

CONTENTS

BEHAVIOUR	2
BIRD PLANT INTERACTIONS	3
DISTRIBUTION	5

BEHAVIOUR

Territorial behaviour of Yellow-rumped (*Pogoniulus bilineatus*) and Yellow-throated (*Pogoniulus subsulphureus*) Tinkerbirds in Kibale Forest, Uganda

Abstract

Territorial behaviour of two closely related species, yellow-rumped and yellow-throated tinkerbirds was investigated in Kibale Forest by the use of acoustic experiments. Eight yellow-rumped and eight yellow-throated tinkerbirds territories were chosen for the experiments. Three types of playback stimuli were administered to an individual from each territory. These species exhibited inter-specific territorial behaviour although responses to intruders may differ within and between species. There was no response to unrelated species and responses to the playback stimuli were well explained by the latency and the closest approach to speaker.

Vuyisile Thabethe, University of KwaZulu-Natal, South Africa

Chipo Mungenge, University of Zimbabwe, Zimbabwe

Edwin Njuguna, University of Nairobi, Kenya

Elihuruma Wilson, Nelson Mandela African Institution of Technology, Tanzania

2014

Factors affecting bird call structure in a tropical forest

Abstract

Few studies have looked at behavioural and morphological adaptations of bird species to a given habitat. We attempted to quantify the effect that habitat structure and body mass had on bird call structure. Results indicated a significant difference in call structure for generalist species between open and closed zones and a significant difference between zones and canopy level for passerine species. Body mass was significantly correlated to call frequency. We conclude based on our study that evolutionary traits contribute more toward variation in call structure than habitat differences.

Imogen Dainty, University of Liverpool, UK

Tarik Bodasing, University of KwaZulu-Natal, South Africa

2009

The effect of food availability on the diversity and density of birds in forest edge and interior habitats of Kibale National Park, Uganda

Abstract

Animal species are influenced by a wide variety of abiotic and biotic factors, which influence both their diversity and density. In this study the effect of food availability in different habitats on the

diversity and density of birds was investigated in a tropical moist forest. The results showed that there is a significant difference in the biomass of birds between the two habitats and that the availability of fruit as food may be one of the causes of this. Further investigation into the actual composition of the species between the habitats would provide a clearer picture as to the factors influencing the density and diversity of birds at Kibale.

Adam Kane, University College Dublin, Ireland

Deo Kujirakwinja, Wildlife Conservation Society, Democratic Republic of Congo

David Marques, University of Zurich, Switzerland

2007

Population density and territorial behaviour of two tinkerbird species, Yellow-rumped (*Pogoniulus bilineatus*) and Yellow-throated (*P. subsulphureus*) in logged, unlogged and community plantation forests in and around Kibale National Park

Abstract

Our results show that population density of both species is different in three habitat types; the Yellow-throated Tinkerbird was more abundant in pristine forest compared to the Yellow-rumped, while the community plantations did not support great numbers of either species. Playback responses of both species varied both with own species and other species stimuli. Results do not support inter-specific exclusion but rather the two species seem to share overlapping territories.

Perpetra Akite, Makerere University, Uganda

Claudien Nsabagasani, DFGFI-Karisoke Research Center, Rwanda

2006

Territoriality and song behaviour of the Little Greenbul, *Andropadus virens*

Abstract

Birdsongs are used for intra- and extra-specific communication. In intraspecific communication, the repertoire, i.e. the number of notes used by an individual, is known to be a true indicator of fitness of the individual itself and thus a clear signal both to mates or rivals. The males of the Little Greenbul, *Andropadus virens*, show a wide range of song-repertoire. Analysing the sonograms of different individuals, comparable numbers and shapes of elements in calls and stereotype songs were detected, while the numbers and shapes of notes in variable songs changed dramatically between individuals. As a highly territorial bird throughout the year, the Little Greenbul showed a strong response to playback experiments, measured as approaches to within 3 m of the speakers. The response to playback-stimuli, manipulated in order to contain only variable songs, induced the strongest and most aggressive response both measured by approaches to within 3 m of the speaker, and analysis of the sonograms of post-playback recordings.

Sahar Ahmed Abdul Rasoul, University of Khartoum, Sudan

Mathieu Camenzind, University of Zurich, Switzerland

Egon Heiss, University of Vienna, Austria

2006

Foraging success of the African Pied Wagtail *Motacilla aguimp* in three habitats

Abstract

We used transects and focal animal sampling to assess the foraging success of the African pied wagtail (*Motacilla aguimp*) in three forage substrates, namely, buildings, cultivated fields and cut grass lawns. Peck rates were slightly higher in cultivated fields than buildings and cut grass lawns, but not significantly so ($F = 0.55$; d.f. = 2, 39; $P = 0.58$). We observed more large insects falling prey to the birds in cut grass lawns than in other sites (Chi-square = 43.81, d.f. = 4; $p < 0.001$). Juveniles registered slightly higher peck rates than their parents, but not significantly so. ($F = 0.08$, d.f. = 2, 43; $P = 0.92$). The results suggest that wagtails achieve similar foraging success in three distinct forage habitats.

