaw and its habitat in Kinangop grasslands. A full list of all birds recorded during the monitoring was produced and shared with locals and partners.

Grassland owners were invited for training on good grassland habitat management. They were shown the benefit of actively managing their livestock to be in-line with their farms carrying capacity. During these meetings/trainings conservation of grassland birds and grasslands was taught. Good healthy livestock management was also taught. To reach out to the younger generation, the project team visited schools creating environmental awareness to students. Print materials including calendars and leaflets were produced and distributed to the general public.

To build leadership and skills to local community, team and local youth, a workshop was planned and the groups were invited. Training topics included but not limited to; data collection, sampling, analysis, reporting, bird identification, environmental awareness creation and partnerships. The participants later participated in different project activities. The project team also got equipped with basic equipment to implement the project and train other locals one the equipment use.

Biodiversity Monitoring training in progress

2.3 Project Outputs and results

The project saw significant achievements to both human capacity development to participate in conservation and also to the grassland habitat. Specifically the project achieved the following:

Objective 1: Conservation of at least 1000 acres of the unique Kinangop highland grasslands		
Output	**Impact**	**Impact Sustainability**
6 workshops held with grassland owners	-164 grassland owners reached on good grassland management -Management of over 850 acres of grasslands positively influenced by the participants	-More workshops to be organized by FOKP in partnership with Ministry of Livestock and Ministry of Environment -Follow-up visits to the grasslands owned by participants to monitor progress
Held 6 Meeting with farmers	-139 farmers reached, educated on how use small spaces for better yield and engaged in practical grassland management -Over 760 acres of grassland managed- Physical weed and overgrown tussock removal from grasslands done	-Volunteers residents to repeat the exercise every 6 months in feature
Attended 4 opportunistic meetings	Reached out to over 1750 Kinangop resident through the CLP project team attending and creating grasslands	-FOKP affiliated CLP project team members will continue this even as

	awareness in meetings planned for other purposes in the community	project ends
Objective 2: Develop a biodiversity monitoring protocol and produce a report on Sharpe's Longclaw status		
Held a 5-day workshop/training on biodiversity monitoring	A standardized monitoring protocol developed and piloted.	Used to guide monitoring in feature
Sharpe's Longclaw Monitoring	-Monitoring done involving more than 20 residents. -A report and birds checklist produced n and distributed to partners and stakeholders -Opportunistic awareness done by the monitoring teams to at least 200 residents during monitoring days	Monitoring to happen annually to as per the protocol produced
Objective 3: Environmental awareness to Kinangop residents		
Factsheet/leaflets produced and distributed	Reached to 900 people; 400 grassland owners and 500 farmers	Distribution to continue subject to availability of resources
Updated the FoKP Website	More people reached about species and grasslands conservation in Kinangop	Posting of projects updates to continue in feature

Prepared and produced calendars with the focal species to raise awareness	300 distributed to 300 families- reached approximately 1500 residents	Distribution to continue subject to availability of resources
Visited 16 schools within Kinangop	640 students and 36 teachers directly reached	Follow up visits continued by FOKP affiliated CLP project team members
Objective 4:Leadership skills and knowledge to lead biodiversity monitoring and environmental education impacted to Kinangop residents		
Held a training on biodiversity monitoring and data management	Trained 18 residents including the 5 team members on how to standardize monitoring and to manage data	Fundraising and partnerships ongoing to train volunteers on monitoring of other taxa
11 meeting held between the team members and the advisors	Guidance on implementation of activities and reporting done	One more meeting before project end and meeting to continue beyond project time
Bought and acquired equipment including a laptop, 2 pairs of binocular, 2 bird guide books	Team well equipped to sustain action and train more people	All equipment are and will be used beyond project

2.4 Communication and Application of results

The project team has worked to see the results of the project are well circulated to the partners and stakeholders. This has been done through publication of an article to a bimonthly newsletter produced by Nature Kenya. The newsletter publishes news and developments in conservation Important Bird Area of East Africa.

The project team is also working to see a publication of results of the survey. The publication is already accepted in the 'African Bird Club Bulleting' to be published in March 2022.

The results of the Sharpe's Longclaw and grasslands in Kinangop plateau survey carried out by this project, has been shared with the Birdlife International, to inform decisions regarding IUCN status of the species and the IBA.

2.5 Monitoring and Evaluation

We developed a 3 questioned questionare which was administered before and after workshops and training sessions. This was aimed at assessing the effectiveness of activities including school visits. We also observed grasslands that had been physically managed to record the positive change.

2.6 Achievements and Impacts

The most significant achievements of the project are:

The project has helped build the capacity of local youth to effectively participate in biodiversity monitoring and creation of environmental education and awareness. This has been done by training on monitoring, providing them with basic research equipment, development and implementation of a comprehensive Sharpe's Longclaw monitoring protocol which resulted to a report on the current status of endangered Shape's Longclaw in Kinangop- its stronghold habitat.

Success in involving Kinangop residents to conserve and positively influence management of over 1500 acres of grasslands for the benefit of livestock and grassland dependent biodiversity. This is expected to have a positive impact to the population of endangered Shape's Longclaw in feature.

The project has reached out to over 3000 residents of Kinangop plateau way above the proposed target of less than 1600. This is a strong foundation to conservation actions in progress and once to be implemented in feature

2.7 Capacity Development and Leadership Capabilities

The project enabled capacity development on biodiversity monitoring through training to local community members and the team. The team was able to learn how to design and implement a simple scientifically sound biodiversity monitoring protocol.

By hosting meetings with the external advisors through the project implantation period, the project team was able to gain critical skills in data collection, community engagement and as well as reporting.

The project team was able to acquire research equipment including binoculars, laptop and guidebooks which enabled them to effectively carry out the project and train others on their use. The equipment has since been donated to Friends of Kinangop Plateau to allow for their sustained use.

3.0 Conclusion

The project has created the most needed local capacity improvement in grassland and Sharpe's Longclaw conservation. This has indeed helped in the development of a monitoring protocol that will help establish and maintain an updated biodiversity database. The database will be a key tool in informing conservation actions henceforth. The project also has opened an avenue where local grassland owners, farmers and general community members understand and contribute to conservation of their privately owned and managed grasslands for optimal benefits to livestock and Sharpe's Longclaw. To sustain action, a strong partnership between

organizations and individuals has been established by this project. Considering all this benefits brought about by this project, the project team observes a critical need to add more conservation skills to the locals as well as create more avenues to incentivize open grazing to ensure substantial grasslands are left in good status for the species to thrive.

3.1 Problems encountered and lessons learnt

3.1.1 Which project activities and outcomes went well and why?

-Implementation of project activities including workshops, meetings, data collection and habitat management had great success. We attributed this to involvement of local community from planning to actual implementation.

-The cooperation of partner organizations and skilled individuals in designing the monitoring protocol and training community members on different scientific aspects of monitoring was a great aspect that helped achieve a scientifically sound data and results to this activity.

3.1.2 Which project activities and outcomes have been problematic and in what way, and how has this been overcome?

Grassland owners (in some selected monitoring sites) wanted to benefit with hard cash in return for grassland bird conservation. It was difficult but we offered no monies as it would have adverse impacts to conservation in feature and instead educational materials we used to convince them of the conservation benefits. This changed the grassland owners' initial demand for cash to voluntary participating in the interventions.

3.1.3 Important lessons learnt through the course of the project

-We have learnt that approaches to conservation in privately owned habitats demands an incentive attached. We promoted livestock grazing which according to research is more beneficial economically than cultivated farming. This helped a great deal in convincing Kinangop residents to participate in conservation.

