



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

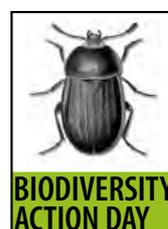


Federal Ministry
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and Development

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Grasping life: Global Biodiversity Action Days

A worldwide expedition to the values of nature



in cooperation with

GEO
International

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This year's UN Day for Biological Diversity bore the motto »Biodiversity for Development«, which emphasises the enormous importance that nature and its services offer people. To secure their livelihoods, the people of the developing countries very directly depend on the services of the local ecosystems. But in Germany too, we have to rely on nature providing us with food, drinking water, fuel and medicaments, on insects pollinating our useful plants, and on forests protecting us from floods and soil erosion and regulating the global climate.

One of the reasons why biological diversity is being destroyed worldwide in spite of its enormous importance is that we have, as yet, attributed no specific value to its economic significance. This is why, together with the European Commission, Germany has initiated the TEEB Project (»The Economics of Ecosystems and Biodiversity«) in order to gain better estimates of the economic value of nature's services and estimate the cost of destroying nature. This survey shows us that investing in nature conservation and environmental protection does not compete with economic development but, on the contrary, pays its way.

The worldwide Action Days for Biodiversity and Development have made an important contribution to promoting an understanding among the public at large of what biodiversity is worth economically. And only when people start to grasp how much they really depend on nature and its services will they make a determined effort to preserve biological diversity.

I am happy to be able to present you the many beautiful stories and pictures here that were created during the Action Days in 38 countries on four continents and wish you a stimulating expedition to the values of nature!

Dr. Norbert Röttgen,
Federal Minister for the Environment, Nature Conservation and Nuclear Safety

2010 has been declared the International Year for Biological Diversity by the United Nations. So biodiversity has long become more than a niche topic for nature enthusiasts or environmentalists. Alongside climate change, conserving and making careful use of the treasure trove that nature offers is one of the central global challenges of our times. Intact ecosystems and their environmental services guarantee the maintenance of our livelihoods and economic base.

There are a wide range of examples demonstrating this. For example, around ten of the 25 most successful drugs worldwide are gained from species living in the wild. In addition to their recreational role, the Earth's forests provide precious ecological and economic services and rank among the most effective existing climate stabilisers.

We humans are part of the diversity while simultaneously depending on it, both in the industrialised and in the developing countries. However, the majority of sensitive ecosystems and up to 90% of all known animal and plant species are to be found in the countries of the South. There, the livelihoods of people often depend directly on the natural resources, too. Fertile soils, but also clean rivers and lakes as well as forests and medicinal plants, secure the survival of billions of people.

However, our resource-intensive commercial activities have drastically changed nearly all of the Earth's ecosystems. Over the last 50 years, biodiversity has gone lost 100 to 1,000 times faster than before, bearing as yet unpredictable harmful impacts on the world economy, too. In the developing countries, it is often poverty that forces the people to overexploit the scarce resource of nature.

Alternatives and innovation are required, which is why I am pleased to present you this booklet. The worldwide Days of Action for Biodiversity and Development, which have been organised in 38 countries on four continents with German support, make us aware of our planet's diversity of species and landscapes – they also highlight problems and offer very concrete guidelines for action as well as new approaches.

Very much in the spirit of the Action Days, I therefore invite you to learn more about biological diversity and nature's value throughout the world and would look forward to you thus adopting one or two ideas for a more sustainable handling of nature.

Dirk Niebel
Federal Minister for Economic Cooperation and Development



Conserving biodiversity: from the scientific concept to the basis of human action

»Biodiversity is life. Biodiversity is our life.« With this motto, the United Nations is seeking to draw attention to the increasingly rapid loss of species, genes and ecosystems in the Year for Biological Diversity, 2010. For this loss is threatening more than individual animals and plants – it is jeopardising the long-term survival of human beings.

This trend was to have been reversed by 2010. However, a stocktaking has yielded sobering results, and developments continue to be alarming: Well over 20% of all the world's mammals are regarded as endangered – just like many other plant and animal species. By 2030, 60% of all coral reefs could be lost. Monoculture farming landscapes are continuing to spread. And oil disasters such as the recent one in the Gulf of Mexico are destroying

entire ecosystems in one go – and with them the economic livelihoods of the people in the regions affected.

Science has a lot to say about the causes – and also about possible solutions. But have its insights already reached the population? Are companies interested in their influence on the diversity of life? And have politics really understood that conserving biodiversity is not a luxury but a necessity essential for survival?

In order to bring about change here, scientific insights have to be made comprehensible to laypeople – in a manner that not only reaches brains but above all moves hearts and changes people's action. In addition, a broad-based dialogue is required as well as political and economic decisions securing our natural resources.



PERU - Collect, analyse, discuss: This was at the core of the Action Days, like here in San Marcos near Cajamarca, Peru. *Photo: Thomas Müller*



VIET NAM - Those who understand early in life will act prudently later on: Students examining nature in Phong Nha-Ke Bang National Park, Viet Nam. *Photo: S. Urban*

CAMEROON - Oil plantations are approaching the primeval forest faster and faster, e.g. in Bakingili at Mount Cameroon. *Photo: Peter Schauerte*

Against this background, the Federal Ministries for the Environment, Nature Conservation and Reactor Safety (BMU) and for Economic Cooperation and Development (BMZ) have, in cooperation with the reportage magazine GEO International, launched a special project: The Global Biodiversity Action Days.

The initiative was prompted by the International Day in the International Year of Biological Diversity, the 22nd May 2010, with its motto: »Biodiversity for Development«. People and organisations in a total of 38 countries accepted the invitation by Ministers Röttgen and Niebel and organised local Action Days for biodiversity and development.

A project to touch

The idea was that people should experience biodiversity directly and reflect upon their values. Therefore, in each country, representatives of ministries, environmental organisations, local authorities, schools or other interest groups met up with scientists. On the Action Day, they explored a previously determined site, together with scientists.

In each location, this started off with a so-called »bio-monitoring«: The participants were to find and identify as many of the species living there as possible. Inspired by the frequently surprising insights they gained, they then discussed the interaction of the species found in the respective ecosystem together with the benefits this offers humans. In several countries, this was accompanied by a colourful cultural fringe programme. Everywhere, national and international media were present to report the results. And sometimes, the insights were further debated at specially organised symposia or even put up for discussion in Parliament.

