



Assessing the occurrence and status of the Hinde's Babbler population in the Northern Suburbs of the Nairobi Metropolitan Area, Kenya



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INTRODUCTION

Hinde's Babbler *Turdoides hindei* is a globally vulnerable Kenyan Endemic associated with thickets at the edges of farmlands and along rivers with some vegetation cover. The current global estimate of the Hinde's Babbler population has it at the lower end of the range between 1500-5600 individuals (BirdLife International 2017, Shaw et al. 2014). This declining population occurs in small fragmented clusters at the foot hills of the agricultural rich and highly populated areas of the Aberdare Ranges and Mt. Kenya – that is Mukurweni and Kianyaga Valleys respectively. Other outlying babbler populations have been recorded in Ol Donyo Sabuk and Thika (BirdLife International, 2017), Meru National Park and adjacent Nyambeni Hills to the North, the Mumoni Hills and Kitui to the East and South and finally Machakos to the South (Birdlife International 2017, Habel et.al 2015, Shaw et.al 2013, Bennun and Njoroge 2000, Njoroge et al. 1998). Until recently, the Hinde's Babbler known distribution in Kenya did not include Nairobi Metropolitan Area. This changed in February 2017 when birders Carter, S. and Guarnieri, D. saw two Hinde's Babbler individuals while bird-watching at the University of Nairobi's Kabete Field Station Farm (*pers.com-KenyaBirdsNet Yahoo Group*). The sighting marked the first official record of the species in Nairobi. Similarly, Sidney Shema further reported breeding evidence of the babblers at the same field station after seeing and photographing a juvenile in a group of 4 adults (*pers.com-KenyaBirdsNet Yahoo Group 2017*). Although Nairobi metropolitan is undergoing rapid urbanization, this discovery is not surprising because there still remains a decent area with coffee farms and vegetated river-lines suitable for the Hinde's Babbler. The Birdlife International species data fact sheet for Hinde's Babbler shows that the species is possibly extinct in the areas between Thika and Nairobi. This gap underpins the need to assess and document the existence of this Kenyan endemic and globally threatened bird at the Nairobi metropolitan area, to assist in updating its distribution map and consequently inform the need of conserving these habitats. Furthermore, given that the newly discovered territory of the Hinde's Babbler serves as a dormitory corridor for the population working in Nairobi City, and is thus undergrowing massive land use change from large scale coffee farming to real estate, the need to gather information about its existence in this area cannot be emphasized more. Following these reports therefore, this project attempted to comprehensively assess the occurrence of the Hinde's Babbler in the Nairobi Metropolitan area – between Ruiru

Town and Nairobi City to provide up-to-date information of how many Hinde's Babbler groups are present as well as an estimate of their population.

METHODS

Hindes' babbler surveys were done in the area between the periphery of Thika town and Nairobi City. Since the Hinde's babbler is closely linked to dense thickets bordering river valleys and edges of coffee farms, we concentrated on areas with such topography and land use. Using google earth, we subdivided the area of study into six regions (see appendix 2). These regions were chosen either due to the presence of coffee farms and river valleys or fallow land colonized by thickets, but close to the river valleys. To maximize the detection of this species, a tape recording of its call was played for 1-2 minutes at the beginning of each transect and thereafter at intervals of 50 meters. Upon detection of the Hindes' babbler the size and composition of each group was recorded. We also noted down the habitat features of each location where the babblers were detected.

