

Summary of research projects supported by the Critical Ecosystem Partnership Fund through the Student Grants Programme that was implemented by BirdLife International

January 2008

Project Title	Short Description	CEPF contribution (US\$)	Grantee	Level	University
The proximity of the farms to Arabuko – Sokoke forest influences the diversity of insect pollinators and fruit set.	This study will (1) identify the pollinators of mango and cashew nut crops around Arabuko Sokoke forest, and (2) investigate the relationship between the forest the pollination and diversity of pollinators to these crops and how the fruit set level achieved changes across a gradient away from the forest.	7750	Kenneth Njoroge Mwangi	MSc	University of Nairobi
Beekeeping for forest conservation: Filling a knowledge gap at Arabuko Sokoke Forest, Kenya	The research has an overall aim of cataloguing tree and crop species foraged by honeybees in the Arabuko Sokoke Forest-adjacent areas. Specifically, it seeks to: (1) to construct a floral calendar for the Arabuko Sokoke environs, (2) to investigate the sources of nectar and pollen for honey bees foraging at the Arabuko Sokoke environs, and (3) to assess the quantity and quality of honey collected from beehives at various distances from the forest.	9182	Susan Sande Okoth	PhD	University of Pretoria
Effects of Joint Forest Management Institutional Arrangements on Forest Condition and Local Livelihood	The research focuses at knowing whether the introduction of Joint Forest Management improves the forest condition and the livelihoods for people living adjacent to the forest reserve. The findings will be useful in providing insights and lessons on how institutional arrangements can be supported, reoriented to help design better interventions in ecosystems management.	8025	Simon Deus Lugandu	PhD	The Open University of Tanzania
Abundance and Diversity of Small Mammals in Disturbed and Undisturbed Forests at Uluguru Mountains	This project intends to study the diversity and abundance of small mammals in disturbed and undisturbed forests at Uluguru Mountains, Tanzania. The main goal is assess the impact of forest disturbances on these disturbance-sensitive mammals, and one of the most poorly known fauna group in the Eastern Arc Mountains.	8326	Elikana Kalumanga	MSc	University of Dar es Salaam

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Bird-habitat relationships of some Kenyan coastal forest bird species	This study examines the influence of local habitat quality and characteristics on occupancy (absence/presence), distribution, abundance and habitat use by the three endangered bird species (<i>Anthus sokokensis</i> , <i>Anthreptes reichenowi</i> , <i>Tauraco fischeri</i>) in five forests at the south coast of Kenya (Diani, Dzombo Hill, Kaya Waa, Mrima, and Marenje).	5487	Bernard Cheruiyot Soi	MPhil	Moi University
<i>Cedrela mexicana</i> impacts on indigenous trees diversity in Kimboza Forest Reserve, Morogoro Tanzania	<i>Cedrela odorata</i> spread threatens indigenous biological resources. Findings will provide impacts information and propose mitigations measures. Investigation of plant species composition and diversity changes caused by spread of <i>Cedrela odorata</i> . Study will be conducted within Kimboza Forest Reserve.	3985	Charles Patrick	MSc	University of Dar es Salaam
Assessment of Species Composition and Diversity of Small Mammals at Saadani National Park	The project aims to study and assess species composition and diversity of small mammals found in Saadani National Park (SANAPA), identify the species of small mammals and their population characteristics in different species of small mammals and their population characteristics in different habitats. The results are hoped to fill the gap of the species list of small mammals of SANAPA.	5044	Christopher Sabuni	MSc	Sokoine University of Agriculture
Density and Inter-fragment Dispersal of Bird Species in Three Coastal Forest Fragments, Kenya	Three indigenous forest fragments (Kayas Gandini and Mtswakara and Mwache Forest) at the Kenyan coast within the Eastern Arc and Coastal Forests Hotspot will be studied. Point counts and bird-banding techniques shall be used to assess avian diversity and dispersal within and between these fragments.	9108	Simon Nganda Musila	MSc	Kenyatta University
Ecological Dynamics and Conservation Importance of the Eastern African Coastal Forests ecosystems in Tanzania.	The study explores ecological change along the selected coastal forest focusing on genetic diversity and regeneration potentials of threatened plant species in the coastal area in relation to edaphic factors and the levels of ecological disturbance caused by human activities and the threats in which such species are faced. Standard-sampling methods on will be employed so as to get the representative sample for generalization of the characteristics of the ecosystem.	8021	Mligo, Cosmas	PhD	University of Dar es Salaam