-We have also leant that it is necessary to include local residents in all stages of the project- possibly in the project team. This helps the project team in understanding the expectation of the communities creating a room of improving approaches.

3.2 Future planned activities

As per the designed monitoring protocol, surveys of Sharpe's Longclaw and the grassland status will be carried out in April of every year. This will ensure a sustained up to date database for the species and its habitat.

3.3 Recommendations

1. Promotion of traditional livestock rearing through establishment of gene bank in Kinangop to avail good quality sheep breed and support willing farmers into livestock rearing.
2. Development of a Sharpe's Longclaw conservation action plan.
3. Further trainings on more conservation skills and awareness to more Kinangop residents.
4. Piloting of vertical farming which uses less space to produce more

3.4 Financial Report

2	Itemized expenses	Total CLP Requested (USD)*	Total CLP Spent (USD)	% Difference
3	**PHASE I - PROJECT PREPARATION**			
4	Communications (telephone/internet/postage)	240.00	280.00	17%
5	Field guide books, maps, journal articles and other printed materials	60.00	61.00	2%
6	Insurance	0.00		#DIV/0!
7	Visas and permits	100.00	103.00	3%
8	Team training	1,000.00	1000.00	0%
9	Reconnaissance	0.00		#DIV/0!
10	Other (Phase 1)	0.00		#DIV/0!
11	**EQUIPMENT**			
12	Scientific/field equipment and supplies	998.00	1084.00	9%
13	Photographic equipment	480.00	570.00	19%
14	Camping equipment	0.00		#DIV/0!
15	Boat/engine/truck (including car hire)	3,848.00	3547.00	-8%
16	Other (Equipment)	0.00		#DIV/0!
17	**PHASE II - IMPLEMENTATION**			
18	Accommodation for team members and local guides	2,250.00	2500.00	11%
19	Food for team members and local guides	750.00	619.00	-17%
20	Travel and local transportation (including fuel)	1,980.00	1614.00	-18%
21	Customs and/or port duties	0.00		#DIV/0!
22	Workshops	600	822.00	37%
23	Outreach/Education activities and materials (brochures, posters, video, t-shirts, etc.)	994.00	1172.00	18%
24	Other (Phase 2)	380.00	462.00	22%
25	**PHASE III - POST-PROJECT EXPENSES**			
26	Administration	720.00	630.00	-13%
27	Report production and results dissemination	450.00	400.00	-11%
28	Other (Phase 3)	135.00	121.00	-10%
29	**Total**	**14,985.00**	**14,985.00**	

4.0 Appendices
4.1 CLP M&E measures

Output	Number	Additional Information
Number of CLP Partner Staff involved in mentoring the Project	3	2 birdlife International from Kenya and one WCS staff from USA
Number of species assessments contributed to (E.g. IUCN assessments)	1	Sharpe's Longclaw was the main project target
Number of site assessments contributed to (E.g. IBA assessments)	1	Kinangop IBAs was the project site
Number of NGOs established	0	Community Based Organization (Friends of Kinangop Plateau) strengthened
Amount of extra funding leveraged ($)	0	Not applicable
Number of species discovered/rediscovered	0	Not applicable
Number of sites designated as important for biodiversity (e.g. IBA/Ramsar designation)	0	Not applicable
Number of species/sites legally protected for biodiversity	0	Not applicable
Number of stakeholders actively engaged in species/site conservation management	4	Grassland owners, farmers, grassland managers, Nature Kenya and the National Museums of Kenya all working along Friends of Kinangop Plateau
Number of species/site management plans/strategies developed	1	A monitoring protocol developed
Number of stakeholders reached	1	The County Government of Nyandarua,
Examples of stakeholder behaviour change brought about by the project.	4	Grassland owners practicing good grassland management in their private farms Sheep farmers practicing good sheep management for optimal biodiversity and livestock production Students planting and tacking care of indigenous trees within the school compound Willingness of local youth and general public to participate in conservation activities

Examples of policy change brought about by the project	0	Not applicable
Number of jobs created	20	Local participant in project activities
Number of academic papers published	1	Accepted for publication in March 2022
Number of conferences where project results have been presented	1	At the Kenya National IBA site support groups workshop

APPENDIX 4.1: Publication Manuscript from the Project.

The status of Sharpe's Longclaw *Macronyx sharpei* and its grassland habitat in Kinangop, Kenya

Martin Mwangi[a], John Kimani[a], Lucy Ngari[a], Cynthia Gichumu[a] James Maina[a], Jack Kiiru[a], John Gitiri[a] and Samuel Bakari[a,b]

Le statut de la Sentinelle de Sharpe *Macronyx sharpei* et de son milieu herbacé à Kinangop, Kenya. La Sentinelle de Sharpe *Macronyx sharpei* est endémique au Kenya et menacée d'extinction en raison de la perte de son habitat, des prairies montagnardes denses à 1.900–3.600 m. Un inventaire réalisé entre le 20 avril et le 5 mai 2021 dans les prairies de Kinangop, ancien bastion de l'espèce, a recensé 286 individus sur 24 exploitations agricoles avec le bon milieu (total 387 ha). Les trois plus grandes fermes détenaient près de 75% des individus recensés (214) sur environ 43% de la superficie totale (166 ha). Les densités de la Sentinelle de Sharpe dans le bon milieu étaient de 0–2.2 oiseaux/ha, avec une moyenne de 0.7 oiseaux/ha. Nous estimons que notre inventaire à couvert environ 80% du milieu disponible pour la Sentinelle de Sharpe dans les prairies de Kinangop, suggérant qu'il reste maintenant moins de 400 individus et moins de 1% des 77.000 ha du milieu original. Les prairies naturelles continuent à être converties en cultures, remplacées par des boisements avec des espèces essentiellement exotiques ou abîmées par le surpâturage. Nous recommandons l'achat ou la location de fermes à forte densité de Sentinelles de Sharpe, à gérer de manière optimale au profit de l'espèce. De plus, nous recommandons le renforcement de l'élevage traditionnel et de l'agriculture durable compatible avec la conservation des prairies et de la Sentinelle de Sharpe, la sensibilisation des propriétaires des prairies à la conservation de l'espèce et des prairies, l'étude des exigences écologiques de l'espèce, et la réalisation d'inventaires tous les cinq ans dans l'aire de répartition de l'espèce.

Summary. Sharpe's Longclaw *Macronyx sharpei* is endemic to Kenya and Endangered due to the loss of its habitat, montane tussocky grassland at 1,900–3,600 m. A survey carried out between 20 April and 5 May 2021 in the Kinangop grasslands, formerly a stronghold for the species, recorded 286 individuals on 24 farms with suitable habitat (total 387 ha). The three largest farms held nearly 75% of the individuals recorded (214) on *c*.43% of the total area (166 ha). Sharpe's Longclaw densities in suitable habitat were 0–2.2 birds/ha, with a mean 0.7 birds/ha. We estimate that our survey covered *c*.80% of existing suitable Sharpe's Longclaw habitat in the Kinangop grasslands, suggesting that fewer than 400 individuals and less than 1% of the original 77,000 ha of suitable habitat now remain. Native grassland continues to be converted to cultivation, replaced by forestation with mostly exotic species, or degraded by overgrazing. We recommend the purchase or lease of farms with a high density of Sharpe's Longclaw to be managed optimally for the species' benefit. Additionally, we recommend strengthening of traditional livestock-rearing and sustainable agriculture compatible with grassland and Sharpe's Longclaw conservation, enhancing species and grassland conservation awareness among grassland owners, studying the ecological requirements of the species, and undertaking surveys every five years across the species' range.