The concept is based on the GEO Day of Biodiversity that Germans are familiar with and that already took place for the twelfth time in 2010. In addition, since 2001, there has been a parallel event in one developing country almost each year, organised in co-operation with local partners and supported by Germany.

Accordingly, GEO International has been one of the project's central partners: In around half of all the participating countries, the magazine's national edito-

rial offices have played a crucial role in organising the Action Days. In a further 16 countries, implementation has been supported by the staff of German and international development organisations. The United Nations Environment Programme (UNEP) and the Secretariat of the Convention on Biological Diversity (SCBD) have supported the project at international level. Furthermore, numerous government institutions, non-governmental organisations and media in each country have participated in the Action Days.

In addition to the global framework, a further novelty this year has been the thematic focus on nature's services. For, in addition to looking for and identifying as many species as possible, the question of what economic, social and cultural values the respective ecosystem can yield for human beings has always been at the forefront of activities.

The value of nature

Disturbed by the progressive loss of biodiversity and entire ecosystems, more and more experts are asking themselves what economic values are simultaneously being lost. At the G8+5 Summit in 2007, the ministers of environment initiated a comprehensive survey on this issue. The study »The Economics of Ecosystems and Biodiversity« (TEEB) establishes the costs arising as ecosystems provide less and less of their goods, functions and services.

The TEEB study is being promoted and financed, together with European partners, by the German Ministry for the Environment. The patron is the United Nations Environment Programme; the Indian economist Pavan Sukhdev is co-ordinating the study. Around 200 scientists from 35 countries are involved. The results will be presented at the 10th Conference of the Parties to the Convention on Biological Diversity (COP 10) in Nagoya, Japan.

What would it cost to provide the services of nature artificially? »Just imagine how expensive the equipment would be you would have to take with you to make the entire moon inhabitable,« suggests Gretchen Daily of Stanford University as a way of approaching this problem. We would need no end of apparatus – to produce clean drinking water and air to breathe, for photosynthesis and the production of all food, to create topsoil and prevent erosion, to pollinate the blossoms of fruit and crops, as a protection from flooding and landslides, to store CO₂, to absorb pollutants, to biologically contain epidemics, to control pests ... and for lots and lots more.

All of this would be beyond price. For a network of the most intricate and diverse processes interwoven with one another of growth and decay, blossoming and ripening, eating and being devoured, parasitism and partnership that has evolved over millions of years would have to be replaced.



NAMIBIA - Diversity requires attention: The flag for International Biodiversity Day continues to fly on the Brandberg in Namibia.
Photo: Constantin Harrer



CZECH REPUBLIC - Media spread the word: TV interview at the Action Day in the Czech Republic. Photo: Filip Moško



GERMANY - Documentation of results at the GEO Biodiversity Day in Freiburg, Germany. *Photo: Suhel Al-Janabi*

Such holistic approaches are far more complex than traditional economic thinking. The TEEB survey gives an idea of what the monetary scale of services rendered by natural ecosystems is like. Years ago, economists already put the value of all biodiversity services at 33 billion US dollars – a year. This figure has since had to be adjusted upwards, also because biological diversity is becoming ever scarcer. And scarce means of production are expensive.

But even if concrete calculations are complicated: An ecosystem's productivity – and hence the value of the services it provides – rises as its diversity increases. The TEEB survey demonstrates this as follows, for example:

- The benefit that humankind draws from the existence of intact coral reefs – as fishing grounds, food producers and tourist attractions – is valued at an annual 172 billion US dollars. However, climate change is posing a massive threat to the corals.
- The global fishing industry is losing an annual 50 billion US dollars because of unsustainable fishing practices.
- The annual economic performance of intact mangrove forests, for example in Thailand, is 2,100 euro per hectare. Their services include maintaining the

climate, offering flood protection and providing yields for local fishermen. If they are turned into shrimp farms, profits, including yields from aquafarming, fall to around a third.

- In Canada, almost 200 euro per hectare and year is obtained from healthy marshlands thanks to their purifying water and guaranteeing the recycling of nutrients. In intensive crop-farming, their contribution to the economy also drops by two thirds.

In the Year of Biodiversity, of all times, an up-to-date 'valuation' of ecosystem performance is being demonstrated in the Gulf of Mexico, too. In July 2010, the BP corporation was obliged to pay 20 billion dollars into a fund to balance the consequences of the oil disaster. With this money, water and beaches are to be cleaned and the losers of the oil pollution – fisheries and the hotel industry – are to receive compensation. This is just an initial indication of what has actually been lost.

Of course all these figures are approximations. For they are calculated values – not prices. Nevertheless, they do show that conserving biodiversity has a tangible economic dimension. Furthermore, the TEEB survey demonstrates that only certain ecosystem services – for example their contribution to combating global

warming – can be globally valued. Far more frequently, the values are calculated at regional or local level. For to obtain genuinely meaningful results, the environmental, economic and also cultural peculiarities of the respective area need to be considered.

