

# REACH 'LEARNING through ACTION'



Image © Dr Luke Dollar

## Developing Madagascar's *future* conservation leaders

**In 2010, three individual grants enabled three emerging Malagasy scientists and conservationists to join the *Carnivores of Madagascar* project as part of the Earthwatch Capacity Development Programme. Barisoa Narova Miasa, Zo Heritsimba Rabemananjara and Toky Hery Rakotoarinivo were nominated by former Earthwatch lead scientists and joined 15 international volunteers on the team in July 2010.**

Madagascar's ecosystems exhibit high levels of endemism which is particularly apparent in its carnivore species; eight of the island's ten carnivores have no living relatives anywhere else in the world. *Carnivores of Madagascar*, led by scientist Dr Luke Dollar, aims to increase understanding of the abundance, behaviour, and conservation ecology of the carnivores of Ankarafantsika and Kirindy Mite National Parks by monitoring populations and trends, examining the effects of habitat fragmentation and invasive species and studying the relationship between ecological factors and carnivore behaviour. Participants assist with a variety of activities contributing to Dr Dollar's research and carnivore

conservation, including checking traps, processing and monitoring anaesthetised animals, ecological monitoring, biological assessments, as well as trail marking and mapping. Involving emerging Malagasy conservationists in the project plays a key role in protecting Madagascar's biodiversity.




Twenty-four year old Narova, who received the Denise Mitchell Memorial Fellowship, is currently working towards a PhD in Management and Conservation. She believes that there should be more opportunities for Malagasy scientists to join the project. She says: "It would be good if such experiences could integrate more local fellows because we will increase public awareness of environmental problems and issues."

Zo, 27, received the Earthwatch McCrae Fellowship and is currently studying for his secondary Masters in Management of Natural Resources and Environment. "Participating on this project was important for me. I hope that I can make my contribution to conservation and encourage Malagasy students, like me, to protect carnivores and the environment."

The Capacity Development Programme aims to develop conservation knowledge, practical skills and networking. Toky, 28, was awarded the Herschel and Peggy Post Fellowship, and is a student of Palaeontology and Biological Anthropology. He comments: "The greatest impact of the project to me personally was it taught me to work in a team, increased my knowledge of carnivores and biodiversity, and increased my skills and experiences of biological conservation." Narova adds: "This expedition has given me more than field techniques. I learned why conservation is so important for protecting Malagasy biodiversity."

Earthwatch hopes that equipped with new knowledge and skills, and confidence and inspiration gained on the project, participants will be able to initiate their own research projects. When asked about his plans for the future Toky said, "I would first like to work in conservation. I'd like to lead or be a member of a research team studying threatened species in order to contribute to their conservation. In any case, I'm likely to love and protect the environment and biodiversity."

**Earthwatch engages people worldwide in scientific field research and education to promote the understanding and action necessary for a sustainable environment. Through our programmes and partnerships we:**

-  engage people from diverse countries, cultures and organisations, inspiring them to take responsibility for the environment
-  support objective scientific research which informs decisions on important environmental issues
-  educate and motivate people to change their attitudes and behaviour

## FROM THE EDITOR...

More than 100 individuals from Costa Rica to Kenya and from Madagascar to Mongolia have benefited from Earthwatch's Capacity Development Programme during 2010, through hands-on field experience training, workshops or training grants.

Earthwatch has been developing an Emerging Scientist Strategy, which builds on our years of successful training teams and provides a more structured programme of learning for the scientists and conservationists of the future. Central to this strategy is our network of lead scientists around the world who, in addition to undertaking key areas of research, provide the support on the ground to our emerging scientists and share their passion with all who join their projects. For this we thank you and we hope to continue our partnerships for many years to come.

At Earthwatch we recognise the importance of supporting "scientists in developing countries to participate fully in international scientific research programmes dealing with the global problems of environment and development so as to allow all countries to participate on equal footing in negotiations on global environmental and developmental issues" (United Nations Department of Economic and Social Affairs Agenda 21). Our training teams contribute towards this, and in addition our focused training grants funded by Neville Shulman CBE and the Maurice Rufford Laing Foundation enable us to support additional training where it counts. You can read more about our training grant winners in this newsletter.