Sharpe's Longclaw *Macronyx sharpei* is endemic to Kenya and listed as globally Endangered, with an estimated population of 6,000–15,000 individuals in 2000, which may have decreased to as few as 2,000 birds at present (BirdLife International 2021a). This sedentary species occurs in montane grasslands at 1,900–3,600 m, albeit rarely above 2,800 m, and appears to co-exist with livestock where the appropriate habitat—short grass with tussocks used for nesting and concealment (from predators)—is maintained (Muchai 1998, Lens *et al*. 1998, Muchai *et al*. 2002, Kimani *et al*. 2020). The Kinangop grasslands, an Important Bird Area to the west of the Aberdare Mountains, was formerly the stronghold for Sharpe's Longclaw, but has suffered extensive habitat loss, and most of the remaining population probably now occurs on Mau Narok and the grasslands to the north and north-east of Mount Kenya (Bennun & Njoroge 1999, BirdLife International 2021a,b).

On the Kinangop Plateau there has been a rapid loss of grassland as farmers reduce the numbers of traditional livestock in favour of crop cultivation. In 2002, it was estimated that by 2010 the extent of grassland cover on the Kinangop Plateau would be less than 10% of the original (Ndang'ang'a *et al*. 2002). These predictions were confirmed by a study in 2014 that estimated that just 5% of the grassland remained intact (Bakari & Kariuki in prep.). These losses are negatively affecting the density of Sharpe's Longclaw and other specialised grassland fauna (Lens *et al*. 2001). Here we present the results of a survey to assess the current status of the species and its habitat on the Kinangop Plateau.

Methods

We visited all potentially suitable grasslands for Sharpe's Longclaw across Kinangop and identified 30 plots, from which the best 24 were selected, representing 80% of the potentially suitable habitat on the plateau. The 24 farms were visited between 20 April and 5 May 2021 (Fig. 1). Each site was surveyed for 7–34 minutes, based on its size, weather and habitat characteristics, between 07.00 and 14.00 hrs by a team of five skilled surveyors from Friends of Kinangop Plateau (FOKP) equipped with 8–10 × 42 binoculars (Appendix 1).

Smaller farms were covered in their entirety, with team members walking at a distance of <25 m between them to ensure all birds were flushed and recorded. For larger farms, a 50 m-wide transect was walked with 10 m between each of the five team members. All birds on transects were recorded and, based on these counts, the total of Sharpe's Longclaws was then extrapolated. The size of the study sites was assessed with a GPS unit.

For all sites, habitat was classified, based on the requirements of Sharpe's Longclaw, as 'good' (= short grass with sufficient tussock) or 'moderate' (= taller grass or overgrazed areas with dense tussock). Data were also collected on land use (presence or not, type and number of livestock), weed infestation, edge types, and bird species other than Sharpe's Longclaws. Any sign of breeding by Sharpe's Longclaw was noted. Finally weather conditions, GPS coordinates and the list of observers per site were recorded.

Results and discussion

Of the 24 farms, 21 (87.5%) were found to have short grass with tussock considered good-quality habitat for Sharpe's Longclaw, whilst three (12.5%) with overgrazed areas or very dense tussock were considered of moderate quality (Table 1). In total, 286 Sharpe's Longclaws were recorded, together with 103 other bird species. Seven pairs exhibited display flights and calls, and one nest with two eggs was found. Only one juvenile was seen (Fig. 2). Despite the survey's intention to capture the peak of the species' breeding season, the results suggest that this

objective was not achieved. On four (19%) of the 21 farms with good-quality habitat no Sharpe's Longclaws were found. The three largest farms, KN001, KN013 and KN015, comprising 43% (166 ha) of the area surveyed, hosted 75% (214) of all recorded individuals. The density of Sharpe's Longclaws was *c*.0.0–2.2 birds/ha, with a mean of *c*.0.7 birds/ha. Density was not related to grassland size (Fig. 3; Pearson's $r^2 = 0.12$, df = 22, P>0.2); other factors, including habitat edge effects and the presence of alien plants may have played a role. Densities were lowest in farms that were partly overgrazed or overgrown with weeds, and farms with wooded edges, whereas high densities were found in farms with continuous tussock grassland.

Considering that *c*.80% of the area with good- to moderate-quality habitat was covered and 286 individuals were found, we estimate that the Kinangop Plateau population comprises fewer than 400 individuals.

The farms occupied by the species were mostly used for traditional grazing of sheep and cows. This confirms previous findings that Sharpe's Longclaw seems able to co-exist with livestock provided grassland with adequate tussock cover remains (Muchai 1998).

The survey further confirmed that the increasing human population is placing ever more pressure on the land, leading to a reduction and fragmentation of tussock grassland, which is increasingly replaced by cultivation and forestation with mostly exotic *Eucalyptus grandis* and *Cupressus lusitanica* (Lens *et al*. 2000, Ngari 2004). Sixteen newly converted grasslands and eight young woodlots were recorded during the survey. Tussock is ploughed to permit growth of grass that is palatable for livestock. Land holdings are increasingly subdivided, whereas ever greater stocking rates leads to overgrazing resulting in short grass with bare patches and fewer tussocks (Rayment & Pisano 1999; this study). Of the original 77,000 ha of continuous native grassland (BirdLife International 2021b), we estimate that less than 1% remains as suitable habitat for Sharpe's Longclaw.

We recommend the purchase or lease of farms with a high density of Sharpe's Longclaw to be managed optimally for the species' benefit. It remains important to promote traditional livestock rearing and sustainable agriculture that is compatible with grassland and Sharpe's Longclaw conservation, and find ways to make this more attractive for landowners. Furthermore, we advocate promoting species-specific and wider grassland conservation awareness among landowners, managers and farmers; studying the factors affecting Sharpe's Longclaw occupancy and density in suitable grasslands; and carrying out surveys every five years across the species' range.

Acknowledgements

Designing and implementing this survey would have been impossible without financial support from the Conservation Leadership Programme. For technical support we thank Dr Kariuki Ndang'ang'a (Birdlife International), Wanyoike Wamiti (National Museums of Kenya), James Mutunga (*Nature*Kenya), Dr. Joseph Mwangi (Crane Conservation International) and Dr Geoffrey Macharia (Kenyatta University). We are grateful to the landowners who allowed the survey teams to access their property. Special thanks go to the Friends of Kinangop Plateau members who participated in the various stages of the survey: Wachira Kariuki, Paul Kimani, Loise Kiriti, Stephen Mbuto, Felista Muhuha, Mwangi Muhuha, Paul Muhuha, Maryanne Mumbi, Charles Mwaniki, Andrew Waweru, James Waweru and others who guided the teams. Leon Bennun and Luc Lens are thanked for their comments on the manuscript.

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Table 1. Study sites, habitat quality, size (in ha), total number of Sharpe's Longclaws *Macronyx sharpei* recorded, and their density per ha.

Tableau 1. Sites d'études, qualité de l'habitat, superficie (en ha), nombre total de Sentinelles de Sharpe *Macronyx sharpei* recensées, et leur densité par ha.