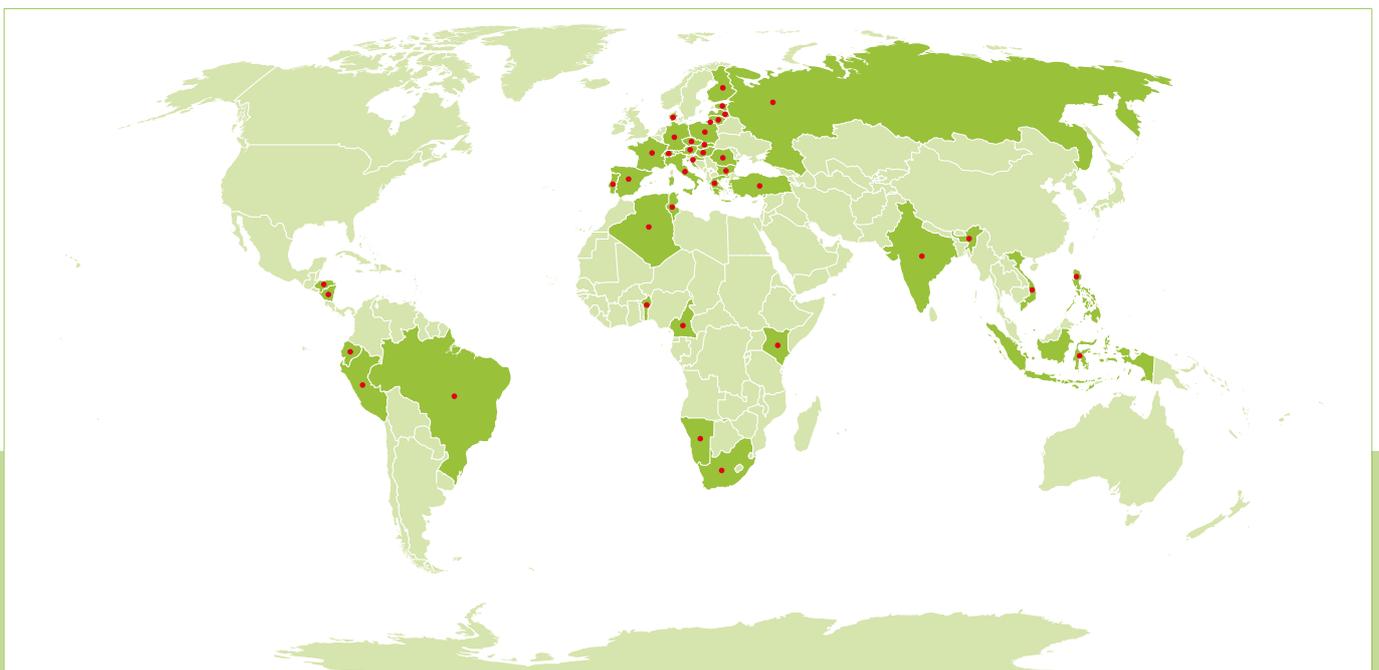
This leads to the question of the beneficiaries: Who are the people benefiting from the ecosystem services – and how must benefits be valued from their particular angle? Only when this becomes clear will there be any prospect of change. For as alarming as the global figures may be, the process of rethinking things is only going to gain momentum when people grasp what advantages arise for them, their families and their communities from functional ecosystems. And only then will change become possible.

The Global Action Days project went one step in this direction. Concentrating on specific ecosystems, citizens, experts, politicians and media came together in each country to understand the respective area regarding its ecological and economic functions. To make the insights thus gained public. And to initiate change on this basis.

The Action Days: A diversified examination of diversity

Countless people in a total of 38 countries participated in the Biodiversity Action Days in May and June 2010. They roamed through low and high mountain ranges, analysed dry and swampy areas, snorkelled in coastal zones, wandered over volcanoes, explored Mediterranean and tropical forest regions and combed through caves and gorges – constantly on the lookout for the diversity of life. And for the importance of this diversity to us humans.

This is how a worldwide mosaic of hands-on experiences with the wealth that nature offers us developed. The following pages provide an idea of the impressive diversity of ecosystems in this world, of their services – and also of the creative diversity emerging from the Action Days themselves, which were organised for the International Day in the International Year of Biodiversity.



World map with the participating countries.



GERMANY - Almost a work of art: In Lilienthal at the Kaiserstuhl, experts trapped bats with a net. Photo: Berthold Steinhilber

GERMANY

11. - 12.6. Region of Freiburg with Kaiserstuhl, Feldberg, Rheinauen and Mooswald

There is a tradition of Biodiversity Days in Germany, which GEO has been conducting for the last 12 years. The GEO Biodiversity Day has, in fact, become a national event, with about 35,000 individuals participating in 2010 through 574 self-organised activities. One event is supported by the magazine every year, this time in the extreme southwest of Germany and in co-operation with the 'Eco Station' in Freiburg. The slogan was: »Price of nature. Why biodiversity pays«. A search for species was conducted in four very different habitats: the sunny slopes of the Kaiserstuhl massif, the Feldberg mountain touching 1,500m, the wetlands along the upper Rhine and a mixed forest in the city of Freiburg. 120 experts were able to identify over 2,000 species, among them biological gems such as the Natterer's bat (*Myotis nattereri*), very rarely sighted in Germany, the highly endangered Yellow-bellied toad (*Bombina variegata*) that is protected all over Europe, and the Western green lizard (*Lacerta bilineata*). The highlight was the *Cixidia pilatois*, an insect that was last sighted in Germany 43 years ago –

at the very same spot near the Kaiserstuhl. At the grand final event in the evening, the economic significance of the areas was discussed, too. With the example of the Freiburg Moss Woods, TEEB expert Carsten Neßhöver explained how the value of nature can be calculated. The guests and visitors in the Freiburg Market Square were truly surprised to learn that the Moss Woods yield services of more than 22 million euro. This is the sum resulting from adding the values of carbon dioxide storage, water filtering and the recreational and cultural use of the area.

ITALY

22. - 23.5. Parco Nazionale d'Abruzzo, Parco Nazionale Foreste Casentinesi, Parco delle Alpi Marittime

The Foreste Casentinesi National Park on the border between the regions of Tuscany and Emilia-Romagna is an unspoilt nature reserve. Saint Francis of Assisi retreated to these mountains to be alone with creation. On Biodiversity Day, things were much livelier. A dozen experts along with hundred adults and children assembled 'on the trail of the wolves'. The trail extends to two other

mountain ranges of the Apennines: the Parco Nazionale d'Abruzzo and the Parco delle Alpi Marittime, northwest of Turin. Here, too, dozens of experts and about a hundred visitors each had followed the call for the Action Day. The inventory from the three sites listed several mountainous species, among them the Dingy skipper (*Erynnis tages*), in the Abruzzo region. In the Maritime Alps, young Bearded vultures (*Gypaetus barbatus*) bred in captivity were released. As many as three different newt species were found in a single pond in the Foreste Casentinesi: the Italian crested newt (*Triturus carnifex*), the Alpine newt (*T. alpestris*) and the Smooth newt (*T. vulgaris*). As for the wolves, they weren't sighted this time – but smelt. In the scrubby grass close to a delicate Grape hyacinth (*Scilla sp.*) forest ranger Angelo Salvaguardi found a fresh pile of droppings – huge, even when compared to that of a fully grown Alsatian – consisting largely of wild boar hide.