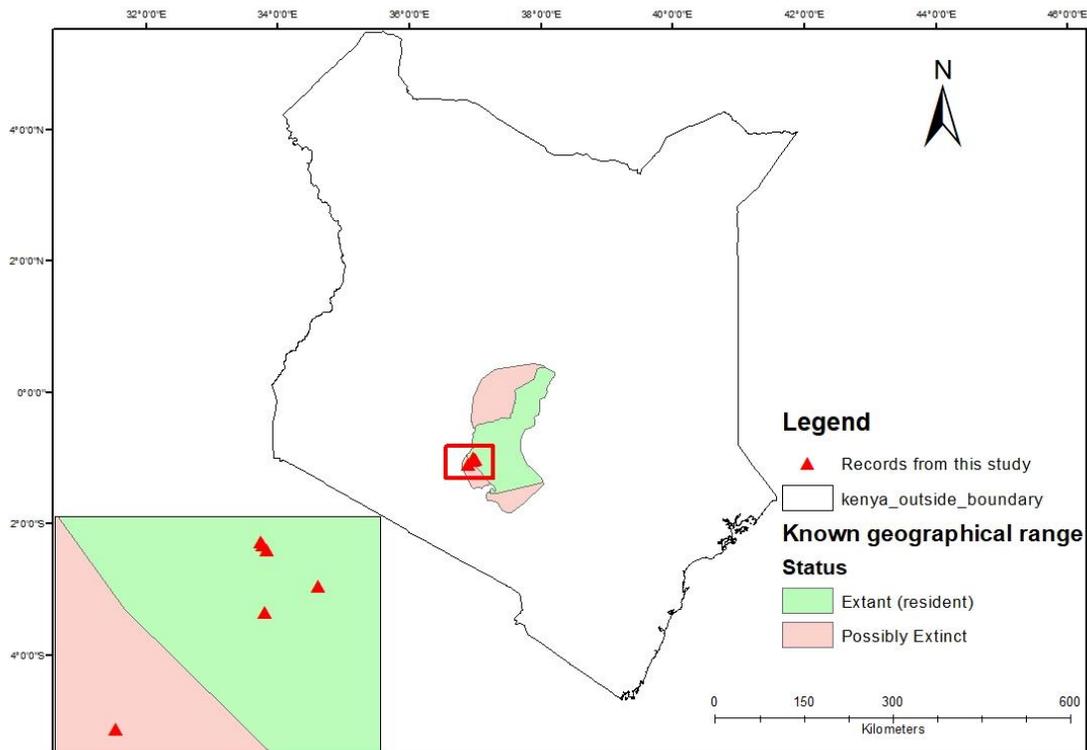


Figure 1: Map of the known geographical distribution of Hinde's babbler in Kenya according to Birdlife International and the area of study for this project.

MAIN FINDINGS

We detected a total of six Hides' babbler groups with an average of two individuals per group. Although it was not easy to characterize the composition of most of the group members due to the dense bushes or brief show up, we positively identified a young Hides' babbler in one of the groups. The presence of a juvenile indicates that the groups are breeding successfully. Groups were either found on dense riparian thickets along the river (four groups) or dense bushes at the edge of coffee farms (see Table 1).

Table 1: Meta information on the Hides' babbler groups that were recorded in this study

	Number of individuals	Vegetation type	Latitude	Longitude	Altitude	Notes
Group 1	2	Riparian thickets along the Chania River valley	-0.9995	36.985264	1559	One adult and one of unknown age (seen briefly).
Group 2	3	Dense bush along the Chania River valley	-1.00092	36.986007	1549	Fairly unresponsive to callbacks despite having a juvenile in the group. They were busy feeding and almost completely ignored the callbacks.
Group 3	2	Fallow field along the Chania River valley.	-1.00343	36.988285	1554	Responded very aggressively to the callbacks.
Group 4	1	Individual along a dense hedgerow (Lantana camara).	-1.03482	36.987119	1560	Very briefly responded vocally to the callback and then went silent and refused to emerge from cover. Possibly a female incubating egg or an individual intimidated by the sound of the large group in the callback.
Group 5	1	Dense bush at the edge of Chania Coffee Estate.	-1.02189	37.014137	1528	Very responsive to call back
Group 6	3	Dense moist indigenous riparian bush at the edge of a large coffee farm	-1.09387	36.91197	1587	Very responsive to callbacks

One group was detected in an area where the Hinderes' babbler is presumably extinct according to the current Birdlife International/IUCN map of the geographical distribution of this species in Kenya (Figure 1 and 2).

