Conservation at Durrell 2011-2015

Saving the most threatened species in the most threatened places

Mountain chicken frog rescue

This story is just beginning. Restricted to two Caribbean islands, a fungal disease has almost wiped them out from both Montserrat and Dominica. Thanks to a rescue mission in 2009, 50 frogs were brought into a bio-secure captive breeding programme as part of a long-term restoration effort in Montserrat.
Executive summary

Durrell has been saving species from extinction for the past 50 years, proving that hands-on and committed conservation efforts really can work. When he first created the Trust, the author and naturalist Gerald Durrell believed that zoos had an essential role in the conservation of wildlife. His vision was for a safe haven for the world’s most threatened and the efforts required to save them, could be showcased to the public, and for a centre to train conservationists from around the world. In 2010, Durrell is now an international biodiversity conservation organization with our headquarters based in the wildlife park in Jersey, field projects in 14 countries and an internationally renowned training centre providing courses up to post-graduate level.

The human-driven threats to species and ecosystems that Gerald Durrell recognised have grown in scale and complexity as they interact with new pressures such as climate change. The resulting biodiversity crisis is threatening not only wildlife but also people. As human wellbeing becomes increasingly impacted, with the effects most severe in the developing world, the global response is still falling short of what is required to ensure the planet’s natural environment is managed sustainably.

Over the next five years, Durrell’s response to the biodiversity crisis is a global programme of dedicated conservation projects to save the most threatened species in the most threatened places. Drawing on our field experience, captive breeding skills and training innovation, the programme will be delivered through dedicated partner organisations in the region to help save some of the most threatened species and ecosystems are found. The second is Critical Species, groups of species which are of a disproportionately high risk of extinction and where we can have greatest impact: Critically Endangered Amphibians, Globally Threatened Primates, and Endangered Birds of South East Asia.

During the five crucial years, the response of Durrell to the crisis of biodiversity is a global programme of projects dedicated to saving the species most at risk: Amphibians, Primates and Birds of South East Asia. The programme has two integrated themes. The first is Islands at Risk, where some of the most threatened species and ecosystems are found. The second is Critical Species, groups of species which are of a disproportionately high risk of extinction and where we can have greatest impact: Critically Endangered Amphibians, Globally Threatened Primates, and Endangered Birds of South East Asia.

Durrell has worked in Madagascar for over a decade to identify sustainable solutions for local communities to protect their natural resources. Durrell has created the Manombo Special Reserve and Manombo Classified Forest. Manombo is Durrell’s eight permanent field site in Madagascar, and is home to eleven other species of lemurs. Copyright: Iñaki Relanzón (www.photosfera.com)

Background Image: Lac Alaotra is the largest inland waterbody in Madagascar. The marshes around the lake are home to two mammal species found nowhere else in Madagascar, including one of the largest rice growing areas and one of the largest island fisheries in Madagascar and has a population of over half a million people who rely on the lake and its resources. Durrell has worked in Madagascar for over a decade to identify sustainable solutions for local communities to protect their natural resources and the endemic wildlife. Captains Andrea Wallace

Cover Image: a white colored brown lemur: Eulemur cyaniceps found in a highly restricted patch of eastern lowland forest in south eastern Madagascar. This species occurs in two very small protected areas the Manombo Special Reserve and Manombo Classified Forest. Manombo is one of Durrell’s eight permanent field sites in Madagascar, and is home to eleven other species of lemurs. Copyright: Iñaki Relanzón (www.photosfera.com)

Spanish

Durrell ha estado salvando especies en peligro de extinción durante más de 50 años, probando así la efectividad del trabajo práctico y del esfuerzo comprometido en conservación. Cuando creó la fundación, el escritor y naturalista Gerald Durrell, creía que los zoos tenían un papel esencial en la conservación de la fauna salvaje. Su visión era la de un refugio seguro para las especies más amenazadas del mundo donde éstas, y los esfuerzos realizados para salvarlas, pudieran ser mostrados al público, y así se ha vuelto en la práctica.

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Durrell Wildlife Conservation Trust

Durrell’s mission is saving species from extinction. We achieve this by restoring species in their native habitats, dedicated breeding programmes and conservation training.

Gerald Durrell and his legacy

Gerald Durrell’s passion for the natural world began at an early age, with his experiences growing up on the island of Corfu. As a young man, he traveled extensively and his many trips, captured in his books and films, highlighted not only the wonders of nature, but also the threats that were increasingly being placed on them. He believed that zoos could be much more than collections of animals for public entertainment; they could have a direct role in conservation through the captive breeding and release of species to the wild.