CROATIA

22.5. Zagreb (Maksimir Park)

»Twenty-seven species of mosquitoes live here,« explains Ana Klobučar, making many of the listeners in Maksimir Park, Zagreb's green lung, shudder. But Klobučar, a biologist at the Health Department, reassures them that the bloodsuckers are decimated by a host of enemies. Five amphibian species, especially the Common toad (*Bufo bufo*), prey on the mosquitoes and their larvae. In addition, there are several species of bats. And, of course, many of the more than one hundred species of birds

here. Maksimir, one of the oldest green spaces in Europe, was opened in 1794. It covers 316 hectares of landscaped park with ponds, meadows with patches of trees and forests. The large amount of dead wood provides an ideal environment for arthropods. A biologist from the State Institute for Nature Protection counted twelve spider species new to the park on the Action Day. Cavity-nesting birds breed in the dead trunks, one of the reasons why this place, bang in the middle of the Croatian capital, has the world's largest population of Middle spotted woodpeckers (*Dendrocopos medius*). All this information came as a surprise to many. The park alone had 1,000 visitors – and there were more in other parts of the country: Eight other national parks and eleven nature reserves offered guided walks or discussions on that weekend.

NAMIBIA

7. - 9.5. Brandberg Massif

They were among the first of the mark worldwide. And they wanted to make it all the way to the top. Namibia's 'Biodiv team' began its Action Day on 7th May 2010 by climbing the Königstein, the highest peak in the country. At 2,573m, this peak in the Brandberg mountains towers high above the Namib desert. It was precisely to this point that the six-member team climbed to hoist a 'Biodiversity 2010' flag. Meanwhile, down below, biologists led six groups with more than 100 participants through the high desert plateau, among them Netumbo Nandi-Ndaitwah, Namibia's Minister of Environment and Tourism. The explorers found an unexpectedly



CROATIA - Grey heron (*Ardea cinerea*) in the park with fish. Sometimes it's only a beetle. Photo: Stipe Surać



NAMIBIA - Beauty amidst a barren vastness. A researcher photographs a Mopane aloe (*Aloe littoralis*) at the Brandberg mountains. Photo: Constantin Harrer



KENYA - How does this Masai woman benefit from the White stork (*Ciconia ciconia*)? It flies from Europe to Mount Suswa in winter and eats the pests in the fields. Photo: Daniela Rühl



NICARAGUA - Sailor of the night: a Short-tailed bat (*Carollia perspicillata*). Photo: Martha Sanchez

large number of grass species, the rare Angolan python (*Python anchietae*), tracks of a leopard (*Panthera pardus*) and the highly endangered Black rhinoceros (*Diceros bicornis*). Also a herd of springboks (*Antidorcas marsupialis*), as well as zebras and other antelopes – drawn on boulders by Stone Age hunters. Tilman Lenssen-Erz, an expert on the early history of humankind, described how they lived with nature. The tourist accommodation at the Brandberg mountains is proof of how nature conservation and development can go hand in hand today. Eco safaris are on offer here, as well as handicrafts from natural materials that are produced by local people. The Action Day also had an impact in the capital Windhoek, where an extraordinary session of parliament was held on biodiversity along with a conference at which researchers discussed the wealth of species in the Brandberg mountains with the minister.

KENYA

15.5. Mt. Suswa and Lake Naivasha, 22.5. Nairobi

The United Nations' official celebrations on International Day for Biological Diversity (22.5.) took place in Kenya's capital, Nairobi. Among those present were Ahmed Djoghlaif, Executive Secretary of the Biodiversity Convention, and Jochen Flasbarth, President of the CBD Conference of the Parties (COP). On the agenda was a

marketplace of new ideas aimed at deriving profit from biodiversity, e.g. through silk, wool or bamboo products, or through eco tourism. In the shantytown of Huruma, the delegates of an international conference on biodiversity learnt how people live off the forest. They fetch water from it and soil for growing flowers, and collect honey and other food, medicinal herbs and seeds for tree nurseries. The Masai live in harmony with nature, too. This was the theme of the event at Mount Suswa. The third location, Lake Naivasha, saw a gathering of 400 people. Students showed a cross section of African fauna, ranging from the hippopotamus (*Hippopotamus amphibius*) to zooplankton.

NICARAGUA

22.5. Parque Nacional Volcán Masaya

The excitement is palpable. After a hike through the mountainous forest around the volcano, the group will soon reach the spot where Octavio Saldaña laid the coyote traps at night. But the boxes contain »only« a Common opossum (*Didelphis marsupialis*). The Action Day in Nicaragua's largest national park supported by the ReniBio Network had other things to show off: a Mexican burrowing python (*Loxocemus bicolor*) and the Hairy-legged vampire bat (*Diphylla ecaudata*). Both species were sighted here for the first time.

BULGARIA

1.5. Dragoman Marsh, 22.5. Sofia (South Park)

The five girls from the Sveti Konstantin children's home had never seen binoculars. And now, turn by turn, they held those of ornithologist Boris Nikolov in their hands, peered through them and were thrilled to see the female Mallard duck (*Anas platyrhynchos*) so close up. Holding a container full of garden snails (*Helix aspersa*) in his hand, malacologist Ivaylo Dedov from the Central Laboratory of General Ecology was also able to provide some astonishing insights. The slime produced by the molluscs is used as an extract by the cosmetics industry, and this in turn endangers the animals. Lessons along the city park's lake. On its banks, students, families and experts could experience what 'urban biodiversity' really means. This was the second Action Day in Bulgaria. The first was organised in the Dragoman Marsh in western Bulgaria, where many species were spotted. But even the South Park in Sofia has a wealth of species. There are 65 different kinds of birds; 29 of these are protected and two are on Bulgaria's Red List. Amazingly, 16 species of ants were found! Two surprised even expert Vera Antonova: the Black-backed meadow ant (*Formica pratensis*), a Red List species, and the Slavemaker ant (*Formica*

sanguinea), which – as the name reveals – keeps slaves. It attacks the nests of other ant species, steals the larvae and carries them off to its own lair. The kidnapped larvae hatch here and become slaves who work in the foreign ant colony and keep it clean.