Study site	Area / Location	Habitat quality	Size (ha)	No. of Sharpe's Longclaws	Density per ha
KN001	Mutonyora	Good	27.1	60	2.21
KN002	Magumu	Good	6.5	10	1.54
KN003	Magumu	Good	18.6	1	0.05
KN004	Nyakio	Average	22.3	8	0.36
KN005	Nyakio	Good	4	2	0.49
KN006	Nyakio	Good	4	0	0
KN007	Njambini	Average	13.4	7	0.52
KN008	Njambini	Average	10.5	1	0.1
KN009	Njambini	Good	6.1	0	0
KN010	Munyaka	Good	3.2	2	0.62
KN011	Engineer	Good	4.9	0	0
KN012	Matudura	Good	7.7	1	0.13
KN013	Weru	Good	112.1	114	1.02
KN014	Mumui	Good	14.2	9	0.64
KN015	Ndinda	Good	26.7	40	1.5
KN016	Ngothi	Good	3.2	0	0
KN017	Ndaraca-Ini	Good	23.5	14	0.6
KN018	Ndaraca-Ini	Good	16.2	6	0.37
KN019	Kirima	Good	12.9	0	0
KN020	Kirima	Good	12.5	1	0.08
KN021	Kimuri	Good	8.1	4	0.49
KN022	Wangunini	Good	18.2	2	0.11
KN023	Ol'magogo	Good	5.3	0	0
KN024	Munyaka	Good	6.1	4	0.66
TOTALS			387	286	0.74
Three largest farms			165,9	214	1.29

Appendix 1. Study sites, coordinates, dates of 2021 survey and survey time.

Annexe 1. Sites d'études, coordonnées, et dates et durée de l'inventaire de 2021.

Study site	Coordinates	Date	Start time	End time
KN001	00°46'55.33"S 36°35'13.76"E	20 April	09:18	09:48
KN002	00°46'17.77"S 36°35'07.68"E	20 April	12:22	12:55
KN003	00°43'18.65"S 36°37'10.64"E	20 April	13:21	13:55
KN004	00°44'06.05"S 36°34'45.33"E	21 April	08:11	08:47
KN005	00°43'47.06"S 36°34'37.26"E	21 April	10:13	10:41
KN006	00°42'17.82"S 36°36'41.63"E	21 April	11:25	11:42
KN007	00°37'13.40"S 36°33'01.67"E	21 April	13:04	13:40
KN008	00°37'26.90"S 36°31'44.01"E	22 April	09:19	09:51
KN009	00°40'53.67"S 36°31'13.91"E	22 April	10:27	10:41
KN010	00°30'41.49"S 36°29'47.87"E	22 April	12:24	12:31
KN011	00°32'30.39"S 36°32'38.00"E	26 April	09:05	09:26
KN012	00°33'16.68"S 36°32'16.83"E	26 April	10:35	11:00
KN013	00°34'30.83"S 36°29'38.25"E	26 April	12:43	13:07
KN014	00°32'57.98"S 36°28'38.21"E	27 April	08:58	09:31
KN015	00°37'54.19"S 36°28'44.36"E	27 April	11:15	11:47
KN016	00°37'46.02"S 36°28'29.22"E	27 April	13:12	13:40
KN017	00°36'53.70"S 36°28'50.87"E	28 April	08:32	09:31
KN018	00°35'47.55"S 36°27'58.48"E	28 April	10:20	10:41
KN019	00°33'52.75"S 36°29'03.15"E	28 April	11:37	12:00
KN020	00°42'29.49"S 36°35'30.30"E	28 April	12:12	13:08
KN021	00°46'55.33"S 36°35'13.76"E	28 April	13:30	14:00
KN022	00°46'17.77"S 36°35'07.68"E	4 May	09:08	09:37
KN023	00°43'18.65"S 36°37'10.64"E	4 May	10:46	11:08
KN024	00°44'06.05"S 36°34'45.33"E	4 May	13:45	13:58

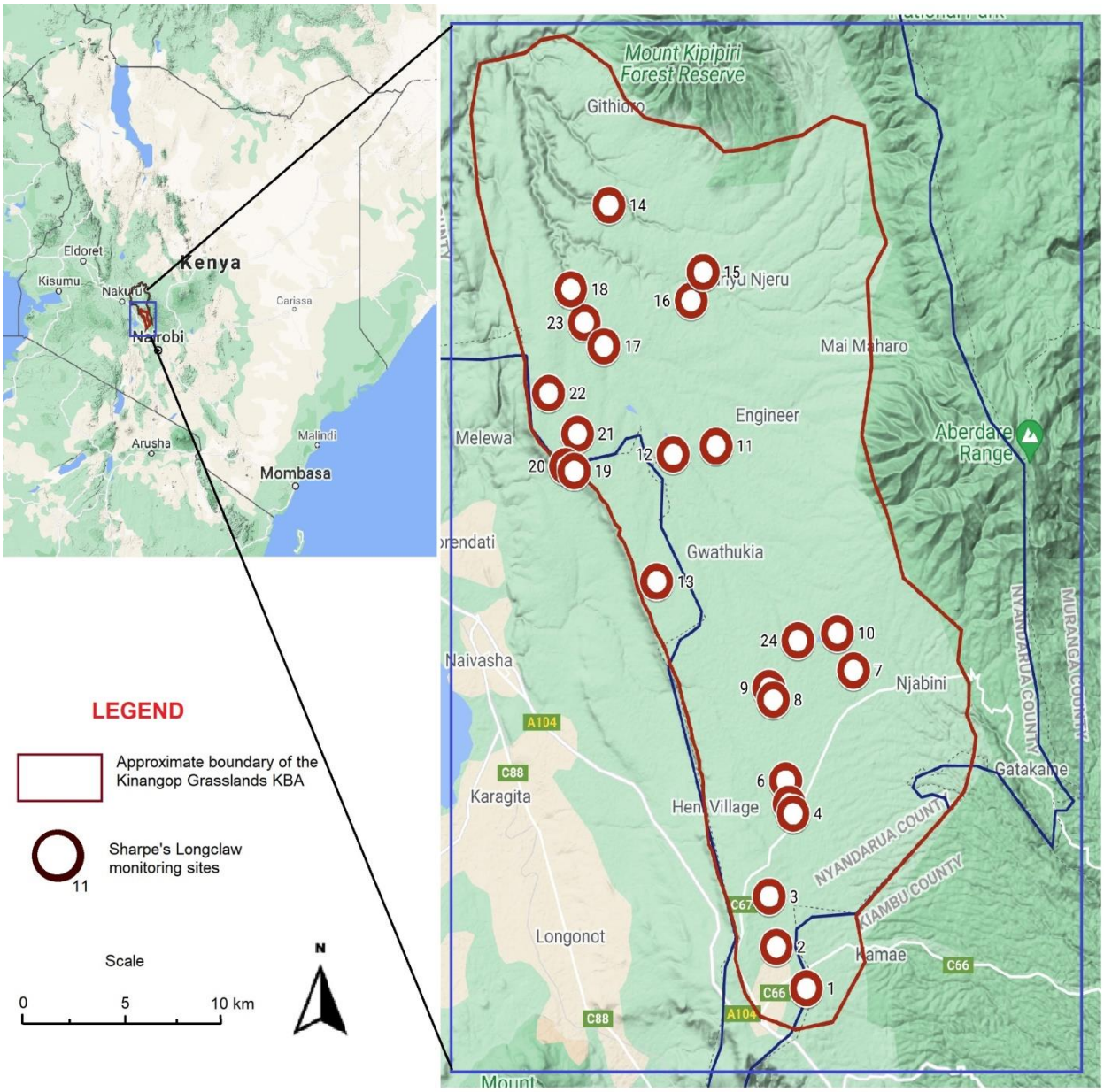

Figure 1. Map of the Kinangop Plateau, Kenya, with the study sites indicated by red circles.
Carte du plateau de Kinangop, Kenya, avec les sites d'études indiqués par des cercles rouges.