Conservation activities in the field started early on in the organisation’s history with expeditions in 1960s to find the volcano rabbits of Mexico and 1970s to India and then to St Lucia for our first field project on the endemic amazon parrot. Gerald then visited Mauritius and became fascinated by the beauty of the island but also alarmed by the loss of its native species. Work started to save the Mauritius kestrel and then progressed to other iconic bird species and the restoration of Round Island. Soon after this, the organisation became involved in Madagascar initially working to protect the then recently re-discovered ploffshate tortoise.

To complement our world renowned animal husbandry and breeding skills, we have developed a range of expertise to conserve species in their natural habitats. We use a variety of scientific techniques to assess conservation problems and design and evaluate management solutions. We conduct hands-on management of endangered species populations, control the impacts of invasive species and work with local communities to reduce pressures on species and habitats. These approaches integrate our species-led focus with broader ecosystem-based conservation issues. Additionally, our training programmes now provides dedicated training to conservation practitioners and scientists from around the world.

We believe that it is through this integrated approach coupled with an ability to act rapidly to save species that Durrell can most effectively continue to address the crisis facing global biodiversity in the 21st century.

Gerald Durrell with a young silky anteater Cyclopes didactylus.
Credit: Durrell Wildlife Conservation Trust

Gerald Durrell with a kiwi (Apteryx sp.) in New Zealand.
Credit: Durrell Wildlife Conservation Trust

Gerald Durrell with a baby (Apteryx sp.) in New Zealand.
Credit: Durrell Wildlife Conservation Trust

Humankind depends on a healthy and thriving natural world for its survival. But today our natural world is under unprecedented pressure primarily from human activities. As economies have developed, so too has the scale and complexity of the threats placed on the world’s forests, wetlands, grasslands and oceans. To mitigate these pressures and ensure the sustainable use of natural resources, conservation responses need to become truly multi-disciplinary; addressing the protection of natural ecosystems, as well as the drivers of change including economics, politics and human society.

For 50 years, Durrell has championed and led the conservation of species most highly threatened with extinction. This mission has taken us to many parts of the globe, but in particular to the many islands that support such a high proportion of globally threatened species. In that time, Durrell has built up a core body of conservation expertise and a network of partnerships with leading organisations that will allow us to further develop our ability to save species for another 50 years to come.

In this document we present our Global Conservation Programme for 2011–2015. It sets out Durrell’s main conservation goals and how we will achieve them. We focus on two main themes. The Islands at Risk programmes target island species and ecosystems under severe pressure. Critical Species focuses on three extremely threatened species groups for which we can have the greatest impact. Our response is built on the Trust’s three main working pillars: our field projects around the world; our animal collection and breeding programmes; and our training activities that aim to build a cadre of dedicated conservationists of the highest technical capacity.

A baobab tree towering over a lake in Menabe, western Madagascar. The baobabs are icons of the dry forests that once used to cover the west of this biologically outstanding island. Copyright: Iñaki Relanzón.

Gerald Durrell with his first pet antelope Cyclopes didactylus.
Credit: Durrell Wildlife Conservation Trust

Gerald Durrell with a giraffe (Giraffa camelopardalis) in New Zealand.
Credit: Durrell Wildlife Conservation Trust

Gerald Durrell with a baby (Apteryx sp.) in New Zealand.
Credit: Durrell Wildlife Conservation Trust
The challenge facing us

Biodiversity is the variety of life on earth and it is being lost at an unprecedented rate. Human societies rely on the natural environment for their survival and the loss of biodiversity is jeopardising our welfare, health, economic wellbeing and, for many millions of people in the poorest countries, their future development opportunities. Ensuring biodiversity is managed sustainably is one of the great challenges of the modern age.

Biodiversity is essential for the world to sustain humankind. Now, more than during any other period of history, human activities are exacting a massive toll on the planet’s natural environment and since the 1980s we are using its resources faster than they can be replenished.

Current rates of decline and loss of species worldwide exceed those in geological history by several orders of magnitude and show no indication of slowing. Among the vertebrates, the number of species under threat of extinction includes 32% of all amphibians, 21% of all mammals, 12% of all birds, and 28% of reptiles and 37% of freshwater fishes assessed so far. Of those examined to date 35% of invertebrates are at a high risk of extinction.

Why should we care? There are many answers to this question that start fundamentally with the fact the future of humankind is intrinsically linked to the health of our natural environment. All over the world essential natural resources have been dramatically over-exploited whether this is the conversion of forest to agriculture, the development of coastal mangroves, the over-fishing of seas or the destruction of coral reefs. Although there is great resilience in the natural world, in many cases we are finding that natural stocks do not return to former levels.

