

# Density and abundance of the Understorey avifauna of Ruhiiija

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# Introduction

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- Bwindi Impenetrable National Park is listed as one of Uganda's Important Bird Areas (Byaruhanga et al, 2001) and hosts 24 of 37 restricted range bird species of the Albertine rift region (Shaw and Shewry, 2001).
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# Bird Distribution

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- The key to an understanding of present day bird distributions in Africa will be found in ecological conditions, especially the nature of vegetation, which is an index of climate.
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# Bird Distribution

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- This comes as a result of dependence by birds on vegetation for many key facets of their lives. Vegetation is a key part of any bird species' habitat owing to its importance in their feeding, nesting, breeding and protection from other species as well.
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# Bird Distribution

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- The Albertine rift is a biodiversity hotspot and the biodiversity of forest trees and forest species in Uganda are only mildly correlated (Pomeroy, 1992).
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# Distribution across altitudes

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- Terbough (1977) found major changes in vegetation and climate from a valley floor at 500m to the summit of the ridge at 3500m. This is definitely likely to cause a change in bird population dynamics.
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# Problem Statement

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- There has been evidence of the decline of some of these species like the Shelley's Crimsonwing (Taylor, 1983). It is necessary to establish whether this decline is general or limited to specific species and discover the factors related to habitat and altitude that may be contributing to this decline.
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# Overall Objective

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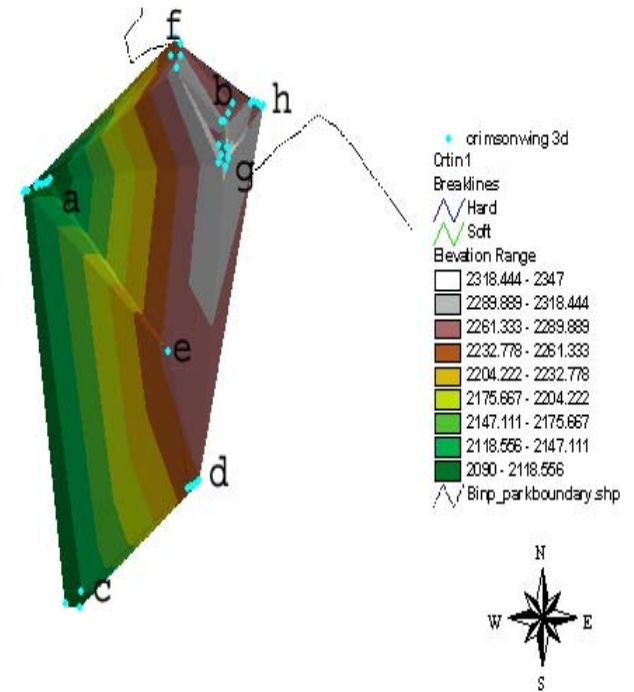
- The objective of the study is to develop a better understanding of some aspects of the ecology of the understorey bird communities of BINP.
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# Specific Objectives

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- ❑ Estimate the density and relative abundance of the understory bird communities in Ruhija.
  - ❑ Assess the habitat characteristics at the different altitudes.
  - ❑ Assess the altitudinal distribution of the Albertine Rift Endemics and the Montane forest birds.
  - ❑ Assess the species richness, abundance and distribution of the Albertine Rift Endemics.
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- a- Hamufa
- b- Bishaayu
- c- Kajembajembe
- d- Old Nyabayonza
- e- New Nyabayonza
- f- Kinyungu
- g- Nature Trail
- h- Kyaahi



# Methods

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- Transect Counts
  - Mist Netting
  - Vegetation Structure Assessments  
(Chequered board technique)
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# RESULTS