We hope you enjoy this edition of REACH and encourage all our alumni to share their stories and news with us. We are developing our website to make it more interactive so please remember to visit us at [www.earthwatch.org/europe/capacity\\_building/](http://www.earthwatch.org/europe/capacity_building/) and watch this space.

Lucy Cullen



REACH Editor



Image © Cristina Zeemann



## A most diverse partnership

put the skills they learnt into practice since the project, and 94 per cent said their Earthwatch experience had been useful to their personal and professional development. Ninety per cent strongly agreed that the organisation they currently work for has benefitted as a result of their training. A full report of the survey can be found at: [www.earthwatch.org/europe/downloads/BAT\\_eval\\_summary.pdf](http://www.earthwatch.org/europe/downloads/BAT_eval_summary.pdf)

The specialist training offered through Earthwatch's former project *West African Manatee Conservation* in Ghana has inspired fellows to apply their new skills and develop their careers. Abdul Jalloh, who joined the training team in 2007, said at the time: "It was a great experience and I have learnt so many things from it, which I hope to replicate in my area of operation." When we contacted Abdul in 2010, he reflected on the value of the training for sharing knowledge on manatee conservation. Abdul now works

**For the last 10 years, the British American Tobacco Biodiversity Partnership (BATBP) has enabled Earthwatch to give over 250 emerging scientists from Africa, Asia and Eastern Europe the chance to further their aspirations and career through a diverse range of training programmes throughout the world.** In 2010, Earthwatch contacted these individuals to assess the impact of the programmes. One hundred per cent of those who responded said that they have

for the Environmental Foundation for Africa as a Programme Officer implementing a biodiversity conservation project focused on natural resource protection and species and habitat protection. He is also involved in manatee conservation efforts in his own country, Sierra Leone, using the skills he gained during the Earthwatch project.

In Eastern Europe, teams of scientists have been conducting research to find comprehensive and effective systems of conservation for the raised bogs of Belarus under the guidance of Dr Natasha Zeliankovich. In terms of removing CO<sub>2</sub> from the atmosphere, a single hectare of bog is seven to 15 times more effective than a hectare of forest, and engaging emerging scientists in understanding this ecosystem is vital. In 2008, 24 year old Irina Zapasnik from Grodno State University in Belarus joined the 20-day training team: "I really grew up professionally after the project. I learnt skills from the scientists about the organisation of scientific field research, and it was excellent because the training took place in the field."

On the other side of the world, sponsorship from BATBP has enabled emerging scientists from across South East Asia to join the *Malaysian Bat Conservation* project as interns under the direction of Earthwatch scientist Dr Tigga Kingston. Chuan Chia Huang from

Taiwan interned in 2008 and then went on to study for a PhD at Texas Tech University, USA, under Dr Kingston's direction. His research focuses on the conservation and ecology of bats in Bukit Barisan Seltan National Park, Sumatra. A key success of the programme has been the eagerness of former interns to share their new skills with others: "I will try my best to transfer my knowledge and skills of bat research and the importance of biodiversity conservation to local students and young scientists, and support their research. This project makes my dream come true!" (Chuan Chia Huang, 2010)

Finally, a thought-provoking Round Table on Rock Fowl Conservation took place in Ghana this year. It enabled scientists from Sierra Leone, Liberia, Nigeria, Cameroon and Ghana – all actively involved in rock fowl conservation in their respective countries – to get together to achieve a common understanding of the status of rock fowl populations and conservation efforts across West Africa. Arnold Okoni-Williams, a lecturer at the University of Sierra Leone, found that the Earthwatch event altered his perceptions on the importance of community involvement in conservation, and provided him the chance to work with other scientists: "I cherish the opportunity of getting to know, and networking with, scientists and conservationists working with rock fowl in other countries."