Figure 2. The only juvenile Sharpe's Longclaw *Macronyx sharpei* found during the survey, at KN017, 28 April 2021 (Martin Mwangi)

La seule Sentinelle de Sharpe *Macronyx sharpei* juvénile trouvée pendant l'inventaire, à KN017, le 28 avril 2021 (Martin Mwangi)

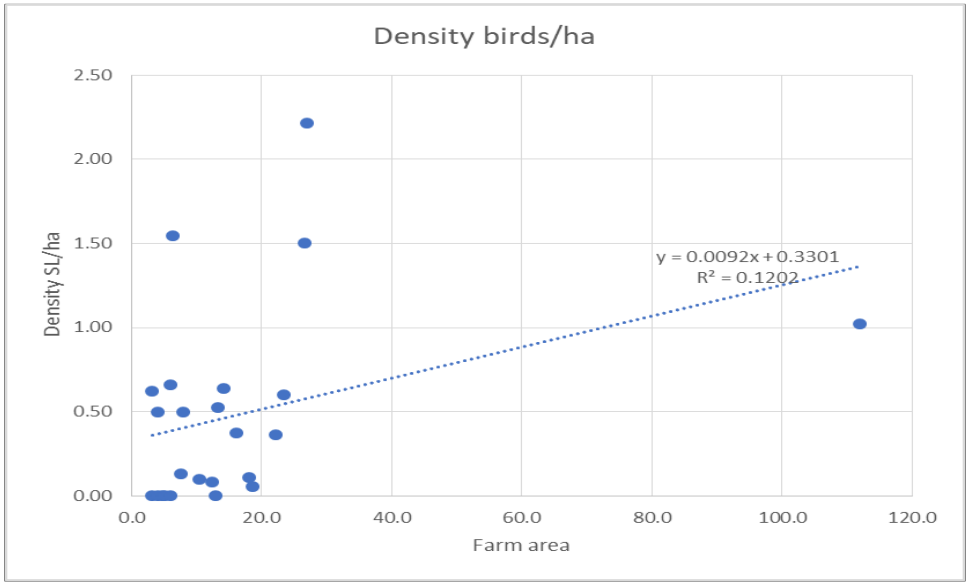

Figure 3. Size of grasslands in relation to the number of Sharpe's Longclaws *Macronyx sharpei* present.

Dimension des prairies par rapport au nombre de Sentinelles de Sharpe *Macronyx sharpei* présentes.

Appendix 4.2:
SHARPE'S LONGCLAW MONITORING STANDARD OPERATING PROCEDURES

Aim
The aim of monitoring is to improve natural resource management, Sharpe's Longclaw and other biodiversity conservation and to build institutional knowledge.

Objectives
1. Assess species and habitats to determine presence and relative abundance
2. Establish the status and trends in population of Sharpe's Longclaw and habitat indicators
3. Provide early warnings on the condition of species and habitats to help management in developing mitigation strategies
4. Monitor Sharpe's Longclaw and habitats to understand their natural and human-induced dynamics and conditions

Indicators/ Variants
- Abundance of species
- Population per species
- Habitat status

Scope/ Area
Monitoring will happen in selected grasslands within Kinangop Plateau

Baseline
Kinangop Plateau was initially continuous native grassland. Fragmentation, cultivation, establishment of woodlots and grassland degradation has been rampant since human occupation in 1963 leaving less than 10% of the plateau as grasslands.
Monitoring had happened since 2004-2010 without a standardized way of data collection. This resumption will use the 'good' sites as of April 2021.

Sampling
A scientifically standard sample size of 24 Sites with good grasslands habitat for habitation of Sharpe's Longclaw will be selected across the plateau. This will ensure most sites had the target species at the start of monitoring.

Monitoring Frequency and timing
Monitoring will be done yearly between 15th and 30th of April.

Field Method

Data collection- Transects of 50m width along the sites will be established and the monitoring team will walk observing and identifying birds for larger sites. Birds identified will be recorded in data sheet specified for each site. Monitoring will happen between 6am and 12pm.
Monitoring team- At-least 3 team members will be present in all monitoring sessions to ensure a standard observation error. More volunteers will be invited encouraged to ensure sustainability of action

Equipment- At-least 3 participants each with a binoculars and at-least one guide book will be needed for monitoring in each site

Data Management
After each monitoring day, data sheets will be verified and submitted to the central person(s) to key in the data for the whole exercise.
Data entry will be done in a soft template similar to the hardcopies used for data collection.
The data collated data will be shared to the monitoring heads at our 4 FOKP branches.
Any person or organization intending to use this data will be required to officially request for it and subsequent publication from the data will need to identify and acknowledge that it is from the Friends of Kinangop Plateau.

Budget
In all the monitoring sessions, a budget of not lower than Ksh. 81,000 will be to cater for participants' transport, lunch and data entry.

APPENDIX 4.4:

SHARPE'S LONGCLAW (SLC) SURVEY &MONITORING DATA SHEET

Plot No_____Plot Name_____ GPS Coordinates_____

Area: _____Original Category _____ Size_____

Date: _____ Start Time_____ End Time_____

Weather

%Cloud Cover	Rain (Tick)			Wind (Tick)				Temperature (Tick)		
	None	Light	Heavy	Calm	Slightly Windy	Windy	Very Windy	Cold	Moderate	Hot

Habitat Assessment

Current Land Use	
Habitat Code	
%grass Cover Now	

Species Assessment

Species	Tally	Total	Comment

Names of Observers	Email	Mobile Number

APPENDIX 4.5: SHARPE'S LONGCLAW MONITORING REPORT

Report on Sharpe's Longclaw *Macronyx sharpei* 2021 Monitoring in Kinangop, 20 April – 5 May, 2021

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SUMMARY

Between 20th April and 5th May 2021, survey to count Sharpe's Longclaw *Macronyx sharpei* and assess grasslands habitat were done in Kinangop Important Bird Area (IBA), Kenya. Based on a set criteria of grassland size and vegetation structure 24 farms identified as suitable habitat for the specialized and endangered Sharpe's Longclaw were selected across Kinangop. Between 0700h and 1400h, a team of 5 skilled individuals systematically walked in transects in the grasslands recording all identified birds by sight and hearing. A total of 286 individual Sharpe's Longclaw were recorded among other 103 species. Studies have put Kinangop grasslands as a stronghold habitat hosting the largest population of the previous estimate; 2,000 individuals by 2009. Findings of this survey suggest a further decline of the population at less than 700 individuals in Kinangop. The species is threatened by habitat loss; grassland conversion, overgrazing and overgrowing of weed and tussock. It is recommended that monitoring be done annually and scaled up to other grasslands including Mau Narok and Mt. Kenya region. National surveys should also be done every 5 years. Further, we recommend that capacity for local communities to participate in grasslands and biodiversity conservation be strengthened.