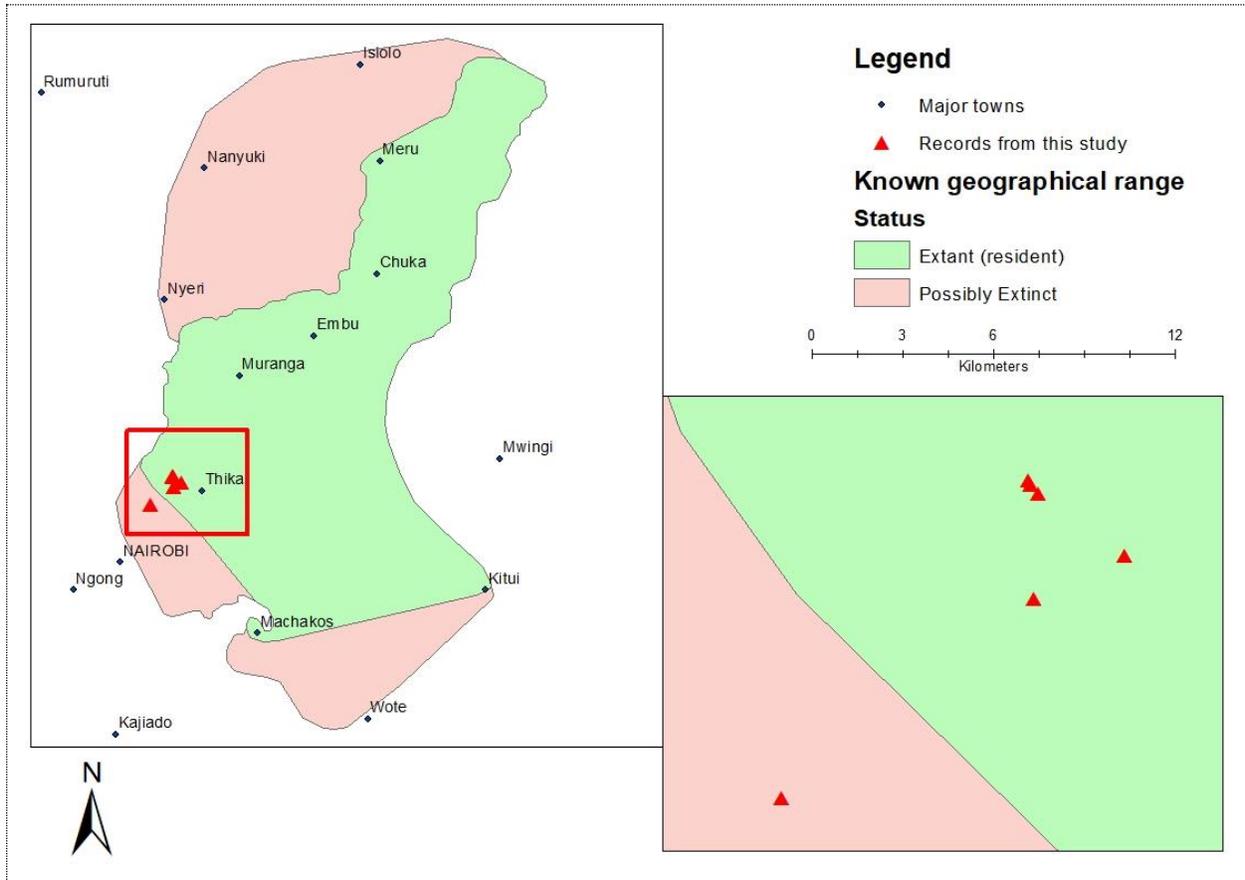


Figure 2: Zoomed map of the area of study showing the location of the Hinderes' babbler groups recorded during this study.

CONSERVATION IMPLICATION

Although the Nairobi Metropolitan is developing at an unprecedented rate, our studies shows that the Kenyan endemic Hinderes' babbler is still existing within this area, though in small numbers. Notably, this species is surviving in areas with dense bushes either at the fringe of agricultural lands or along the river valleys. Continued survival of this species at the greater Nairobi Metropolitan depends on the presence of these suitable habitats (fallow land and indigenous bushes along the river valleys). However, with the growing demand for living spaces for the population that is dependent on Nairobi City for employment and social facilities and the need for the Kenyan government to achieve its development agenda – Vision 2030, changes in land

use (conversion of fallow land and coffee farms to real estates and other public utilities) are inevitable. There is therefore a need to sensitize land owners on the presence of this endemic and globally threatened bird and the importance of sharing land to help conserve its long-term existence.