FRANCE

21. - 22.5. Parc National du Mercantour

Eyes raised to the sky, hands behind his ears, Daniel Demontoux, employee at the Mercantour Park whispers, »Did you hear the *tsiup-tsiup*? A Chiffchaff, *Phylloscopus collybita*.« So, you strain your ears, close your eyes; but it is no use. How is one to hear a *tsiup* with birds chirping all around? Winter is just beginning to recede from the valleys of the Maritime Alps, but one still has to trudge through snow fields on the slopes. Yet, a flap of the wings of one of the vultures soaring above can bring you within reach of the beaches on the Mediterranean. From there, over 600,000 tourists take to the trail every year for the Franco-Italian border. Two hundred visitors assisted by 18 experts have come today to experience the park's biodiversity. Some are crawling on all fours, among them Jean-Louis Besson: »Bon, we have only covered 50m in the last hour. But see, we've already listed 12 species!«



BULGARIA - *Sarcophagidae* mating. Photo: Yanne Golev



FRANCE - Tracing the Chiffchaff. Photo: Hélène David



ECUADOR - Biodiversity on offer: Plants and knowledge are being exchanged at the 'Feria de Sabores y Saberes'. Photo: Oliver Hölcke



FINLAND - Seppo Knuuttila counted nine different fish species – more than expected. Photo: Juha Salminen

ECUADOR

15. - 16.5. Bomboíza (Province of Morona Santiago)

Students took adults on a guided tour of the garden in their boarding school at Bomboíza, a village in south-eastern Ecuador. The fauna and flora, which many indigenous Shuar and Achuar still live with and from, are under threat from mining companies that exploit copper and gold deposits. And from settlers who clear the jungle for farmland or pasture and then use chemical fertilisers. In their ethno-botanic school garden, 330 Shuar and Achuar children grow 360 useful and medicinal plants from their native villages, such as cultivated vanilla (*Vanilla odorata*) and air potato (*Dioscorea bulbifera*). These served as displays for 50 representatives from ministries, research institutes and journalists on the Action Day. The students bring the seedlings from their villages when they return from the holidays. The school has thus become a hub of knowledge concerning the 'old' plants. Over 90 communities have taken part in the programme. The students showed the visitors some rare beauties: orchid species indigenous to Ecuador, such as *Maxillaria bomboizensis* and *Dodsonia falcata*.

FINLAND

25. - 26.5. Helsinki (Töölönlahti Park)

»There is no dearth of fish,« says Seppo Knuuttila holding up a 4-pound perch-pike, or zander, as he glides towards the shore standing in the boat. The TV camera team films from among the reeds as a second researcher in bright orange wading pants jumps into the brown water from the prow and pulls the boat to land. The men spread the net on the shore and do an inventory: »Zander (*Sander*

luciperca), Carp bream (*Abramis brama*), perch (*Perca fluviatilis*),« they call out as they release one fish after the other from the net. Just one of many such scenes in Helsinki's Töölönlahti Park. Discover urban biodiversity and highlight its uses: this was the aim of the Finnish organisers on the Action Day. And they succeeded brilliantly. In 24 hours, 50 experts found 938 species. They are part of an ecosystem that offers excellent ecological services – walking, jogging, boating, picnicking and air pollution control. Anglers are permitted to cast nets in the lake. To his own surprise, fish biologist Knuuttila found a small fish with black spots in his net: a Sea trout (*Salmo trutta trutta*). This fish needs a very high level of water quality, so finding it means that the park's lake is now richer in oxygen.

SWITZERLAND

11. - 13.6. Rheinfelden

There are actually two cities of Rheinfelden on either bank of the river Rhine, one in Switzerland, one in Germany. A circular trail crossing the border connects both towns. Participants in the Swiss Biodiversity Day, among them seven school classes, learnt about the river's ecosystem. Rheinfelden celebrated a big festival of nature that was spearheaded by Naturama, the natural history museum in Canton Aargau. The festival was attended by 1,000 visitors who jammed not just the hiking trails but also the town hall, where nature conservation associations presented their work. Aquariums and terrariums stood on display with local fish and reptiles – and even an entire colony of bees. Over a period of 24 hours, 60 experts offered 25 excursions, and an estimated 1,000



SWITZERLAND - At the Hörnli, a mountain near Zurich, a Fire salamander (*Salamandra atra*) was the star photo model. *Photo: Thomas Flory*

species were found! Among them there were biological gems, right in the middle of town: the rare Four-leaved allseed (*Polycarpon tetraphyllum*), which was discovered in the paving, and no less than 60 kinds of spiders. Bat fans experienced a minor miracle: the flight of a colony of Greater mouse-eared bats (*Myotis myotis*) from their roost site. The day in Rheinfelden was part of a country-wide biodiversity campaign that included 120 talks, nature walks and experiments drawing 10,000 visitors.

VIET NAM

3. - 6.6. Phong Nha-Ke Bang National Park

There are 113 reptile and 388 bird species living in Phong Nha-Ke Bang National Park in central Viet Nam. One hundred school children were able to experience a small part of this abundance. With nets, they caught water scorpions (*Nepa cinerea*) and damselflies (*Odonata zygoptera*). And they drew pictures: of gibbons (*Nomascus leucogenys siki*) and Stump-tailed macaques (*Macaca arctoides*) that they had visited at the animal rescue centre. The following day, a group of experts and politicians visited the impressive Phong Nha Cave. With its branching-out system of karst and caves, the park is becoming more and more important for tourism. In the subsequent panel debate, the participants, including many government representatives, then discussed how this sensitive habitat can be pre-



VIET NAM - The Action Days in Viet Nam also went underground – e.g. to the Bi Ki grotto. *Photo: Stefan Urban*

GREECE - Martin Gaetlich, zoologist in Athens, explains the environment around the Acropolis. *Photo: Michaelis Koronis*

served in the long term. Also, the Day of Action revealed a small scientific sensation: during the preparations, a blind scorpion was discovered – a hitherto completely unknown species, and, into the bargain, the only cave scorpion in entire continental Asia known so far!