Photo 1: Sharpe's Longclaw, Macronyx sharpei, Kinangop (Photo: Martin Mwangi)

Dated July, 2021

Sharpe's Longclaw (*Macronyx sharpei*, Jackson 1904) was listed by the IUCN as endangered in 2000 at an estimated population of 6,000-15,000. Although further work is needed to refine the estimates, as it has been suggested that the total population may now be as low as 2,000

individuals (BirdLife International, 2021). The species is endemic to Kenya with Kinangop grasslands on the west of Aberdare Mountains and Mau Narok on North to North-east of Mount Kenya hosting the bulk of its population. Surveys in Lake Ol,borosat grasslands confirmed its presence (Wamiti e*t al*. 2007). Sharpe's Longclaw prefers short grass with tussocks needed for nesting and hiding from predators (Muchai, 1998 and 2002). Sharpe's Longclaw is a high altitude grassland species although rare above 2800m that appears to coexist with livestock where the right habitat-short grass with tussock quality is maintained (Muchai, 1998 and Lens *et al.* 1998).

Sharpe's Censuses and Monitoring

A few uncoordinated counting of Sharpe's Longclaw has been carried out over time by independent researchers and organizations across its range. One such works include a survey in Mt. Kenya and Meru (Kimani *et al.* 2015), Lens et al. 2001 which evaluated landscape variables effect to density. A comprehensive monitoring exercise was ran by Friends of Kinangop Plateau between 2004 and 2010 although with serious data quality control challenges. Previously, Sharpe's Longclaw monitoring in Kinangop grasslands by Friends of Kinangop Plateau (FOKP) involved monitoring of 160 farms. Although a very good model, it did lack data quality control since it was run by unskilled volunteers. It also seriously stretched the limited human resources of the organization leading to data gaps within the period. Only Kinangop IBA has had a Sharpe's Longclaw comprehensive monitoring plan despite the data quality challenge.

Objectives of the FoKP Sharpe's 2021 Monitoring

The aim of 2021 monitoring was to build on biodiversity knowledge for improved natural resource management for the conservation of Sharpe's Longclaw and other grassland biodiversity focusing on the Kinangop Plateau.

Specific Objectives were

5. Assess the current habitat status, Sharpe's Longclaw population and density in Kinangop
6. Strengthen the organizational capacity of Friends of Kinangop Plateau to plan and implement monitoring
7. Provide critical information for use in creating environmental awareness.

METHODS

Site

Sharpe's Longclaw prefers a mosaic of short grass interspaced with long tussock in its highlands range (Muchai, 1998). Farms selected considered suitability of habitation and spread across Kinangop. Using these criteria, more than 32 farms with good quality grassland and or presence of Sharpe's Longclaw sites we identified and visited. Out of these, 24 farms across Kinangop were finally selected for monitoring.

Timing

As set in the Sharpe's Standard Operation Procedure designed to inform and guide the activity with inputs from experts; Birdlife International, Nature Kenya and the National Museums of Kenya, monitoring was done between at 0700h and 1400h in the month of April and early May of 2021.

Teams

To standardize collection of data and minimize biasness during data collection, a team of 5 skilled persons visited each of the 24 farms. Other volunteers from Friends of Kinangop Plateau FOKP joined in efforts to build capacity among locals community for sustainability.

Photos 2, 3 and 4 Monitoring teams in different days

The area was divided into four main regions as per the branches of Friends of Kinangop Plateau; Magumu/Nyakio, Njambini, Engineer and Murungaru area. In each area, local volunteers who understood the grasslands guided the teams and together they decided on the best fit grasslands to the set monitoring criteria.

Materials and Data Collection

With an effort of between 7 minutes and 34 minutes and at least 5 team members with 8-10X42 pair of binoculars for all the farms visited data was recorded in a data sheet. Team members spread to cover the width of the farm and walked along the lengths for smaller farms and used a 50m transects for larger farms from which numbers were extrapolated based on the size of the grassland and observed density. Data captured included; number of Sharpe's Longclaw and other species of birds including their breeding status, area of the farm, GPS coordinates, weather variable, habitat quality as per the requirements of target species, utility of the grasslands, list of observers and their contacts.

RESULTS AND DISCUSSIONS

Out of the 24 farms, 21 farms (87.5%)were recorded to be of good quality and thus very suitable habitat for Sharpe's Longclaw. 3 (12.5%) farms were recorded to be of average grassland quality (Table 1).

Plot Number	Area/Location	Category	Size in Acres	No. of Sharpe's Longclaw
KN001	MUTONYORA	GOOD	67	60
KN002	MAGUMU	GOOD	16	10
KN003	MAGUMU	GOOD	46	1
KN004	NYAKIO	AVERAGE	55	8
KN005	NYAKIO	GOOD	10	2
KN006	NYAKIO	GOOD	10	0
KN007	NJAMBINI	AVERAGE	33	7
KN008	NJAMBINI	AVERAGE	26	1
KN009	NJAMBINI	GOOD	15	0
KN011	MUNYAKA	GOOD	8	2
KN013	ENGINEER	GOOD	12	0
KN014	MATUDURA	GOOD	19	1
KN015	WERU	GOOD	277	114
KN016	MUMUI	GOOD	35	9
KN017	NDINDA	GOOD	66	40
KN018	NGOTHI	GOOD	8	0
KN019	NDARACA-INI	GOOD	58	14
KN020	NDARACA-INI	GOOD	40	6
KN021	KIRIMA	GOOD	32	0
KN022	KIRIMA	GOOD	31	1
KN023	KIMURI	GOOD	20	4
KN024	WANGUNINI	GOOD	45	2
KN025	OL'MAGOGO	GOOD	13	0
KN026	MUNYAKA	GOOD	15	4
			957	286

Table 1: Visited grasslands sizes, habitat category and total number of Sharpe's Longclaw Recorded

Sharpe's Longclaw Population and Breeding

In total, 286 (Table 1) individuals were recorded in all the 24 farms with 103 other bird species (see appendix 1). Only 1 juvenile was seen representing 0.003% of the total recorded. 7 pairs of Sharpe's Longclaw were seen exhibiting breeding behavior. One nest with two eggs was recorded.

This is an indication that the design may not have captured the peak of breeding season for the species.

Photo 6: The only Juvenile Sharpes Longclaw found at KN017 (Photo: Martin Mwangi)

Although with good habitat quality, 4 farms (19%) out of the good 21 farms visited had no records of Sharpe's Longclaw. The 3 farms categorized as of average quality (12.5% of all farms visited) hosted 16 individuals or 0.06% of the recorded individuals of Sharpe's Longclaw. Three farms KN001, KN015 and KN017 hosted 214 of the counted individuals, accounting for 75% of all recorded individuals and 43% of the acreage surveyed.

It is estimated that the Kinangop Plateau population of Sharpe's Longclaw is less than 700 individuals. This is per the extent of coverage of this survey- approximate 80% of Kinangop sites with possible occurrence of Sharpe's Longclaw owing to habitat status.

Sharpe's Longclaw Density

The density of Sharpe's in the farms ranged from c-0.1 Birds/Ha to c-4 Birds/ha with a mean density of c-1.2 Birds/Ha. The density was not consistent with the grassland size as shown in Figure 1.1 and other factors including habitat edge effects and presence of alien plant species played part.

