



INTERNATIONAL
ROCHA
Conservation and Hope



Conservation & Food

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INTERNATIONAL NEWS ISSUE 57 – APRIL 2015

WHY CONSERVATION & FOOD?

by Dr Martin Kaonga, Conservation Science Director, A Rocha International



(Melissa Ong)

We live in a world with an expanding human population and declining biodiversity, so growing enough food for people, whilst also protecting nature, has become a global priority. For several decades, scientists, politicians and development organizations have separated conservation and agriculture, as if they existed independently. However, the global community is increasingly calling for land use practices that integrate the needs of all species. This is a profoundly biblical vision, expressed in many Old Testament writings, especially Psalm 104, which describes the flourishing together of trees, birds, wild animals, livestock and people in forests, mountains and lowlands.

A Rocha shares this perspective, and specializes in practical projects which involve communities in protecting their local sites of wildlife importance, whilst also using these lands and wetlands in ways which do not degrade them by over harvesting, but rather improve them for themselves and future generations. In this newsletter, we highlight just four A Rocha projects where the production of food is a key component, but there are many more.

In Kenya and Ghana, our major focus is on protecting tropical forests and that necessitates finding sustainable agricultural systems for communities who depend on the forests. My own academic background includes agroforestry and soil conservation research with colleagues in Ghana, Kenya and Zambia. I soon

learned that a typical agroforestry system with diverse plant species efficiently utilizes resources because different plants obtain nutrients at different soil depths. In fact, some plants deposit carbon at depths where it cannot easily be removed. Working with farmers, I found that traditional agroforestry systems or ‘forest gardens’ are used to protect rare plants and animals, produce a great variety of useful products and are very productive and stable even when exposed to hostile climatic conditions. A well-managed mixture of plant and animal species can even mimic natural forest ecosystems and I met many farmers who deliberately practiced agroforestry for both biodiversity and reliable harvests.

Many Christian farmers look at agriculture as an opportunity to exercise their faith. It is not surprising, therefore, that the A Rocha family is committed to implementing agricultural systems that allow both people and wildlife to flourish.

Snail farming and coastal mangrove protection

The Muni–Pumadze Ramsar site is a coastal lagoon in Ghana with beautiful white sandy beaches where three species of turtle (Leatherback *Dermochelys coriacea*, Olive Ridley *Lepidochelys olivacea* and Green *Chelonia mydas*) lay their eggs. In recent years the vegetation has been severely degraded by too much firewood collection, charcoal production, cattle grazing and bush burning, and there has also been overfishing. As a result, the fishery spawning grounds have been affected and the numbers of migrating water birds have dropped dramatically, resulting in serious impacts on its conservation value and the well-being of the local people.

During the last two years, A Rocha Ghana has responded by running a mangrove restoration project with twenty communities in the core area, near Winneba. One of these is Akosua, a small fishing village, where thirty women were directly involved. They monitored the number of turtles coming ashore and prevented their eggs being dug up by poachers. They also helped to raise mangrove seedlings and gave their labour in planting them at a degraded area around one of their main fishing grounds.

For their commitment to the project, the women were trained in alternative livelihoods, including snail rearing. Snail farming requires dedication: the snails need to be well fed and protected from pests such as red ants *Solenopsis* sp, and the pens kept moist. However, once the women were each provided with equipment and four mature snails, they worked hard at rearing the hundreds of eggs, producing a large stock for harvest. Snail is a delicacy in Ghana, and so the animals can be enjoyed at home or sold, providing much needed income for expenses such as school fees or attendance at funerals, festivals and family weddings.

by A Rocha Ghana

A Rocha provided each beneficiary with training, breeding stock and a rearing pen. (A Rocha Ghana)



Ekua Kitseaba beside her open pen, with a mature snail. She says, 'With the snails I feel empowered. I can now confidently support my family.' (Jacqueline Kumadoh)



CONSERVATION FOR Dakatcha Woodlands

Life is difficult for families in Kenya's Coast Province. It's a semi-arid region, with vast stretches of poor soil dominated by *Brachystegia* woodland and acacia-dominated 'bush'. There is also dense, evergreen *Cynometra* forest on the more fertile, red sands, combining to form Dakatcha Woodlands. In the past, families could clear trees and grow enough food to get by, but nowadays, finding cash for school fees and even modest material needs, such as a motor bike, is challenging. With few employment opportunities, villagers have resorted to felling trees to sell for timber or to make charcoal. During the last ten years, communities have increasingly sold swathes of *Cynometra* forest for pineapple farming, but after just three or four years the ground becomes exhausted so growers abandon it and fell new areas.