GREECE

11.5. Athens (historic centre)

How many species live around the Acropolis? With this question, Christos Tsanakas, organiser of the Action Day in Greece, was able to arouse immediate interest. So much so that the Ministry of Environment agreed to support the event. And the answer? »500 species live here«, explains Martin Gaetlich, a zoologist at Athens University. The reason? The streets and squares around the Acropolis provide a structured terrain. There is masonry, enough grassy spaces, small gardens, patches of forest, fallow land and riverbeds. The group actually found a hoopoe (*Upupa epops*), of which there are supposed to be six to seven pairs around the Acropolis, among a small population of Kermes oaks (*Quercus coccifera*). And with a bit of luck, the mythical symbol of the city and goddess Athena can still be heard at night at the Acropolis rock, as it was thousands of years ago: the Little owl (*Athene noctua*), which in ancient times adorned the valuable Athenian tetradrachmon coins.



PERU - The farmers of Lamas presented the Sacha inchi plant – and their traditional costumes. *Photo: Thomas J. Müller*

TUNISIA - Students finding biodiversity in the Acacia forest. *Photo: Mabrouk Hadfi*

PERU

7.5. San Marcos (Cajamarca),

11.5. Lamas (San Martín), 14.5. Locuto (Piura)

In few countries does the population actively use so many plant varieties as in Peru. A total of 4,400 species are collected for medicinal purposes or food. This is why the Action Day focused on useful plants in three different habitats. In the uplands, in San Marcos, home to the small Tara tree (*Caesalpinia spinosa*) from whose fruits tanning agents are derived, 180 people took part in the event. In the Amazonas region, 170 people gathered in Lamas, where the nuts of the Sacha inchi plant (*Plukenetia volubilis*) are harvested from which valuable oil containing Omega-3 fatty acids is obtained. And in Locuto on the coast, 200 people gathered in the name of the Algarrobo tree (*Prosopis alba*), which provides wood and sweet fruits that can be made into syrup.

TUNISIA

22. - 23.5. Eight national parks

Eight national parks, students from the region, a biodiversity rally with biologists in each park – and a joint finish. That was the concept of the Action Day in Tunisia. The excursions of the students in the conservation areas near their homes resulted in a film, which was screened during the final presentation at the Zaghouan National Park centre, about 50km south of Tunis. It showed the fun that the little naturalists had. Of course, the full diversity of Tunisian flora and fauna was also on display.



AUSTRIA - Trap inspection in the Kalkalpen: Erich Weigand examines an aquatic insect. *Photo: Robert Mühlthaler*

»My father is a peasant and always used to be sceptical towards these national parks,« says 14-year-old Oumaima Garissia. »But thanks to our activities, he has gained a new view of things. Now he is very proud of us – and so are my friends and I, of course!«

AUSTRIA

29.5. Six national parks: Hohe Tauern, Gesäuse, Kalkalpen, Donau-Auen, Thayatal, Neusiedler See-Seewinkel

If one had to choose a world champion of the Action Days in 2010, it could very well be Austria. All six national parks in the country simultaneously began a species hunt on the 29th May. This became the largest field research campaign in Europe. Two hundred scientists, among them lichenologists, ornithologists and experts on spiders, cicadas, bugs and butterflies, identified 3,000 species. And 2,000 visitors came to the mountains, valleys, meadows, forests, wetlands, rivers and lakes. Austria's nature gifted some special moments: a Golden eagle (*Aquila chrysaetos*) circling majestically above the hikers in the Hohe Tauern National Park. In the same location, a very rare mushroom, the Conifer woodtuft (*Kuehneromyces lignicola*). Or the pictures taken at night, with photo traps in the Kalkalpen National Park, of Europe's largest predatory cat, the lynx (*Lynx lynx*). At the Thaya river, a Black stork (*Ciconia nigra*) spiralled up into the air, and the researchers were able to find all four Austrian species of vipers (*Colubridae*). In the Danube

wetlands, fishery biologists presented their project of resettling the European mud-minnow (*Umbra krameri*) – once extinct in this habitat – in the river. Around the Neusiedler Lake, botanical rarities such as Pepperwort (*Lepidium cartilagineum*), and orchids (*Orchis palustris*) stole the limelight. But the large variety of bird life also drew many nature lovers. There are a million overnight stays a year thanks to tourists who travel to the region to visit the Neusiedler See-Seewinkel National Park. The local economy thus benefits enormously from biodiversity.

TURKEY

23.5. Istanbul region (forest at the Ömerli reservoir)

»*Cytinus hypocistis!*« Professor Adnan Erdağ parts the bushes to show a plant with fleshy shoots and glowing orange scale leaves – the ‘Rape of Cistus’ – a parasite that attaches itself to the roots of rockroses (*Cistus salviifolius*, *C. creticus*) and draws all its nutrients from there. The professor is standing 55km from the centre of Istanbul, in the forested area of Ömerli that is now threatened by urbanisation despite being a protected catchment area. The nearby reservoir meets about 40 percent of Istanbul’s drinking water requirements. And it is here, of all places, that a Formula One racetrack has been built. Piles

of torn workmen’s clothing and twisted plastic parts can still be seen. The 12-million-strong metropolis is spreading – at the cost of nature. This is what the Turkish Action Day organisers wanted to draw attention to and show how the mix of species changes due to human influence. A total of 240 species could be identified within roughly 4km². In addition to birds, reptiles, insects, spiders, molluscs, fungi and flowering plants, there were also 20 moss varieties. However, some species that used to live here in the past could no longer be traced.

CZECH REPUBLIC

5.6. Prague (Prokop valley)

Just behind the last row of high-rise buildings on the south-western fringes of Prague, the wilderness begins. It is recapturing what man had snatched away in the last two hundred years with five limestone quarries and a narrow gauge railway cutting right through the stony heart of the Prokop valley. Today, the gorge is green again and is largely a protected area. A good reason for families, school classes and nature-lovers to take part in the Action Day. Five groups roamed through the valley and discovered typical grasses such as *Stipa pennata* and *Festuca rupicola*. Of the 136 bird species found in Prague, 60 are resident in the Prokop valley. The sounds of the Common chiffchaff (*Phylloscopus collybita*) and the Com-



TURKEY - Beauty by the wayside: Rockrose (*Cistus creticus*) being visited by a Burnet moth (*Zygaenidae*). Photo: Melih Kafa



CZECH REPUBLIC - Bird-spotter on the hunt. Photo: Filip Moško



HUNGARY - Class time: Biologist Laszlo Peregovits explains to students how insect traps work. *Photo: Sándor Zsila*

mon redstart (*Phoenicurus phoenicurus*) could be heard, among others. The Bank vole (*Clethrionomys glareolus*) chose only to show its droppings. Sighting the Old world swallowtail (*Papilio machaon*), the largest butterfly in the Czech Republic, proved a visual treat. The Day was also used to prepare three small nature trails in the conservation area. These are intended to sensitise the residents of Prague about the treasures of the valley, which include a strictly protected leek (*Allium strictum*), a relic from the Ice Age used by the first Slavs as a spice.