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The ecology and molecular characterization of the endangered and endemic <i>G. taitensis</i> (land snail) of the Taita Hills, Kenya.	<i>Gulella taitensis</i> is an endangered land snail endemic to the Taita Hills forests, Kenya. This study seeks to investigate the species ecology and molecular characterization. Such information will be vital for promoting insitu conservation of the species as well as ex-situ conservation should the need arise for captive propagation of the species to avoid extinction. Secondly, the species molecular characterization will for the first time provide an understanding of the species genetics in addition to providing opportunities for providing taxonomic barcodes inline with the global bar-coding initiative.	9389	Ann Njeri Mwaura	MSc	Kenyatta University
Distribution, diversity and population status of herpetofauna in lower Tana River forests, Kenya.	A study of the herpetofauna of the Lower Tana River forests will be undertaken to determine their distribution, diversity, population and conservation status. Data will be collected for comparisons of forests within and outside protected areas for amphibians and reptiles. Standardized methods (a time-limed search, traps with drift fences and transects) as well as un-standardized opportunistic visual encounter survey will be used for sampling.) A comparison of abundance and species diversity using various indices will be done.	8439.29	Julius K. Nguku	MSc	Nairobi University
The distribution, diversity and populations status of Land snails from Shimba Hills National Reserve, Kenya.	Previous incidental land snail collections among few coastal forests in Kenya have shown potentially existence of high levels of endemism among the coastal forests such as Shimba Hills. This study seeks to investigate distribution, diversity and population status of land snails from Shimba Hills National Reserve. Snail sampling will be undertaken using timed direct search and litter sample methods and data will be analyzed using various statistical software's. The study is expected to deliver the first ever checklist of Shimba Hills land snails, detailed report/thesis on their distribution, diversity, population, conservation status and priorities. Voucher material will be curated and archived at the National Invertebrates Collection at the National Museums of Kenya.	6712	Mercy Nelima Ndalila	MSc	University of Nairobi

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Impact of Human Disturbance On Coastal Forests: The Case Study Of Tong'omba Forest Reserve In Kilwa District, Tanzania.	This research will investigate the impact of human disturbances on stocking and diversity of woody plants in Tong'omba Coastal Forest Reserve for the purpose of generating information which will contribute to the proper management of the reserve.	4920	Hassan Senkondo Chikira	MSc	Sokoine University of Agriculture
Ecological Survey Of The Golden Rumped Elephant Shrew (Rhynchocyon Chrysopygus) In The North Coastal Forests Of Kenya.	The golden-rumped sengi in the Arabuko-Sokoke Forest (ASF) and five smaller patches around it have its status is reasonably well known from recent studies. However, there is ample reason, to believe that the sengi occurs in the forests north of the Tana where habitats are still relatively intact and human impacts low, especially with regard to the Boni and Dodori Forests where some evidence exists, based on a single sighting and interviews with residents of Milimani village. This study will assess the occurrence of the species and its habitat north of the Tana River in the Boni and Dodori Coastal forests. It will also determine the relative abundance of golden-rumped sengis in representative forest habitats north of Tana River for comparison with historical data from south of the Tana River.	6833	Grace Wambui Ngaruiya	MSc	University of Nairobi
Conservation status of threatened endemic birds in Gongoni coastal forest reserve, Kenya	Gongoni forest Reserve will be studied by establishing conservation status of threatened coastal forest endemic and restricted range birds. The results will provide an inventory of the avian diversity and information on current status and conservation threats of to the site.	6778	Maurice Ogoma	MSc	University of Bremen