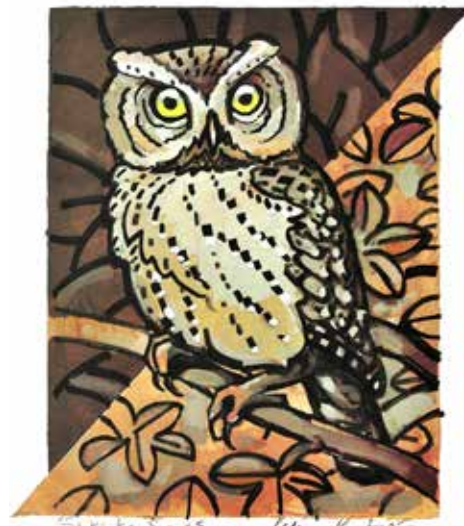
As a result, Dakatcha Woodlands is rapidly becoming fragmented and degraded, making urgent intervention necessary for the survival of Africa's smallest owl, Sokoke Scops Owl *Otus ireneae*, as well as other rare animals and plants.

We have, therefore, implemented two strategies to save Dakatcha Woodlands.

Last year, to prevent clear-felling for pineapples, A Rocha Kenya purchased 219 acres dominated by the evergreen *Cynometra* forest on which the owls depend.

It was named Kiroa Scott Reserve in memory of Bob Scott, an English ornithologist whose widow raised the funds. Gabriel Katana, a local A Rocha team member, keeps an eye on the reserve and teaches neighbouring villages about its importance. He monitors the owls at dusk (both the single pair on the reserve and others in surrounding forest fragments) and carries out regular bird monitoring within the reserve. An intensive study of the *Cynometra* forest is planned for March 2015, involving Kenyans and specialists from overseas. Research will focus on tree species composition and insect diversity in order to further our understanding of the forest's role in pollination, pest control and other services vital to agriculture.

Our other strategy is to work long-term with communities in Dakatcha Woodlands. They need to realise the importance of its survival if they and future generations are to enjoy its beauty and benefit from its many eco-services. We also want them to understand its global importance, so that they can take pride in protecting it. But more than that, we want to help Christian communities understand that caring for the land and other species is an important part of biblical stewardship.



The endangered Sokoke Scops Owl, designed by Peter Partington for a gift card which helped raise funds for the purchase of Kiroa Scott Reserve.

We began community work at Dakatcha in 2010 (in partnership with the Bountiful Grains Trust) with training in Farming God's Way (FGW). This is a form of conservation agriculture which combines biblical ethics and discipleship training with practical farming techniques which can increase productivity, even on impoverished soils. FGW combats another threat to the forest – gradual clearance for the extension of *shambas* (land on which families grow subsistence crops).



This patch of Dakatcha Woodland, just outside the reserve boundary, has been cleared for charcoal production. (A Rocha Kenya)

ARMING IN odlands

Last year we began a new programme with Tearfund, involving five villages near the reserve, where farmers grow maize, sorghum, cow beans and tomatoes. We teach them to avoid ploughing and burning and instead, to prepare the land before planting, time it according to the seasons, space seeds systematically and mulch well. This gives higher, more stable yields, making families less vulnerable to crop failure.

In the next few years, as we learn from experience and our forest studies, we want to improve the FGW training with a greater focus on conservation. The reserve will continue to play a key role in our research and education activities and we pray that through our programmes, the people of Dakatcha - already growing in understanding - will increasingly take their rightful place in caring for this unique part of God's good creation.

by Stanley Baya, Community Conservation Manager and Jaap Gijsbertsen, Acting Science and Conservation Director, A Rocha Kenya.

One farmer's story: Stella Pekeshe

Home: Mulunguni Village, Dakatcha

Age: Mid-thirties

Family: Five children

Involvement with A Rocha:

With others from her village, Stella underwent training in conservation farming and is now one of a group who work together on each other's farms.

Stella says, 'I have always wanted to go to church, but my husband won't allow me or the children to go'. However, she adds, 'The practice of kneeling and praying for the land before and after work in the FGW plots has made me very prayerful: I always do it. When wild pigs attacked the plot, I prayed. Surprisingly the plot was not attacked again as the pigs turned on my other [less productive, traditional] plot!' Her FGW plot is one of the best in the group, much to the surprise of her husband. 'When he saw the difference in the maize, he suggested that we should have done FGW for the whole farm. One day, my eight-year-old daughter, Martha, brought some maize from the plot to roast. It had been dropped during a monkey attack, and I told her that the first harvest was to be taken to church as thanksgiving before any use.'