HUNGARY

22.5. Szénás Hills (Duna Ipoly National Park)

North of Budapest, the jagged mountains of the Duna Ipoly National Park give way to a gently undulating hilly landscape, the Szénás Hills with their barren tops and green slopes. Here lies the village of Nagykovácsi, whose elementary school students are now experts on indigenous biodiversity. On the Action Day, scientists from the Hungarian Natural History Museum made them aware of the enormous biodiversity on the slopes of the national park and also on the shores encircling Békás Lake, where experts played birdcalls and put up a net. Bat researchers went out at night. And insectologists put up light traps. Diverse species from marshes, lakes, fields and forests, slopes and mountains put in an appearance: the European pond turtle (*Emys orbicularis*), Smooth newt (*Lissotriton vulgaris*), European greenfinch (*Carduelis chloris*), Blue tit (*Parus caeruleus*) and Tortured tortella moss (*Tortella tortuosa*).



LATVIA - Black slug (*Arion ater*). *Photo: Maris Maskalans*

LATVIA

22.5. Riga (Bišumuiža, Kengarags, Bolderaja)

The adult experts counted close to 200 species of higher plants, lichens, fungi, insects and birds. But even the children were in form: ten mussel and snail species in five minutes – elementary school students from the capital city Riga did all the hard work. As soon as biologist Digna Pilāte gave the signal, they swarmed along the shores of the Daugava with Petri dishes in hand, digging up the sludge on the riverbank. One of their finds was a Zebra mussel (*Dreissena polymorpha*), a bio indicator of methyl mercury concentration in the water. Researchers from the Museum of Natural History in Riga initiated them into more secrets. For instance, the sap of the Greater plantain (*Plantago major*) is helpful against bites of the mosquitoes that suddenly attacked the group in Bišumuiža Park. And the Antlion (*Myrmeleon formicarius*) constructs conical pits in sand, buries itself at the bottom and waits for its prey, which slips before its jaw pincers. Prey that falls over the edge is showered with sand to hasten the slide.

CAMEROON

12.5. Bakingili (Mount Cameroon)

Thick vines hang from the trees in the Bakingili forest at Mount Cameroon. The guide suddenly grabs one and cuts it in two: clear water streams out, which the members of the botany group immediately sample. It is tasty. Almost 200 participants, divided into nine thematic groups, had set off to explore the transitional region between the oil plantations and the primeval forest on the Action Day. Probably, none of the participants had



CAMEROON - Some tree species can be identified by their smell. That way, Duke Tchoundjeu learns that the bark of this tree is a cure for wounds.
Photo: Peter Schauerte

expected to find so many food and medicinal plants there. To learn how the interaction of species protects the soil from erosion. And to see how many people in the surrounding areas live on what they find in the forest. Later, the experts and politicians were astonished by a twelve-year-old. In next to no time he identified six snail species and gave a talk on them in front of running TV cameras at the end of the day.

ALGERIA

22.5. Algiers (Botanical Garden)

In Algeria, there is a school for providing environmental education to children. It is in the Jardin d'Essai du Hamma in Algiers, the biggest botanical garden in the country. And this is where the Algerian Action Day was held. Many mothers came with their children. Ornithology workshops, puppet shows, painting competitions, discussions, films and a quiz: The teachers at the environmental school provided a multimedia perspective of biodiversity. They also pitched in with their charges: In the afternoon a group of girl guides and boy scouts planted various tree species that, while being endemic to the region, had virtually been forgotten. This will hopefully attract even more visitors to the garden, which was founded in 1832 and was opened again in 2009, after extensive renovation.

HONDURAS

21.5. Gualaco, Olancho

Gualaco is a village in the Honduran department of Olancho, and a role model of communities that are attempting to run an ecological economy in the tropical forests of Central America. Conservationists and researchers discussed the best strategies to adopt e.g. an environmentally sound forest management. The experts visited the Finca Las Orquidéas, where farmer Isidro Zuniga is growing eco orchids. And they embarked



ALGERIA - Biodiversity everywhere: employees of the Ministry of Environment.
Photo: Salim Gora

on a species hunt. Their best sightings included birds: the Blue-crowned motmot (*Momotus momota*) and the White-breasted wood-wren (*Henicorhina leucosticte*).

LITHUANIA

29.5. Vilnius region (Rudninku bombing range)

The Russian air force dropped its training bombs on these 20,000 hectares until the end of the 1980s. The place is now a recreational area. A nature trail is being built to show how nature is able to reassert itself. On the Action Day, scientists, students and nature enthusiasts discussed the shape the trail should take.

ESTONIA

14. - 15.5. Tartu (Tähtvere Dendropark)

'Mother river' is how the people of Tartu refer to their city's River Emajõgi, which also flows through the Tähtvere Dendropark. Young expertise congregated here when students from as many as 33 schools went on a species hunt, guided by an equal number of experts. They learnt many things. For instance, that the fox is a scavenger and its disappearance results in an increase in pathogens, and consequently greater danger of infection for humans.

ROMANIA

22.5. Bucharest

In Bucharest, several kindergartens and nursery schools joined forces on Biodiversity Day to introduce very small children to nature's diversity, too. With songs, dancing, painting and many other activities, the children's inquisitiveness was roused in the Botanical Gardens. In the meantime, the parents had the opportunity to inform themselves about the significance of the Gardens and their many species.