Although the challenge is huge, we believe that, jointly, non-government organisations like Durrell, alongside national governments, can and do improve the state of the natural world. Durrell’s vision is for highly threatened species in their natural habitats to recover and then thrive alongside and benefit human communities.

To prioritise our efforts, we have developed an approach that highlights the most important areas for threatened and endemic species.
Taking action: Durrell’s approach

Durrell has a unique structure that is based around three core pillars of specialisation: our field programmes around the world, our wildlife park in Jersey and our training programmes. We address conservation challenges where each of the three arms of the Trust can act in synergy and we base our conservation work on the best scientific evidence available.

Since its inception, Durrell has evolved in response to new challenges and circumstances. However, it has always remained true to the vision of its founder – saving the most threatened species from extinction. Using an ever-expanding set of conservation skills our approach is to respond rapidly to situations affecting species and their habitats, but remain flexible and adaptive to changing events. Importantly we make a long-term commitment to saving and ultimately restoring our target species and ecosystems. As we have grown, we have increased our commitment to field conservation projects, with a third of our budget going directly to saving species in the field; more than almost any other zoological institution in Europe.

Field programmes

Our field programmes are based primarily in the most imperilled island ecosystems in the world. We currently manage 50 projects which are located in 14 countries and one third of the organisation’s total staff are based overseas where they work closely with local authorities and NGO partners.

Always led by the need to restore species, our approaches vary in scale and response to suit the situation on the ground. In many cases, our involvement with a particular species has developed into a series of projects aimed at improving the underlying threats facing that species and its habitats.

In Mauritius, intensive and successful efforts to save a number of bird and reptile species on the edge of extinction from the pervasive impacts of invasive alien species have evolved into long-term programmes to restore ecosystems, so ensuring threatened species have a functioning and safe habitat for many years to come. In Madagascar, now the Trust’s largest programme region with 40 conservationists working in eight field sites, we have developed our own approach to community-led conservation to address the direct human impacts on forests and wetlands and the species found there. Empowering and supporting communities who are reliant on natural resources for survival to identify alternative or more sustainable practices is the most important conservation action we can take in this particular region.

Training programmes

Our training programmes have been providing training in endangered species conservation techniques for over 20 years. Since the International Training Centre establishment in 1985 we have trained more than 2,700 conservationists from over 128 countries. With a dedicated teaching facility and accommodation at the wildlife park, we have been able to bring conservationists from around the world to gain hands-on experience with animal management as well as more theoretical training in species conservation. In recent years we have developed a series of courses that have been run in important centres of biodiversity around the world. Our courses also provide training for a range of education levels from school leavers to postgraduate Master’s courses run with UK universities.

Our goal is to provide a complete multi-disciplinary suite of applied courses, run in Jersey and in regions around the world of greatest need that will provide the essential skills for a new generation of conservationists. But we will go further and, through an internship programme, provide selected individuals with leadership and entrepreneurial qualities to gain the hands-on experience and the skills necessary to become tomorrow’s conservation leaders.
Wildlife park

The wildlife park has been the cornerstone of Durrell as an institution since it opened as Jersey Zoo in 1959. As well as home to our animal collection, the park also serves as our headquarters and location for our International Training Centre. Our animal collection supports conservation through breeding programmes, the provision of skills and training to conservationists and as an important tool for communicating with the general public.

From the park we lead efforts where captive breeding is an important conservation response. Increasingly, breeding programmes are based in the species’ country of origin, as this tends to lead to most conservation impact. But there are many cases where species need to be brought to our institution either because necessary skills are not present or the threats equally affect the captive population.

We are also able to support research and develop husbandry techniques with our animal collection that support the conservation of the species in the field. For example, techniques which our animal staff use on a daily basis, such as animal handling and rearing, data-recording or veterinary procedures, are equally useful in the field and many of our keepers travel to our overseas projects to assist local teams.

Science for conservation action

Science plays a key role in guiding Durrell’s field conservation activities and in the management of its captive breeding programmes and animal collections. It is an essential tool for identifying priorities, designing conservation policy and practice as well as for measuring and communicating the impact of our work. Because conservation problems are both environmental and human-driven we draw on the biological, socioeconomic and earth sciences to generate the knowledge needed to deliver effective solutions on the ground.