Based on this study it is clear that this species still exists in areas where it was thought to be locally extinct according to the current Birdlife International species distribution range. There is a need to update the distribution range maps of this species in Kenya to facilitate effective monitoring and conservation.

EXPENDITURE

Note: £ = UK Sterling pounds and Ksh = Kenya Shillings

Item	Description	Units	Number	Unit cost	Total cost (Ksh)	Unit cost (£)	Total cost (£)
				(Ksh)			
Field Expenses							
Vehicle hire		0	0	0			0
					The Ornithology Section of NMK Land Rover was utilized for this project. Fuel, maintenance and driver's cost were covered by the project funds		
Fuel and maintenance	Local travel within research study sites	km/day	540	15	8100	0.12	64.8
Driver allowance	£ /person/day	Man/day	36	1500	54000	11.54	415.44
Subtotal					62100		480.24
Stipend							
Allowance for local guide	£ /person/day	Man/day	36	1500	54000	11.54	415.44
Daily subsidy for four researchers - lunches	£ /person/day	Man/day	144	800	115200	6.14	884.16
Subtotal					169200		1299.6
Stationery	Field notebooks, pens and pencils	Lump sum			5600		43.06
Sub-Total					5600		43.06
Grand-Total					236900		1822.9

LIST OF APPENDICES

Appendix 1: Pictorial illustration of field observations

		
Potential suitable habitats for the Hinder's babbler encountered within the study area: Indigenous bushes along river valleys and secondary growth at the fringes of farmlands		
		
Project team during the field survey		One of the curious Hinder's babbler individuals who responded to a call back

Appendix 2: Sub-regions that were visited within the study area

Surveyed regions	Sub-county
1. Kibidav Farm (Kabete) and nearby riparian thickets bordering University of Nairobi Lower Kabete Campus	Kabete
2. Paradise Lost and surrounding coffee farms (incl. Kibidav Farm)	Kiambu
3. Areas of suitable habitat around Tatu City north to areas around Kofinaf and the Coffee Research Institute	Ruiru
4. Areas of suitable habitat near Karuahia waterfront north and west to Gatundu and south-east to Juja town	Juja
5. Riparian bush, coffee farms and thickets along the Chania River from Chania Coffee Estate to an area of dense human settlements area along the Thika-Mangu Road	Thika West

6. Area of dense bush near the International Centre for Technology, Thika. Surrounding areas were densely built-up and unsuitable for Hinde's Babbler	Thika East
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Appendix 3: Selected References

1. BirdLife International (2017) Species factsheet: *Turdoides hindei*. Downloaded from <http://www.birdlife.org> on 26/09/2017
2. Habel, J. C., Teucher, M., Pschonny, S., Rost, S., & Fischer, C. (2015). Beyond prime areas of nature protection in East Africa: conservation ecology of a narrowly distributed Kenyan endemic bird species. *Biodiversity and Conservation*, 24(12), 3071-3082.
3. Njoroge, P., & Bennun, L. A. (2000). Status and conservation of Hinde's Babbler *Turdoides hindei*, a threatened species in an agricultural landscape. *Ostrich*, 71(1-2), 69-72.
4. Njoroge, P., Bennun, L. A., & Lens, L. (1998). Habitat use by the globally endangered Hinde's Babbler *Turdoides hindei* and its sympatric relative, the Northern Pied Babbler *T. hypoleucus*. *Bird Conservation International*, 8(1), 59-65.
5. Shaw, P., & Musina, J. (2003). Correlates of abundance and breeding success in the globally threatened Hinde's babbler (*Turdoides hindei*) and its congener, northern pied babbler (*T. hypoleucus*). *Biological Conservation*, 114(2), 281-288.
6. Shaw, P., Njoroge, P., Otieno, V., & Mlamba, E. (2014). The range, abundance and habitat of Hinde's Babbler *Turdoides hindei*: fine-scale changes in abundance during 2000–2011 reflect temporal variation in scrub cover. *Bird Conservation International*, 24(4), 453-465.