Image © Dr Tigga Kingston

## Demonstrating the value of community mangrove plantations

**Research into mangrove restoration undertaken on Earthwatch's *Tidal Forests of Kenya* project is helping to develop incentives to undertake mangrove forest restoration and improve community livelihoods.**

Drs Mark Huxham, James Kairo and Martin Skov are seeking to quantify, and put a cost on, the carbon storage value of managed mangrove plantations, including harvested stands, through a community-run demonstration mangrove plantation.

The potential impact of this project is world-wide recognition of the opportunity for restored and sustainably managed mangrove forests to mitigate climate change. By quantifying the carbon storage value of managed mangrove forests, the research could open the door for inclusion of mangrove forests in a future carbon-trading market, creating a bona-fide economic incentive to restore and sustainably manage mangrove forests not only in Kenya, but globally.

Funding from the John Ellerman Foundation has enabled Earthwatch to engage local stakeholders and community leaders in the project and introduce them to the possibilities of community-run plantations as a potential source of income. The first funded team fielded in June 2010, and included participants from Kenya Marine & Fisheries Research Institute, National Museums of Kenya, Gazi Mangrove Project and Kenyatta University. The team collected data to better understand the importance of community-run mangrove plantations, and undertook community consultations and questionnaires to highlight which questions need to be asked by those developing community mangrove plantations in the future.

In more than 400 hours of research and community consultations, the team worked with Drs Huxham and Kairo to develop the training material for future participants to help inspire them into action and understand the opportunity these plantations provide. Funding from the Foundation will support two further training teams where we hope to share best practice not only in Kenya, but across the region of East Africa.

Feedback from the team was very positive. One participant wrote: "Earthwatch created the most impact in my life by inspiring me to participate in any little or large way in conserving the environment. The training sharpened my inner knowledge; it also challenged my convictions on the strength of impacts associated with destructive human activities." Another team member was equally enthusiastic: "It was a great opportunity to interact with volunteers who have different backgrounds, as we had a common goal to conserve the environment, particularly mangrove forests. The scientific field research methods we learned helped engage the general public in the conservation of mangroves."

## Costa Rican coffee: from community to cup

**Earthwatch works in many ways to support Capacity Development across the world. In addition to our training teams and grants, local initiatives to engage different communities and stakeholders around our projects are having considerable impacts.** In 2007, Earthwatch teamed up with Starbucks to work with coffee farmers in the Tarrazú region of Costa Rica as part of a three year programme conducting scientific research designed to benefit CoopeTarrazú, a coffee cooperative of 2,600 farmers. The research is fully participatory, involving the farmers, buyers and public.

Earthwatch scientists have been working with the farmers to determine the most sustainable and economically viable coffee growing practices, and incorporating them into farming and land management plans. A group of 40 farmers from CoopeTarrazú received specific training on recording farming practices, sustainable soil management and soil analysis. The farmers have now been empowered to make better informed decisions on their coffee plantation management. Outcomes of the project include the confirmation of a relationship between high soil acidity in CoopeTarrazú, high levels of synthetic fertiliser application, and declining plant productivity. Applying less fertilizer reduced the acidity of the soil, which, in turn, led to increased berry density. In total, farmers that participated for the full three years applied on average 336.2kg less synthetic fertiliser per hectare saving on average \$1,200 each (£775), whilst yield increased on average by 25 per cent.

On the last year of this first three-year phase, other coffee farmers from neighbouring coffee cooperatives, CoopeDota, CoopeLlanobonito and CoopeVictoria, were also reached through the Sustainable Coffee Leadership Programme, which was designed to facilitate a participatory learning process in which the experience of CoopeTarrazú's farmers is shared with at least 20 farmers from these other cooperatives.



Image © Dr Mark Huxham



Image © Ayana Janovitz

## A winner's journey:

# Hilda Aloyce



After participating on former Earthwatch project *Lakes of the Rift Valley* with lead scientist David Harper in 2007, Hilda had been working for the Darwin Initiative project, Community-Based Biodiversity Conservation Films. Her role involved evaluating the use of films in schools in Dar es Salaam, Tanzania, compared to more conventional teaching methods, such as blackboards and books.