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Land use dynamics and human impacts on conservation status of <i>Warburgia stuhlmannii</i> in Dakatcha and Marafa forests	Dakatcha Woodlands and Marafa forests along the coastal strip of Kenya have been documented as Critical Ecosystem Biodiversity Hotspots. These sites have no formal protection status and are highly threatened by anthropogenic factors. The use of spatial tools is useful in decision making for our natural resources especially where the risks are greater. This approach is particularly useful for the vast coastal forests which are experiencing rapid environmental degradation due to both global climatic changes and rapid population growths. By identifying fragile ecosystems, for instance Dakatcha and Marafa forests in Kenya, it is possible, through this method to direct human activities and settlements away from such areas or concentrate remedial development towards such areas. Ecological studies and social work will be conducted to understand the conservation status of the threatened <i>Warburgia stuhlmannii</i> and its habitat. It is envisaged that the study will shed light on the conservation status of this key species and come up with recommendations to enhance its conservation and the habitat.	5458	Mercy Mwanikah	MSc	Moi University
Potential and Constraints Of Eco-Tourism In Improving Nature Conservation and Livelihoods	Amani Nature Reserve in Tanzania is well known for its biological and ecological values. Eco-tourism is practiced in this reserve. Limited information has been reported on the potential and constraints of the practice. This study aims at examining the potentials and opportunities of eco-tourism in improving nature conservation and livelihoods.	5520	Rehema A.Shoo	MSc	Sokoine University of Agriculture
Assessment of Rare Plants and Restoration Potential through Seed Bank in Zaraninge Coastal Forest, Bagamoyo District Tanzania	The general objective of the study is to assess rare plants species composition and its relation with soil seed banks as basis for restoration potential in Zaraninge forest. The specific objectives of the study are to identify rare plant species and determine their composition, richness and dominance and to determine soil seed bank density and its relationship with species composition. The baseline information is expected to give a basis for restoration planning of threatened plant species and possible restoration measure to be adopted and to ensure its conservation.	7080	Nancy Eliad Pima	MSc	Sokoine University of Agriculture

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The status of invasive plant species at Udzungwa Mountain National Parks	In the last two decades most natural forests in Tanzania have been invaded by invasive plant species, however in varying level of diversity and impact. Udzungwa National Park forest is no exception. Although UMNP ranks high in terms of water catchments value, Biodiversity, aesthetic value, endemism and natural interesting features; not all invasive plant species have been identified. Their status, abundance and distribution however are least documented. If preliminary measures are not taken plants invasive species will spread to the extent of causing conservational, environmental and socio- economical impacts in the park. The present study will therefore provide baseline information on the plant invasive species in the park and set a platform for future work on invasive and particularly on the impact and how to control the situation. It will assess the status, distribution, abundance and diversity of plant invasive species in Udzungwa Mountains National Park.	4900	Mzeru Deogratias Paul	MSc	Sokoine University of Agriculture
Quantifying the Abundance, Distribution and Local Use of Rare Plant Species in East Usambaras Tanzania	The general objective of the project is to quantify the abundance, distribution, local use of threatened plant resources and impacts of local community use of plant resources as an attempt to balance between utilization and conservation of threatened plant resources in selected forest reserves of the East Usambara Mountains. Such evaluations are expected to help in alerting on possible decline of biodiversity, prompting development of policies to address threatened and endangered plants and development of alternative strategies for sustainable use and conservation of the region's biological resources.	5920	Linda Stephen Kiluma	MSc	Sokoine University of Agriculture

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Assessment of the biodiversity of tetranychid mites in the Eastern Arc Mountains and East African Coastal Forest Mosaic Hotspot	Natural ecosystems are known to hold a wide range of unknown species diversity. Mite species diversity has not been studied extensively in East Africa and this study aims at increasing knowledge of spider mite species (Tetranychidae) in ecosystems in and around the biodiversity hotspots in Tanzania. The Eastern Arc Mountains and East African Coastal Forest Mosaic (EACF) Hotspot could hold unique information. Several spider mite species are of economic importance with adverse impacts on community livelihoods within the hotspot. This study will assess the species diversity of tetranychid mites in Kenya and Tanzania sides of the EACF.	3375	Faith Jebet Toroitich	PhD	North-West University of South Africa
Role of the Tana crested mangabey (<i>Cercocebus galeritus galeritus</i> Peters) in forest regeneration	The role of the Tana crested mangabey in forest connectivity and regeneration will be examined in Mchelelo forest. Instantaneous scan sampling and focal animal sampling will be employed for behavioural observations. The fate of dispersed seeds will be investigated. Questions concerning the contribution of mangabeys to forest regeneration and connectivity through seed dispersal will be answered.	5739	Kimuyu Duncan Maingi	MSc	Moi University
Vegetation response to climate change and human impacts in the Eastern Arc Mountains	Eastern Arc Mountains are interesting geologically, climatically and ecologically. Their forests are amongst the important world biodiversity hotspots (species numbers and endemics). Current knowledge on ecosystem response to climate and environmental changes overtime is severely limited. This study will investigate past to present-day changes using multi-proxies (pollen, macrofossil and charcoal).	5640	Cassian T. Mumbi	PhD	University of York