Stella with her tall crop of ripe maize, a result of Farming God's Way, which gives better yields and thus reduces pressure to clear more forest. (A Rocha Kenya)



PLANTING VEGE

'For the last three years I've been coming to A Rocha Canada's regular Fun on the Farm Saturdays. I'm welcomed into a big family who are polite and care for me. They have taught me how to grow and cook local food, so I encouraged my mother to apply for a community garden plot, just a bus ride from our home, where we grow potatoes, squash, zucchini, spinach and corn. I use the A Rocha recipes at home and we're eating healthier.'
Dilara Gegum, Bangladeshi secondary school student.

Dilara visits the Brooksdale Centre, in Surrey, BC, as part of A Rocha Canada's Fun on the Farm project which reaches out to new immigrants and refugees, as well as local Canadians living on the economic margins. Two Saturdays a month, participants get their hands dirty in the garden, learn new cooking skills in the kitchen or at the outdoor cob oven, and explore the natural world around the farm.

Fun on the Farm is part of a larger sustainable agriculture project based at the Centre. Because agriculture is a leading cause of habitat loss and declining biodiversity globally, it has just made sense for those of us working in Canada to grow food in ways that allow the inhabitants of our small patch of earth – birds, amphibians, insects, humans and humus – to flourish!

Through Brooksdale's Community Shared Agriculture (CSA) project, we grow food with an eye toward holistic environmental health while providing over 70 families as well as several food banks with organically grown veggies for 20 weeks each year. Altering our diets so that we eat local, seasonal produce is a steep learning curve, and we feel grateful to be accompanying so many folks on this journey of sustainable eating.

Interns are a key component of our CSA project, and it is heartening that so many interns experience a transformation (one that often begins while weeding!) in their thinking and outlook while serving with us. This is a generation well aware of the human causes of environmental degradation, and many feel hopeless and discouraged. It is not surprising, therefore, that working in the garden brings a sense of renewed hope as they learn to steward the earth while providing for their own and others' needs.



Queenie Hewitt, Community Garden Network Coordinator and Paul Neufeld, Farm Manager, at the Brooksdale Centre garden in British Columbia. (Leah Kostamo)



TABLES & HOPE

AT THE BROOKSDALE CENTRE, CANADA

by Leah Kostamo, Lead Writer, A Rocha Canada



CREATING HEALTHY COMMUNITIES & HEALTHY ENVIRONMENTS

by John Menneer, Environmental Educator,
Desert Spring Ministries

Since 2010, A Rocha Aotearoa / New Zealand has partnered with Desert Spring Ministries in Fairfield, a low socio-economic suburb in Hamilton.

Together we have developed the Te Kaakano Project, mainly based at Desert Spring Community Centre. The project aims to create 'A healthy community and environment where families work together to meet local needs.' Initially, the partnership centred on the community vegetable garden, but now includes a children's environmental club, an up-cycling micro-enterprise, a healthy-eating cafe and field trips.

The community garden has attracted many families and individuals in need of fresh vegetables or time outdoors. They meet once a week for three hours, to plant, weed, mulch, talk and eat. Tania Ashman says, 'We have seen people develop an affinity for the land and the things that grow and live in it. A rich and complex interaction occurs between people, plants, soil and animals. The conversations of adults and children, during the work or over lunch, are often on topics relating to worms, fungi, birds, bees and nutrient cycling, and our responsibilities as stewards. The garden is a powerful tool for sharing principles of sustainability, whilst also bringing people closer to nature. Over time, we have noticed that this new sense of community can lead to participation in more focused conservation projects such as native tree restoration. Plants and people both grow when they are nourished and cared for. It has been exciting to see how participants who were initially just concerned with meeting their basic needs are now developing an ethos of environmental care. We have begun new programmes to further develop social, environmental and economic sustainability. For example, a monthly café morning at the centre educates people on healthy, low-cost eating options, reduced packaging, recycling of plastics and composting.'

The free after-school club targets children aged 9-14 years. Once a week, they get involved in activities which include mountain walks, finding and identifying insects or other animals, exploring local habitats and overnight camping excursions. Success is in large part due to the shared values of Desert Spring and A Rocha. Both are



Curiosity – the precursor to learning. (Tania Ashman)

Christian, with an overriding emphasis on creating sustainable communities through practical conservation and education that is cross-cultural and community based.


Two key lessons have been reinforced: firstly, changes of behaviour do not usually occur overnight. It takes time for people to change how they think and act. Secondly, a holistic approach is essential, and must include working alongside people to show them an alternative lifestyle that includes a strong and genuine focus on social and economic sustainability. It is only in the context of genuine relationship that the message can be heard.




A mother and daughter potting native trees. (Tania Ashman)



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