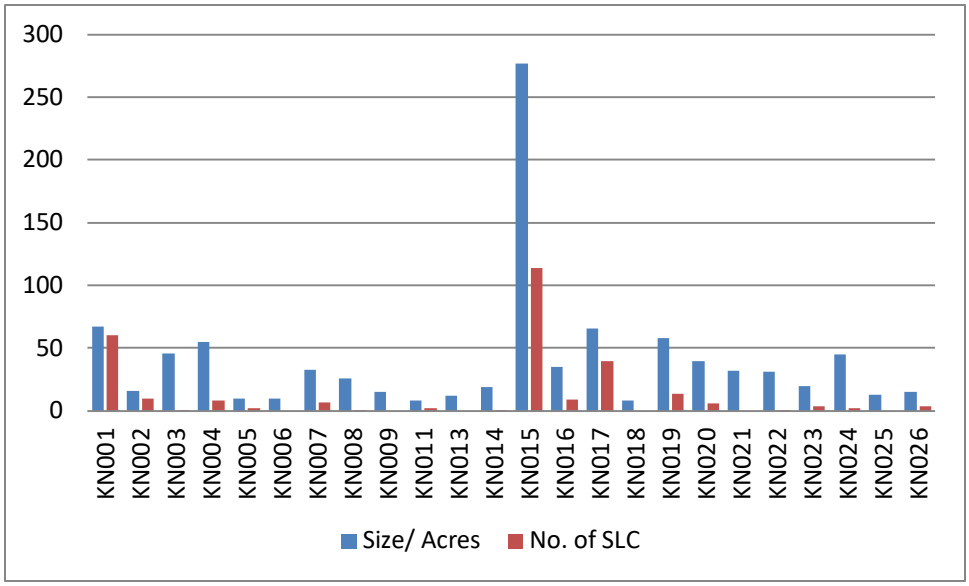

Chart 1: Size of grasslands in relation to the number of Sharpe's Longclaw present

Densities were lowest in farms that had potions overgrazed or overgrown with weed although with good grass quality and farms with wooded edges. High densities were in farms with continuous grass with tussock.

Livestock and Sharpe's Longclaw

In the 24 best selected sites, of which 18 owners has had training on good grassland and livestock management practices, only one farm had not been used for grazing in the last few months. The farm though with good quality grassland and a few alien species affected areas, had no records of Sharpe's Longclaw. The farms were mostly being used for traditional open grazing of sheep and cows. This confirms findings by (Muchai, 1998) that Sharpe's Longclaw perfectly co-exists with livestock as long as good habitat quality is maintained.

Opportunities and Challenges Encountered

This was one its kind survey that involved aspects of creating community awareness on conservation to community members opportunistically and resuming monitoring of Sharpe's Longclaw in a scientifically sound way. It was a great opportunity for the monitoring team to sharpen skills of other monitoring volunteers and impart conservation knowledge to grassland owners and general community members. The survey strengthened monitoring planning and implementation capacity of Friends of Kinangop Plateau, FOKP bringing on board experts from partner organization and local community members from across the Plateau to participate in the process.

On the same note, coordination of the core monitoring team that was selected from far corners of the Plateau proved a challenge and this led to starting and or ending of monitoring late than planned. This coupled with the fact that the teams were selecting farms from a pre-determined set of farms led to delays resulting to an additional monitoring day from the planned.

Threats

Noted by this survey, cultivation, woodlots and development are rampantly replacing grasslands in Kinangop driven by settlement and increase of small scale agricultural community as by (Lens *at al* 2000 and Ngari, 2004). This was evident as teams moved from one farm to the other. Over 12 newly converted grasslands were recorded within the study period.

Photo 7: Black-headed Heron foraging in newly ploughed grassland (Photo: Martin Mwangi)

The species range is almost exclusively in privately owned grasslands and conversion is a reality (Ngari, 2004). The unpalatable tussock is ploughed by grassland owners to allow palatable grass to grow for their livestock. Increase in human population has led to rampant land subdivision as well as high stocking rate leading heavy grazing which results to short, open grass with fewer tussocks which is not suitable to host Sharpe's Longclaw (Rayment and Pisano 1999). Within the study period, a good number of grasslands were noted to be overgrazed making them of poor quality for its habitation.

Conclusion

The findings of this survey has affirmed a previously found fact that good grassland habitat was rapidly declining in Kinangop (Lens et al. 2000). Of the 77,000Ha of initially continuous native grassland, this study only suspected less than 5% of grassland is of suitable quality for the Sharpe's Longclaw habitation. Lack of enough efforts to reduce and mitigate the threats will lead to further decrease of habitat and in-turn Sharpe's Longclaw population in Kinangop and further across its entire range.

Recommendation

It is recommended that Friends of Kinangop together with its partners ensure Sharpe's Longclaw annual monitoring is done in Kinangop Plateau and scaled to Mau Narok and Timau the other major sub populations. Repeat nation-wide surveys done after 5 years to assess current global population status is also recommended to assess current global status and feature trends. Strengthen grassland and species conservation capacity of private grassland owners and managers within its range- a key aspect to securing the feature of Sharpe's Longclaw.

Acknowledgement

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APPENDIX 4.6: LIST OF BIRDS RECORDED DURING MONITORING

1. Egyptian Goose
2. Garganey
3. Hottentot Teal
4. Yellow-billed Duck
5. Red-billed Duck
6. Common Quail
7. Harlequin Quail
8. Little Grebe
9. Red-eyed Dove
10. Ring-necked Dove
11. Mottled Swift
12. Little Swift
13. White-rumped Swift
14. Corn Crake
15. Red-knobbed Coot
16. Grey Crowned Crane
17. Black-winged Stilt
18. Blacksmith Lapwing
19. Black-winged Lapwing
20. Crowned Lapwing
21. Three-banded Plover
22. Lesser Jacana
23. Ruff
24. African Snipe
25. Common Sandpiper
26. Marsh Sandpiper
27. Wood Sandpiper
28. Yellow-billed Stork
29. Long-tailed Cormorant
30. Great White Pelican
31. Pink-backed Pelican
32. Hamerkop
33. Gray Heron
34. Black-headed Heron
35. Great Egret
36. Intermediate Egret
37. Cattle Egret
38. African Spoonbill
39. Black-winged Kite
40. African Harrier-Hawk
41. Black-chested Snake-eagle
42. Long-crested Eagle
43. Gabar Goshawk
44. African Marsh-Harrier
45. Black Goshawk
46. Black Kite
47. Augur Buzzard
48. African Grass-Owl
49. Speckled Mousebird
50. Pied Kingfisher
51. Cinnamon-chested Bee-eater
52. Amur Falcon
53. Lanner Falcon
54. Brown-crowned Tchagra
55. Tropical Boubou
56. Red-backed Shrike
57. Lesser Gray Shrike
58. Northern Fiscal
59. Cape Crow
60. Pied Crow
61. Rufous-naped Lark
62. Red-capped Lark
63. Hunter's Cisticola
64. Levaillant'sCisticola
65. Stout Cisticola
66. Wing-snapping Cisticola
67. Plain Martin
68. Rock Martin
69. Barn Swallow
70. Angola Swallow
71. Wire-tailed Swallow
72. Common Bulbul
73. Willow Warbler
74. Kikuyu White-eye
75. Greater Blue-eared Starling
76. Abyssinian Thrush
77. Cape Robin-Chat
78. African Stonechat
79. Northern Anteater-Chat
80. Bronze Sunbird
81. Golden-winged Sunbird
82. Yellow Bishop
83. Red-collared Widowbird
84. Long-tailed Widowbird

85. Jackson's Widowbird
86. Common Waxbill
87. Red-cheeked Cordonbleu
88. Purple Grenadier
89. Red-billed Firefinch
90. Quailfinch
91. Bronze Mannikin
92. Pin-tailed Whydah
93. Kenya Rufous Sparrow
94. Baglafecht Weaver
95. Speke's Weaver
96. African Pipit
97. African Citril
98. Brimstone Canary
99. Streaky Seedeater
100. Yellow-crowned Canary
101. Cape Wagtail
102. Western Yellow Wagtail
103. African Pied Wagtail

APPENDIX 4.6: PROJECT ARTICLE ON NATURE KENYA NEWSLETTER –FULL NEWSLETTER ATTACHED

ACTION

Sharpe's Longclaw. PHOTO: J. PITTELOUD

Sharpe's Longclaw survey

BY MARTIN MWANGI

A Sharpe's Longclaw survey recently conducted by a group of volunteers in Kinangop grasslands indicates the Endangered bird's habitat is still under threat from human activity. Friends of Kinangop Plateau (FoKP), a Nature Kenya site support group (SSG), conducted the study between April and May this year. The study covered four locations in Kinangop, namely Magumu/Nyakio, Njambini, Engineer and Murungaru.