Hilda was awarded £4,000 to complete her project and make a series of educational films on coastal pollution in Dar es Salaam after winning the Neville Shulman Award in 2008/09. The project was titled *Tears of the Precious Ocean who is to be blamed?*, and the films are now being used in marine conservation campaigns for government officials, policy makers, community members and school children, and illustrate the sources of marine pollution and its associated social, environmental and economic impacts. She said: "From the beginning of the project to its end I was the developer, planner, manager and decision maker."

Since completing the films, Hilda has been conducting film shows in the Dar es Salaam region and plans to use the footage gathered for other environmental film projects. Hilda continues to work for the Community-Based Conservation Films Organisation where her new skills are being put into practice.

2010 CB Programme Funders: British American Tobacco plc • Denise Mitchell Memorial Fund • Herschel & Peggy Post • John Ellerman Foundation • McCrae Earthwatch Fund • The Mitsubishi Corporation Fund for Europe and Africa • Neville Shulman CBE • Newmont Ghana Gold Ltd • Royal Dutch Shell plc • The Rufford Foundation (formerly Rufford Maurice Laing) • UBS

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## CAPACITY DEVELOPMENT GRANTS AND AWARDS

### Neville Shulman Awards 2010/11

The Neville Shulman Awards enable Earthwatch to identify and support active and emerging leaders to continue their careers in conservation as scientists, teachers, or practising conservationists, as well as inspiring others in their environmental endeavours. This year's winners are:

#### £4,000 grant winners:

- **Hegde Anilkumar Kamalakar**, M. M. Arts and Science College, India
- **Marappullige Priyantha Kumara**, Napier University and University of Ruhuna, Sri Lanka

#### £500 grant winners:

- **Batdorj Sodnompil**, Institute of Biology, Mongolian Academy of Sciences, Mongolia
- **Onolragcha Ganbold**, Mongolian Conservation Coalition and Mongolian State University of Education, Mongolia
- **Ren Haibao**, Institute of Botany, Chinese Academy of Science, China
- **Ronald Joshua Williams**, Nature Seekers, Trinidad

### The Rufford Maurice Laing Training Grants 2009/10

The Rufford Maurice Laing Training Grants provide an opportunity for Earthwatch to train a new generation of conservation scientists to plan and manage field research projects. The grants support emerging conservation scientists in field research techniques, research theory, data analysis, report writing, project management and team leadership.

- **Michael Njoroge Githaiga**, Kenyatta University, Kenya
- **Macharia Paul Gaceru**, African Wildlife Foundation, Kenya
- **Kipyegon John Kochey**, Division of Invertebrate Zoology, National Museums of Kenya
- **Jean Michel Takou**, Global Viral Forecasting Initiative, Cameroon.

### Fellowship Awards

This year, all three fellowship recipients were selected to join Dr Luke Dollar's *Carnivores of Madagascar* research project in July 2010, where they gained practical hands-on experience, support in career development and networking opportunities.

- **Barisoa Narova Miasa**: Denise Mitchell Memorial Fellowship
- **Zo Heritsimba Rabemananjara**: Earthwatch McCrae Fellowship
- **Toky Hery Rakotoarinivo**: Herschel and Peggy Post Fellowship

### Support of PhDs

Shell International BV is supporting **Kogila Vani Annammala** and **Yeong Kok Loong**, two Malaysian PhD students conducting research into maintaining rainforest biodiversity in the face of climate and land use change. Aviva continues support of **Joseph Langat's** PhD (Napier University, UK) looking at mangrove forests as a potential carbon sink for mitigating climate change at Gazi Bay, Kenya. The US-based Goldring Family Foundation is funding **Dr Kathy Townsend** (University of Queensland, Australia) to research the impacts of marine rubbish on oceanic wildlife.

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Earthwatch is a diverse community of scientists, educators, students, and passionate volunteers, working together around the world, gathering critical information about threatened species, habitats and ecosystems, informing conservation decisions, and leaving a legacy of knowledge and skills within local communities. Our vision: a world in which we live within our means and in balance with nature.

Earthwatch is an international environmental non-profit organisation (UK registered charity number: 1094467).