As we work to save some of the most globally threatened species we often have to act rapidly ahead of scientific assessments. But even in these crisis situations, we base our conservation decisions on the best available information, where possible following an ‘evidence-based conservation’ approach. Highly applied science can often be employed alongside even urgent actions to ensure that results are measured as rigorously as possible.
In the most threatened places around the world. Over the next five years, Durrell's Global Conservation Programme at Durrell 2011-2015 will focus on saving the most threatened species in the most threatened places around the world.

Islands of Risk
Islands provide a fascinating diversity of geological features, ranging from ancient continental fragments, such as Madagascar, to volcanic island groups, that continue to be formed, such as the Galápagos archipelago. The diversity of flora and fauna on islands reflects this geological history and typically a high proportion of these species are unique or endemic to their island. Some islands contain the last surviving ancestors of the earliest mammals whilst others provide examples of natural selection in action today.

Throughout history, the major waves of human colonisation have exacted a massive impact on islands. Native species were harvested in huge quantities and non-native species were introduced either intentionally or inadvertently. With limited land available for development, natural resources such as freshwater have come under intense pressure. Island species are also extremely vulnerable to climate change, as they cannot adapt to changing conditions in the same way as continental species.

Although islands will always remain fragile, they present more manageable opportunities to address threats and restore species. We will focus on those island groups that contain high proportions of threatened and endemic species and where we can have most impact. Building on our existing field programmes we will work with local and international partners to restore highly threatened species and habitats, develop local capacity and where needed integrate the experience of our wildlife park teams.

Critical Species
Having assessed the extinction risk of 48,000 species, the IUCN Red List of Threatened Species is the world’s most authoritative assessment of the state of biodiversity. We use this resource to identify key taxonomic groups that are most in need of conservation support and where there is an opportunity for us to change their status.

Globally, amphibians have been identified as the most threatened major group of vertebrates and are in crisis. Over 32% of amphibians are at high risk of extinction and 42% are declining in number. Durrell has expertise in saving amphibians and we will focus on Critically Endangered Amphibians in centres of high species richness and threat.
Islands at Risk

Islands around the world support an outstanding and highly distinctive diversity of fauna and flora and are a living laboratory of evolution. But islands are also under great pressure. We aim to find sustainable solutions for people and wildlife to co-exist in these remarkable places.

Durrell’s core conservation focus is on island ecosystems, primarily because this is where so many threatened species are found. The great examples of mankind’s impacts on the natural world come from the colonisation of islands where ‘naive’ fauna was rapidly exploited and subjected to great pressure from animals that arrived with the first settlers. There are many accounts from early explorers and settlers of the ease with which animals could be harvested and this led to many of the known extinctions, exemplified by the demise of the dodo on Mauritius and why this species serves as our logo.

Islands are challenging places to work in. First, they are constrained by their size and isolation and species have a limited ability to adapt to either habitat or climatic change. Second, human communities place a huge pressure on islands’ limited natural resources, such as freshwater and forests. Third, invasive species have now arrived on most islands around the world, and their impacts are often irreversible or extremely difficult to reduce. Finally, islands often support relatively small human populations and so nations have limited capacity to deal with their conservation problems.

Our islands approach is adapted to the situation and pressures faced on the ground and, as with the geological variation among islands, there is a wide range of economic development and population pressure in different regions. In Madagascar and the Comoros where over 70% of the population is rural, responses must be based around the human communities that are directly reliant on natural resources for survival. In Mauritius, the Caribbean and the Galapagos, invasive species often pose the biggest threat to native biodiversity and their control is the most pressing conservation action. In some cases, the invasive species problems are currently irreversible on the main islands so we have to turn to smaller uninhabited offshore islets where invasive species can be controlled and native species restored. Examples of this include Great Bird Island off Antigua and Round Island off Mauritius.

In the next five years we will focus on five key global island regions: Caribbean Islands, Madagascar and Comoros, Mascarenes, Pacific Islands and the Trust’s Home in the Channel Islands. Using our TopSpots we will prioritise those ecoregions within each island group that are most important for conservation.

Caribbean Islands

The Caribbean Islands are a chain of more than 7,000 islands, islets, cays and reefs stretching for over 2,500 miles. The islands support almost 2% of the world’s terrestrial species and over half the vertebrates and plants are endemic to the region.

This high endemcity makes species vulnerable to external threats and approximately 38% of the 2,074 species assessed for extinction risk in the Caribbean islands are threatened. Compared to other regions, the Caribbean has by far the highest percentage of threatened amphibians; over 70% of all the amphibians in these countries are at risk, mostly a result of extensive habitat loss and the spread of the disease chytridiomycosis.