Michael Malinga, Makerere University, Uganda

Wilirk Ngalason, University of Dar es Salaam, Tanzania

2001

BIRD PLANT INTERACTIONS

A comparison of visitation rate and patch size of Sunbirds on *Leonotis nepetifolia*, in Kanyawara

Abstract

In this study, we investigated the relationship between visitation rate of sunbirds and *Leonotis nepetifolia* patch size in Kanyawara, Uganda. Five species of sunbirds visited the patches. During morning observations (7:00-10:00), visitation rate was significantly different between small/medium sized patches and large patches. We also explored visitation rate in the most abundant sunbird species found, Bronze (*Nectarinia k.kilimensis*) and Copper sunbirds (*Nectarinia cuprea*). Bronze sunbirds showed a higher visitation rate in small/medium patch as compared to large. However, there was no difference in visitation rate for Copper sunbirds throughout the day at patches.

Sarah Brady, University of Aberdeen, Scotland

Desire Muhoza University of Dar es Salaam, Tanzania

Rio Heriniaina, University of Antananarivo, Madagascar

2014

Patterns of Sunbird (Family: Nectariniidae) Visitation to Four Sympatric Plant Species in Kibale National Park, Uganda

Abstract

This study was conducted in Kibale National Park from 17th – 20th of July 2014, to investigate patterns of sunbird (Family: Nectariniidae) visitation to four sympatric plant species. We observed four plant species which selected based on a preliminary observation, that all plant species were visited by sunbirds with some patterns of differential visitation over time of day. Eight species of sunbirds were identified as active visitors of four sympatric plant species and evidence for partitioning of visitation to these plants were observed. *Erythrina* and *Callistemon* were visited by seven out of the eight sunbird species. Olive-bellied sunbird visited all our focal plants. Territorial behaviour was observed for Green-headed sunbird, hence, pushing less competitive Olive-bellied sunbirds to switch

feeding preference.

Ngoh Michael Lyonga, Tropical Plant Exploration Group (TroPEG), Cameroon
Phyllis Nayram Dzakpasu, Kwame Nkrumah University of Science and Technology, Ghana
Hadis Tadele Desta, Madawalbu University, Ethiopia

2014

Do differences in eco-morphology reflect differences in habitat between birds found in forest interior and forest edge in Kibale Forest National Park, Uganda?

Abstract

A comparative study of eco-morphology between birds located in interior and edge (exterior) forest was initiated in 4 plots within Kibale National Park. Many studies have shown that bird species and densities differ between these two habitat types and this study attempted to correlate differences in bird morphology with difference in habitat. A distinct similarity in vegetation cover at mid-canopy height between the interior and exterior was discovered. This overlap in habitat type led to similar bird species being captured in interior and edge. Little variation in the morphology of birds was noted. Future studies may need to focus on one particular bird group rather than multiple species in order to determine a clearer morphological difference between birds located in interior and exterior forest.

Laila Bahaa-el-din, University of Nottingham, UK
Niall Higgins, National University of Ireland, Galway

2007

Variation in nectar production in *Erythrina abyssinica* and its effect on sunbird activity in Kibale Forest, Uganda

Abstract

An investigation into the impact of nectar characteristics on sunbirds activity was investigated with reference to *Erythrina abyssinica* flowers in Kibale forest National Park, Uganda. Study trees were randomly selected along a 2 km stretch from forest edges. Measurements on nectar volume and sucrose concentration were made and focal observations on activity patterns conducted on randomly chosen sunbirds. Data analysis showed that nectar characteristics affect the activity of sunbirds at different times of the day. Aggressive behaviour in sunbirds was also shown to increase with increasing number of flowers.

Maurice Ogoma, National Museums of Kenya
Tiwonge I. Mzumara, University of Malawi

2005

Interspecific competition in sunbird species (*Nectariniidae*) for nectar resource in *Erythrina abyssinica* - Kibale Forest National Park, Uganda

Abstract

The interspecific competition among nectivorous sunbird species on *Erythrina abyssinica* is a complex and dynamic ecological interaction. The eight sampled *E. abyssinica* trees in Kibale Forest National Park exhibited significant interspecific competition for nectar resource among 12 recorded sunbird species. This is vividly reflected in their dominance hierarchies. Likewise the results showed positive

correlation between number of individual sunbird species and nectar volume (standing crop). Nectar resource partitioning is shown by the significant difference in times of the day the various sunbird species visited the trees during the day.