Bird experts from BirdLife International assisted the volunteers in the study, which had identified 24 farms as suitable habitats for the grassland specialist Sharpe's Longclaw.

Various data was captured and recorded during the survey. It included: the number of Sharpe's Longclaw individuals observed, their breeding status, GPS coordinates of the areas visited, habitat quality as per the requirements of the target species, among others. Other bird species observed were also noted. A total of 286 Sharpe's Longclaw individuals were recorded during the survey.

Sharpe's Longclaw depends on tussock grass that grows in Kinangop. The grass species grows in clumps or tufts and thrives in dry highland habitats. The bird uses tussock grass to feed, nest, and protect itself from predators when threatened.

The Kinangop grasslands are one of the three main areas where Sharpe's Longclaw, a bird endemic to Kenya, is found. Mau Narok and Timau grasslands are the other two areas. In Kinangop, the bird's range is mostly restricted to privately owned grasslands.

The study noted that loss of the tussock grass habitat due to land-use conversion for farming and woodlot establishment is a leading contributor to the Sharpe's Longclaw population decline. Over 12 newly converted private grasslands were recorded in the course of the survey. Overgrazing was also observed as a contributor to tussock grass habitat degradation.

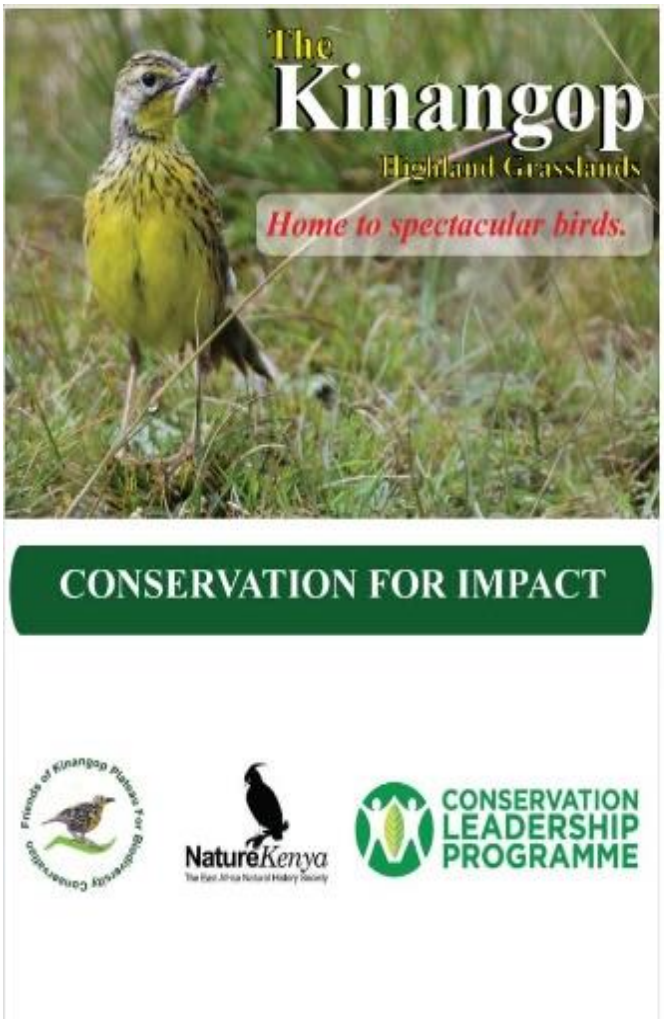
To mitigate the threats, FoKP proposes the strengthening of grassland and species conservation knowledge and the capacity of private landowners and managers in Kinangop. Other recommendations include the annual monitoring of the Sharpe's Longclaw in Kinangop, Mau Narok and Timau grasslands, and conducting a nationwide survey for the species after every five years.

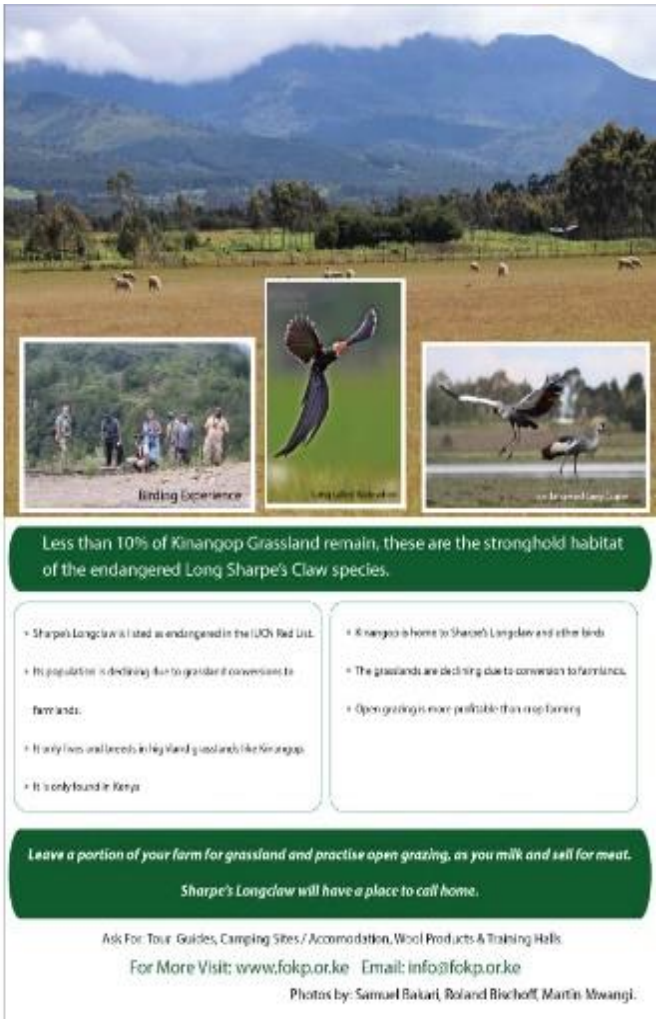
Volunteers who participated in the survey also took time to create community awareness on habitat conservation. The interaction between FoKP members and bird experts also served to sharpen the SSG's monitoring skills.

Nature Kenya is working closely with FoKP to promote the conservation of Sharpe's Longclaw and its habitat in Kinangop. In 2010, Nature Kenya secured the purchase of 20 hectares of land at the Kinangop Grasslands Key Biodiversity Area (KBA) to protect the Endangered bird's habitat.

APPENDIX 4.7: AWARENESS RAISING MATERIALS

Leaflets Used to create Awareness





AWARENESS RAISING MATERIALS

Calendar used to create awareness

APPENDIX 4.8: PROJECT PICTURES

Training on Biodiversity Monitoring and Data Management

Farmers and grassland owners- participants in grassland management

Grassland owners and farmers workshops on good grassland management

Participants of biodiversity monitoring

Sharpe’s LongclawPictures from the Field

School Outreach

Opportunistic awareness creation and skills sharing

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