Durrell will build on its existing activities to protect highly threatened habitats such as dry forest and offshore islands in St. Lucia and endemic species of bird and reptile. In Montserrat, Durrell aims to restore the mountain chicken frog that has been sent to the brink of extinction by chytridiomycosis and is working with international partners to tackle this disease. Reptiles, in particular lizards and racer snakes, remain a priority and we will focus on efforts to control or eradicate invasive species that are their primary threat. We will also continue its focus on the endemic mammals in Hispaniola, which are two of the few remaining terrestrial mammals in the Caribbean.
approach that further enhances our ability to improve will evaluate the impacts of our community conservation the transfer of their management to local communities. We restoration with the establishment of protected areas and manage their natural resources.

Madagascar and Comoros

Madagascar’s rich, unique but threatened fauna and flora makes it one of the global icons for biodiversity conservation. Whole families of plants, amphibians, reptiles, birds and mammals are found no where else, most iconic of which are the lemurs. The Union of the Comoros is a nation of three small islands located in the Mozambique Channel between Madagascar and mainland Africa. With three species of fruit bat, the Comorans are known as the land of the bats, the largest of which is the Livingston’s fruit bat, which has a highly restricted and fragmented range.

Both countries have suffered dramatically from deforestation and the conversion of native habitats to agriculture. In Madagascar, dry deciduous forest has become the most threatened major terrestrial ecosystem, and as a result of expanding rice cultivation wetlands are under severe pressure. With over 70% of their populations being rural based, people are highly reliant on natural resources for survival. Therefore effective conservation must work with local communities to protect and restore native biodiversity.

Madagascar is Durrell’s largest field programme and we focus on conservation of deciduous dry forest and wetlands. Our approach is to focus on species conservation, habitat protection and community-led projects that empower people to identify alternative livelihoods and to sustainably manage their natural resources.

We will continue to support the integration of species restoration with the establishment of protected areas and the transfer of their management to local communities. We will evaluate the impacts of our community conservation model over the past decade, to develop a cutting edge approach that further enhances our ability to improve human wellbeing whilst reducing pressures on our field sites.

A major initiative with international partners will involve the establishment of a dedicated breeding centre and wetland restoration programme for the Madagascar pochard, thought to be extinct until rediscovery in 2006. We will continue efforts to protect the highly imperilled ploughshare tortoises, which is one of the most highly sought after reptiles for the illegal pet trade.

In the Comoros, Durrell is now an active partner in a long term project to establish community-led ecosystem conservation for the sparse and declining forests. We provide biodiversity assessment and conservation management expertise to the project with an additional focus on key species such as the fruit bat and the Anjouan scops owl. Together with the project partners we are developing long term local capacity for conservation.

Mascarenes

The Mascarenes are the main islands of Mauritius, Rodrigues and Réunion and their many smaller islands and islets. They serve as a historical reminder of the effects of human expansion on biodiversity through a legacy of industrial scale eradication of native species and the introduction of invasive alien species. However, these islands also serve as a positive example of what conservation can and does achieve with long term dedication.

Isolated for many millions of years and never connected to a mainland, a distinctive biodiversity with high levels of endemism has evolved on each island. For example, there are approximately 956 flowering plant species in the Mascarenes of which 695 are considered to be endemic. The majority of vertebrate species are either reptiles or birds which show high levels of endemism and also complicate the islands’ most threatened species. However, on all the islands the native forests have been greatly degraded either through agriculture or through the spread of invasive plants such as guava and pine. On Réunion, less than 40% of the native forest remains and on Mauritius only tiny pockets (less than 5%) of native forest are left.

Durrell has supported conservation in Mauritius since the 1970s, starting with efforts to save the endemic kestrel that had declined to just four individuals. Now we work through the Mauritian Wildlife Foundation (MWF) which was started on the back of this conservation work and has since become the leading environmental NGO on the island. Together with MWF and the Mauritius National Parks and Conservation Service we will continue to focus on the restoration of endemic reptile and bird communities and the development of conservation skills within the region.

Pacific Islands

More than 25,000 islands are dotted throughout the vast area of the Pacific Ocean, ranging from flat coral atolls to rugged, mountainous volcanic isles. The region includes the island groups of Melanesia, Polynesia and Micronesia as well as the Hawaiian islands and the Galápagos archipelago.

These islands contain a staggering diversity of natural and cultural systems, and some of the most intact remaining tropical wilderness areas. They also have extreme levels of species endemism, for example 80% of Samoa’s birds are found only there and New Caledonia has more than 2,400 species of endemic plant.