Akwany Leonard Omondi, Egerton University, Kenya

Markus Nilsson, Lund University, Sweden

2003

Features of *Erythrina abyssinica* that influence Bronze Sunbird defence against other bird species visitation along Kanyawara Road, Kibale National Park

Abstract

This study investigated the defence behaviour of Bronze Sunbirds on *Erythrina abyssinica*. Out of the 16 study trees, 7 were defended and 9 were not defended by Bronze Sunbirds. The Bronze Sunbird chased off 6 species of other sunbirds. The floral unit, canopy volume or flower density did not appear to influence whether a tree was defended or not. Both the Bronze Sunbird and other sunbirds spent more time on the trees that were defended than the trees that were not defended.

Anastacia W. Mwaura, Egerton University, Kenya

Teshome Hunduma, Addis Ababa University, Ethiopia

2001

DISTRIBUTION

Bird communities, foraging guilds and forest dependence in primary and secondary forest habitats with varying levels of disturbance in Kibale National Park, Uganda

Abstract

Although a national park, Kibale Forest contains areas that have experienced varying levels of human disturbance in the past. It was therefore decided that the variation in bird communities was of interest in order to assess the effects of logging. Bird communities, foraging guilds and forest dependence were studied in a number of habitat types using mist-netting. Based on the results of the study habitat structure appeared to have more of an impact on bird communities than logging history. Feeding guilds showed a greater response to variation in habitat structure than forest dependence.

Kelly Vlieghe, University of Cape Town, South Africa

Lois Kinneen, Trinity College Dublin, Ireland

Michał Śmielak, Warsaw University, Poland

2011

Forest bird species diversity and abundance in three habitats in Kibale Forest National Park, Uganda

Abstract

A combination of point counts and mist-net data was used to measure bird species diversity and abundance in primary, secondary and edge forest habitats in Kibale National Park. A total of 452 individuals of 69 species was recorded. Species diversity did not vary between the habitats but abundance of species

common to all habitats was significantly different between the primary and edge sites. The highest number of species (49) was recorded at the edge habitat, which also had the highest bird density. Primary forest had the lowest bird density. The results show that habitat disturbance in Kibale Forest has not affected the overall bird species diversity but has influenced bird community composition.

Abdou Karekoona, Makerere University, Uganda

Gayle Reddihough, University of Bristol, UK

2005

A comparison of relative densities of the little Greenbul and the Grey-backed Camaroptera in two different forest edges of Kibale Forest National Park

Abstract

The relative densities of two birds species, the Little Greenbul (*Andropadus virens*) and the Grey-backed Camaroptera (*Camaroptera brachyura*) were estimated in regenerating and lightly logged forest edges. The line transect method was used with each transect measuring approximately 1.6 km long and 30 m wide. The different vegetation structures along each transect was surveyed and the percentage cover of each type calculated. Data analysis showed that individual numbers of the Little Greenbul were significantly greater ($P < 0.01$) in the lightly logged forest edge than in the regenerating forest edge. However, there was no significant difference in the numbers of Grey-backed Camaroptera between the two sites. The difference in the numbers of Little Greenbul in the two sites is thought to be due to the difference in vegetation structure and the species habitat preference for denser secondary forest. This is in contrast to the Grey-backed Camaroptera, which prefers more open habitats. This study showed that the Little Greenbul can be used as an indicator of more closed secondary forests. The densities of the Grey-backed Camaroptera do not suggest any close likelihood of habitat indicator for the two different sites.

Nsom Alfred Jam, BirdLife International, Cameroon

Samuel Kaula Wambua, Egerton University, Kenya

Dolores Cassells, National University of Ireland Galway, Ireland

2003

Abundance of five bulbul species (Pycnonotidae) within logged and unlogged areas in Kibale Forest

Abstract

We determined the abundance of five species of Bulbul (Pycnonotidae) in logged and unlogged areas in Kibale forest. Two transects of 1 km and one of 2 km were randomly selected from each site. The line transect method was used for the bird survey. The percentage cover, storey density, average shrub height, shrub cover, canopy and sub-canopy tree height were measured to compare the general physiognomy of the sites. Two of the species (Honeyguide Greenbul and Red tailed Bristlebill) had a higher abundance in the unlogged area than in the logged area, a ratio of 2:1. The Little Greenbul and the Western Nicator had a lower abundance in the unlogged site than in the logged, a ratio of 1:2. The Common Bulbul was only recorded in the logged area.

Collette Mulkeen, National University of Ireland, Galway, Ireland

Abiodun Abidemi, University of Ibadan, Nigeria

2002