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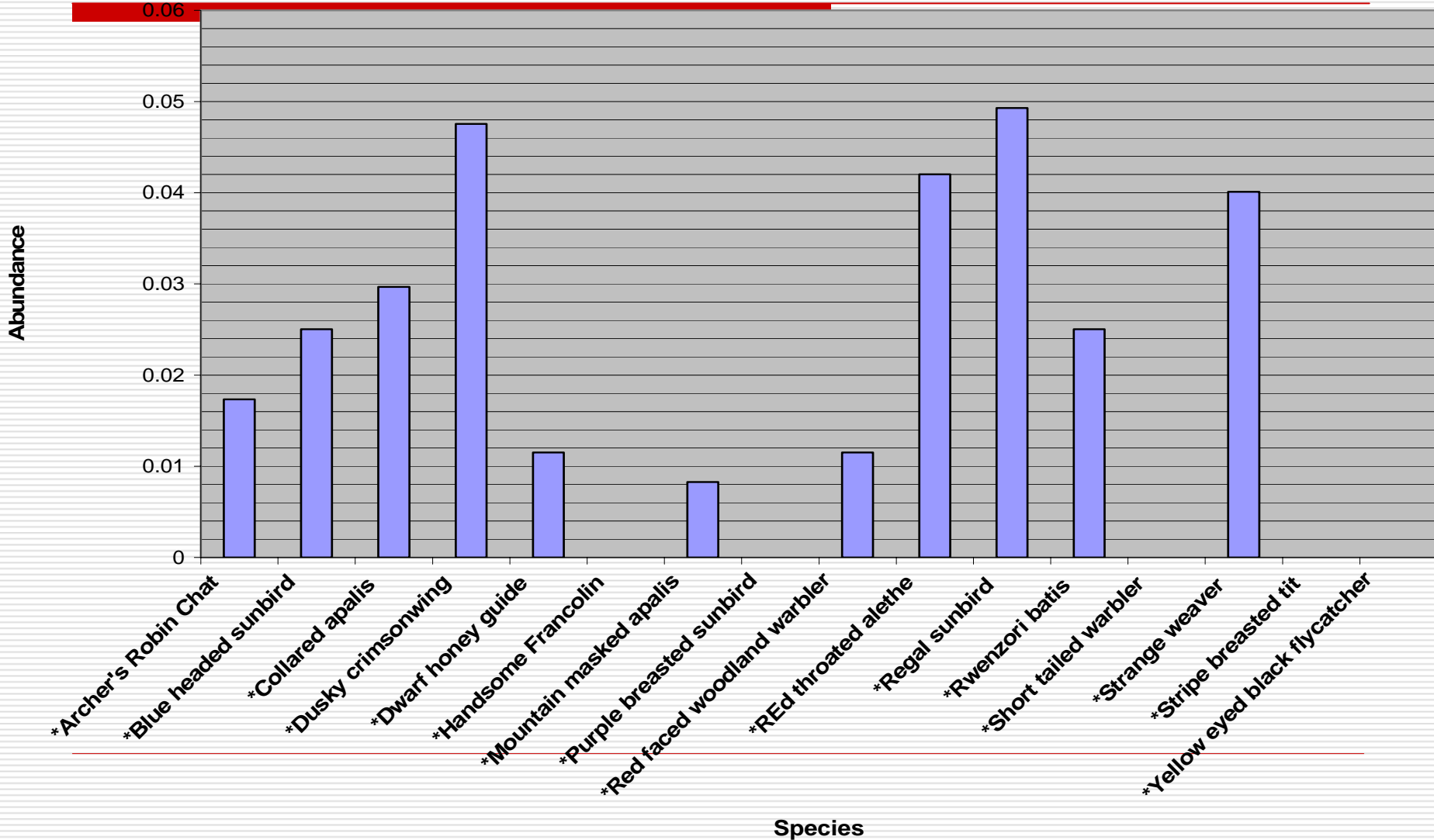
- The study came up with a total of 102 bird species. Of these, 69 were identified during mist netting and 86 were identified during the counts. 34 were only identified during counts and 16 were only identified in the mist netting samples. Of these, only 16 were Albertine rift endemics.
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# Most abundant species

Species	Forest Category	Food	Number captured	Proportional abundance
Yellow whiskered greenbul	(F)	F	186	0.157716163
Chubb's Cisticola	(F)	I	66	0.105543023
African hill babbler	FF	I	24	0.055981926
Regal sunbird	(F)	N	20	0.049295387
White starred robin chat	(F)	I	19	0.047537214
Dusky crimsonwing	(F)	S	19	0.047537214

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# Albertine Rift Endemics



# Table of Correlations for most abundant AREs

Site	Strange Weaver	Collared Apalis	Dusky Crimsonwing	Regal Sunbird	Altitude (m)
Bishaayu	0.0673	0.0308	0.0308	0.0308	2282
Hamufa	0.0492	0.0697	0.0367	0	2108
Kajembajembe	0.0496	0	0.037	0	2110
Kinyungu	0.0374	0.0374	0.0374	0.0374	2253
Kyaahi	0.0258	0	0.0575	0.0432	2285
Nature Trail	0.016	0.016	0.0457	0.0607	2285
Nnabayonza	0.0685	0	0.0885	0	2255
Onabayonza	0	0.063	0.0973	0	2318
<b>Correlation</b>	<b>0.41768101</b> 1	<b>0.07068</b> -	<b>0.479668</b>	<b>0.49887</b> 5	

# Proportional Abundance Vs Vegn. Structure

Site	Strange Weaver	Collared Apalis	Dusky Crimsonwing	Regal Sunbird	Structure
Bishaayu	0.0673	0.0308	0.0308	0.0308	100
Hamufa	0.0492	0.0697	0.0367	0	100
Kajembajembe	0.0496	0	0.037	0	96.5
Kinyungu	0.0374	0.0374	0.0374	0.0374	99.5
Kyaahi	0.0258	0	0.0575	0.0432	98.5
Nature Trail	0.016	0.016	0.0457	0.0607	85.1
Nnabayonza	0.0685	0	0.0885	0	95.2
Onabayonza	0	0.063	0.0973	0	90.8
<b>Correlation</b>	<b>0.612956763</b>	<b>0.091895</b>	<b>-0.40455</b>	<b>-0.273</b>	

# Research Recommendations

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- Strange weaver and Dusky Crimsonwing could be used as ecological surrogates.
- Research into the ecology of the Collared Apalis.
- More time into the research on the Shelley's Crimsonwing.

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□ Dusky  
Crimsonwing



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□ Strange weaver



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□ Regal Sunbird