Unfortunately these islands are very fragile and the destruction of habitat and introduction of non-native species has led this region to have more known extinctions than any other.

Durrell cannot be active throughout this vast region and our field programmes are currently located in the Galápagos archipelago. We are able to engage more broadly with the region through our training activities, which support the development of conservation skills and capacity. Whilst continuing field projects in the Galápagos, Durrell will provide training support and conservation breeding expertise to organisations throughout the region.

Channel Islands

Our home island of Jersey has a range of habitats from coastal cliffs, heathlands and dunes, to marshy and wooded inland valleys. The varied coastline includes extensive areas of infantal zone and offshore reef which are included as Ramsar sites of international importance for biodiversity. Over 100 species of breeding birds have been recorded on the island.

Jersey has been heavily modified for agriculture over many centuries and few truly natural areas exist. Extensive use of land in recent years for housing development has further reduced available habitat and many native species only exist through the efforts of conservationists. In recent years, the reduction of marginal farming in areas such as the island’s north coast cliff tops has resulted in the development of very poor habitat and a loss of biodiversity.

For many years, Durrell has worked closely with the government of Jersey (The States of Jersey) on the conservation of native species including amphibians, reptiles and birds. At the same time we support education programmes for children about the natural world and conservation, and use our wildlife park to showcase our global efforts to protect and restore biodiversity. For the next five years we will undertake a major coastal and restoration initiative together with the States of Jersey and the National Trust for Jersey to restore habitats for native birds that have been in long term decline. This includes the flagship project to restore the red-tailed chough which disappeared from Jersey more than 100 years ago.
Captive breeding, field projects and capacity development can prioritise those species for which Durrell’s combined approach of tangible difference. These include Critically Endangered threatened at the global level and where we can make a Durrell will focus on those major species groups that are most Critical Species affected primarily by the loss of its native rain forest habitat. Copyright: Ian Singleton (SOCP).

Thailand with nine, are extremely important areas. Regions such as the Philippines, with 13 critical species and from forest clearance or from the cage bird trade. Other in Indonesia, where 16 species face serious threats primarily in the Caribbean, Tropical Andes, Madagascar and Sri Lanka – with particularly high concentrations of globally threatened amphibians. Four of these regions are the Western Caribbean, Tropical Andes, Madagascar and Sri Lanka – with the former containing the highest proportion of threatened amphibians in the world. We will initiate a multi-annual programme of amphibian conservation projects, focusing on Critically Endangered species in these focal regions. This programme aims to deliver rapid action on the ground supported by expert assessment of conservation needs, the provision of skills and training to local counterparts and where appropriate conservation breeding programmes for key species. Background work will be completed in 2010 and field activities will begin in 2011.

Endangered Birds of South East Asia
The countries of South East Asia, including parts of southern China and the Andaman and Nicobar Islands, are home to staggering levels of both marine and terrestrial biodiversity. But the region is also experiencing rapid development and population growth and most of the nations are heavily dependent on direct harvesting of natural resources. As a result all biodiversity within this region is under extreme pressure. Twenty per cent of the 652 Critically Endangered and Endangered bird species occur in South East Asia. The highest concentration of Critically Endangered birds is found in Indonesia, where 16 species face serious threats primarily from forest clearance or from the cage bird trade. Other regions such as the Philippines, with 13 critical species and Thailand with nine, are extremely important areas.

Our Critical Species theme consists of dedicated conservation programmes for highly endangered groups of animals worldwide.

Our Critical Species theme consists of dedicated conservation programmes for highly endangered groups of animals worldwide. To identify these groups we use the IUCN Red List of Threatened Species. As of 2010, almost 48,000 species have been assessed and 17,291 (36%) are identified as threatened. However, the recent assessments have identified that there are certain taxonomic groups and regions of the world that are disproportionally at risk. Durrell’s Global Conservation Programme 2011-2015 is our response to these global extinction crises.

This theme focuses on those species that will most benefit from the combined approach of field projects, conservation breeding and local capacity development that Durrell can bring to make our responses as cost effective as possible. Responses will be closely integrated with the husbandry skills present at the wildlife park in Jersey, initially we are focusing on a major project for each of the vertebrate groups most at risk. These activities will be closely integrated with our Islands at Risk programmes.

**Critically Endangered Amphibians**
In 2004, the Global Amphibian Assessment (GAA) brought the desperate plight of the world’s amphibians to the attention of the world. Since that time a number of world-wide initiatives have been developed to support their conservation. Current estimates are that 32% of the 6,260 known amphibian species assessed are threatened with extinction, with 42% of all species declining in number and the status of many others remaining unknown.

The GAA identified a number of regions around the world with particularly high concentrations of globally threatened amphibians. Four of these regions are the Western Caribbean, Tropical Andes, Madagascar and Sri Lanka – with the former containing the highest proportion of threatened amphibians in the world. We will initiate a multi-annual programme of amphibian conservation projects, focusing on Critically Endangered species in these focal regions. This programme aims to deliver rapid action on the ground supported by expert assessment of conservation needs, the provision of skills and training to local counterparts and where appropriate conservation breeding programmes for key species. Background work will be completed in 2010 and field activities will begin in 2011.

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**Globally Threatened Primates**
The primates are by far the most threatened major mammal order with 49% of 413 species classified as threatened. Durrell has a long record of working with endangered great apes, tigers and callitrichid monkeys and we will build on this legacy to initiate a programme to target some of the world’s most threatened primates.

Our wildlife park in Jersey is a world-renowned centre for the breeding and husbandry of mammals and primates. These small-bodied primates, which include the golden lion tamarin of Brazil, suffer greatly from the loss of their native forest. Our staff have supported field efforts to protect tamarins in the wild and work closely with organisations to improve husbandry standards for animals that are brought into captivity through rescue centres.

In South-East Asia, which has been identified as a region of extreme threat for larger-bodied mammals, we will continue to develop our support for the conservation of the Sumatran orangutan. Identified as one of the 25 most threatened primates in the world, this species has suffered greatly from forest loss. While providing training support for staff from the region, we will also identify actions on the ground to be developed in collaboration with the Sumatran Orangutan Conservation Programme.

Durrell has managed a population of western lowland gorillas at our wildlife park for over 40 years and we are committed to supporting efforts to protect them in the wild. The pressures facing all four gorilla species are widespread and intense. We can have the greatest impact by providing conservationists from gorilla range states with the necessary skills to lead conservation efforts in their home countries.

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Conservation goals

Our goal is to stabilise and restore populations of threatened species and their ecosystems through evidence-based programmes of species recovery, habitat management and capacity building. We will demonstrate effectiveness against specific measurable targets and outputs.

So far we have introduced the thematic focus for the new Global Conservation Programme. However, to monitor our actions and measure our impacts, we organise our activities under a series of strategic objectives and results. Associated with these specific objectives we use indicators to help us measure progress towards our goal. Our objectives and results are organised around three core areas of activity: Action, Capacity and Science.

1. Action: The conservation status of Critical Species and habitats in the Islands at Risk is improved.
   1.1 Populations of key species have been stabilised and where possible increased.
   1.2 Invasive species eradication programmes are implemented in the most threatened island ecosystems.
   1.3 Management plans are developed and implemented for priority habitats.
   1.4 Projects to address the unsustainable consumptive use and trade in key species are implemented.

2. Capacity: Conservationists, students and local communities are inspired and equipped to save species and manage natural resources sustainably.
   2.1 The capacity of host country partners to lead conservation initiatives on the ground is enhanced through the delivery of joint adaptive institutional capacity building.
   2.2 In regions of high local population pressure on natural resources, communities are engaged to jointly identify and implement sustainable natural resource use practices.
   2.3 Conservation professionals and young conservationists from around the world are given training and support to lead conservation initiatives that save species from extinction.
   2.4 Durrell acts as a hub for the dissemination and sharing of knowledge and experience by partners, stakeholders and institutions within our programme regions.

3. Science: The evidence-base for Durrell’s conservation programme is strengthened to guide the design, implementation and evaluation of effective action on the ground.
   3.1 Monitoring programmes, both expert led or community led, are operational for all key species, habitats and pressures.
   3.2 Cutting edge scientific methods are employed to answer conservation questions through strategic partnerships with other institutions.
   3.3 Results are published and disseminated in a timely manner and used by conservationists in the field.
   3.4 The impacts and mitigation of major threats such as climate change, disease or over-exploitation are addressed through strategic partnerships with academic institutions.

Effective monitoring of our actions is essential to measure progress towards our goal, share experience and communicate results.

Monitoring our progress

Indicators are measures that we can use to summarise our activities in a way that allows us to monitor progress towards our goal. They also provide a way of communicating this progress in a simple way. Generally, these indicators are divided into categories that monitor the state of biodiversity, the external pressures acting on that biodiversity and responses made to address the pressures. We will use the following indicators to monitor the delivery of our programme:

- Conservation status of species and habitats within programme
- Change in extent/intensity of pressures facing species or habitats
- Extent of target habitats under management for biodiversity conservation
- Proportion of International Training Centre graduates from our programme regions
- Number of conservation projects initiated by graduates from our programme regions
- Number of scientific articles published in support of our conservation programmes

A Bali starling (Leucopsar rothschildi) at Durrell Wildlife Park in Jersey. This species remains Critically Endangered in the wild. Copyright: Gregory Guida

Effective monitoring of our actions is essential to measure progress towards our goal, share experience and communicate results.
Conservation can work

All too often we are told the bad news of biodiversity loss and the challenges of saving species. But we must also recognise that conservation can and does work. Through the dedication and skill of conservationists around the world species are being saved and ecosystems restored. In many cases we know what needs to be done; it becomes a question of capacity, money and political will. The following are some conservation success stories that Durrell has supported, participated in or led through its 50 year history. None of these successes would be possible without the extraordinary support from our members and supporters and without the partnerships formed with the many governmental and non-governmental organisations working to help people and wildlife within our programme regions.

Antigua racers up from 50 to 500

This remarkable 10 year project has not only saved the Antiguan racer snake by removing invasive predators from offshore islands, it has restored other reptiles, plants and seabirds as well.

St Lucia amazon parrots up from 100 to 2,000

Over 30 years of dedicated conservation led by the St Lucia Forestry Department, including legal protection, education and awareness-raising, has seen this species recover back to safe numbers again.

Mauritius kestrels up 500 - echo parakeets up 400 - pink pigeons up 400

Icons of the conservation community, these birds were reduced to only a handful of animals. Years of research, habitat management, hands-on breeding and release led by the Mauritian Wildlife Foundation and many international partners, has allowed these species to recover.

Pygmy hogs new in at 35

A species once thought extinct, 35 pygmy hogs have now been released back to their native terai grasslands habitat in Assam, India thanks to a successful captive breeding programme.

Rodrigues fruit bat bounces back

This is possibly the most successful bat restoration project in the world. Fewer than 100 bats on the Mascarene island of Rodrigues have grown to almost 5,000 through habitat protection and reducing hunting pressure.

Survival of white-handed tamarins up to 80%

Tamarins brought into rescue centres in Colombia had a low chance of survival, but long-term training provided by our Mammal Department and local NGOs has increased survival to over 80%.

Lasting legacy

Graduates of training programme have gone on to establish their own world-renowned organisations including the Instituto de Pesquisas Ecológicas (IPÊ), set up to restore tamars in Brazil; The Sumatran Orangutan Conservation Programme (SOCP); and Eco-friendly Volunteers in Sri Lanka.

Protected areas to save threatened species

Work to save Critically Endangered species and to benefit local human communities has directly led to the establishment of protected areas in Mauritius, Madagascar, Montserrat, Antigua and Grand Cayman.

Saving Darwin’s most threatened finch

Declines in the nest of Darwin’s iconic finches have been halted through invasive predator control. 2010 saw the first translocation of birds to new areas of mangrove to expand the existing small population.

Expanding knowledge

Over 2,500 students from over 120 countries trained as conservation managers and scientists with more than 100 postgraduate theses resulting from Durrell projects. More than 300 scientific papers in peer-reviewed journals and books published in the last decade.

Mountain chicken frog rescue

The story of the Jamaican mountain chicken (Lithobates oapha) – a small, toad-like amphibian – is one of the many conservation projects that are taking place in the Caribbean. Mountain chicken frogs were thought to be extinct until 2004 when a small population was discovered in the mountains of Montserrat. Conservation efforts are now focused on protecting and restoring their habitat and preventing the spread of fungal disease that had been devastating similar species in the Virgin Islands.

Conservation at Durrell costs approximately $3m each year to manage and run. This includes the maintenance of all the animal collections in Jersey, delivery of 90 projects in 14 countries and 18 months of teaching each year.

Through our new Global Conservation Programme we will be able to save more species from extinction, empower more local communities and partners to conserve biodiversity, and train and inspire even more conservation leaders. We will also make our organisation more effective and efficient to be able to better use the skills and experience of our staff around the world.

Over 75% of our funding comes from restricted governmental and non-governmental donors, foundations and generous individuals who believe passionately in conservation. We want to thank all our donors and supporters for the assistance they provide. To meet our goals we need your continued help.

We need your help
Mountain chicken frog rescue
This story is just beginning. Restricted to two Caribbean islands, a fungal disease has almost wiped them out from both Montserrat and Dominica. Thanks to a rescue mission in 2009, 50 frogs were brought into a bio-secure captive breeding programme as part of a long-term restoration effort in Montserrat.