HONDURAS - A typical sight in the Honduran jungle: the Monkey ladder vine (*Entada gigas*). Photo: Eduardo Rico Valladares



SOUTH AFRICA - What did they find at the river? Larvae of dragonflies (*Odonata*), dayflies (*Ephemeroptera*) and stoneflies (*Plecoptera*). Photo: Nikki Brighton

SOUTH AFRICA

20. - 25.5. Umgeni Valley (KwaZulu-Natal) and Baviaanskloof (Eastern Cape)

In the Umgeni Valley, the nature conservation association WESSA taught 31 teachers how to help young people understand biodiversity. Then the students set off. Those from the Hawkstone Elementary School alone discovered 147 species of insects, birds and plants in just a few hours. On the main public day, 500 villagers took part. One of the instructors explained the concept of biodiversity in Zulu: »*Impilo enhlobo nhlobo*« (‘different forms of life’). Translated this way, things were immediately much clearer to everyone. Nearly 200 people gathered in the »Baviaanskloof Mega Reserve«. The grownups discussed the link between biodiversity and clean water – and how ecosystem services can be managed in a manner making them self-supporting. Meanwhile, the children were active outdoors, learning new things about the air, water, fire and earth.

BRAZIL

22.5. Cerrado (Padre Bernardo), 15 zoos and gardens throughout the country

The Brazilians decided not to focus on the Amazon rainforest but on the Cerrado, the barren highlands in the centre of the country. These form the world’s largest agricultural frontier: soya, sugarcane, millet, maize and rice are under industrial cultivation on the cleared, burnt and ploughed fields, using vast quantities of fertiliser and diesel. »A species-rich biotope is being destroyed,« says Jussara Goyano, organiser of the Action Day in the Cerrado, »but hardly anyone knows it.« She attempted to change this by appealing to the senses. At Padre Bernardo, about 80km north of Brasilia, local women dished up delicacies made from regional plants for the Institute for Agrarian Reform: Pequi (*Caryocar brasiliense*), Macaúba (*Acrocomia aculeata*) and Babaçu (*Attalea speciosa*). Great activities also took place elsewhere in the country. Fifteen national zoos and parks invited students to participate in games and competitions about Brazilian species. In the city of Manaus in Amazonas, experts took 300



BRAZIL - ‘Little shower’ is what the Brazilians call the *Paepalanthus* plant. Its inflorescence appears to shoot out like jets of water. Photo: Ricardo Alcará



INDONESIA - Thirsty? Look out for lianas (*Tetracera*)! Photo: Patrick Oswald



SLOVAKIA - Species greetings from the Martinsky Forest: the Hairy vetch (*Vicia villosa*) with a visitor. Photo: Paner

children – many from the city’s shantytowns, the favelas – on a guided tour of the botanical gardens. It was a unique experience for the children, who rarely get to go outside their home neighbourhoods.

INDONESIA

8.5. Menua Sadap (Betung Kerihun National Park)

Menua Sadap is a village of the Dayak Iban people. It is located near Putussibau in the Betung Kerihun National Park and belongs to the Kapuas Hulu district of West Kalimantan, one of the four Indonesian provinces on the island of Borneo. It is not just the local place names that are varied but also the species, many of which are under heavy threat due to forest clearing. Forty students found quite a lot during the Action Day in Menua Sadap: centipedes as long as one’s palms, big spiders, shells, fish, mighty ferns and many tubers, leaves and berries. The Dayak Iban showed what use the finds can be put to. They pound lime out of river shells, weave baskets from vines, press textile dyes from roots – or simply fill their stomachs. Soro mahseer (*Tor tambra*) in bamboo, banana flower and Rotang palm (*Calamus tenuis*) is one of their favourite dishes.

SLOVAKIA

3.6. Martinsky Forest (Bratislava region)

Peter Fedor from the department of conservation biology at Comenius University had told the 60 students

right at the outset: A forest has many layers, it’s a three-dimensional system. Those who want to understand it need to use modern methods – and can look forward to an exciting task. Photo-electors on tree stems make it possible to examine even inside the bark. In its furrows, tiny organisms find refuge and food. Some species of thrips (*Thysanoptera*) feed on microscopic fungi. But things are no less interesting underground. Martina Doričová took samples and set up traps. Using a binocular loupe, the entomologist showed centipedes (*Chilopoda*), millipedes (*Diplopoda*), springtails (*Collembola*), Two-pronged bristletails (*Diplura*) and mites (*Acarina*). That drove up the species count to 200, much to the amazement of the students.

SPAIN

22.5. Alto Tajo Nature Reserve

The Alto Tajo Nature Reserve, roughly 200km north-east of Madrid, could also be called the land of predatory birds. It is home to 18 pairs of Golden eagles (*Aquila chrysaetos*), the rare Bonelli’s eagle (*Hieraaetus fasciatus*) as well as the Booted eagle (*Hieraaetus pennatus*), the Egyptian eagle (*Neophron percnopterus*) and the Griffon vulture (*Gyps fulvus*), which circled over the group of ornithologists as they explored the Reserve on Biodiversity Day. In all, the Reserve’s scientists identified 203 species. Among these were twelve different species of orchids. Almost a quarter of all Iberian flora grows in Alto Tajo,



SPAIN - Impressive landscape with name to match: Mirador de la Virgen de la Hoz. Photo: Paul Alan Putnam

one of the reasons that the Reserve is a favoured destination for nature-lovers in Madrid. The park administration intends to augment its ecotourism offerings. This will also benefit the roughly 40 municipalities in the region. New hotels or restaurants are sources of income for the population. And guided nature walks also bring in money.

RUSSIA

21.5. Kedrowaja Pad sanctuary

»Snake, snake!« The cry startles the students crawling through the grass on all fours searching for insects. But the all-clear signal comes just as promptly. »Calm down, kids. It is only slightly poisonous!« Nadescha Christoforowa, professor of biology at Vladivostok University, lifts her eyes only briefly from the buttercup (*Ranunculus*) in her hand and is able to identify the reptile instantly. It is a Mamushi snake (*Ancistrodon blomhoffi*). Christoforowa identifies three more snakes on this day in the Kedrowaja Pad sanctuary, a region in the far-flung reaches of Eastern Russia, nine hours by plane and another two by car away from Moscow. Kedrowaja Pad is a 60km-long strip of forest lying between the Japanese Sea and the border to China, and is home to a first-class biological rarity: the last 37 Amur leopards (*Panthera pardus orientalis*) in the

world. The students and local journalists don't get to see them face-to-face, but they are impressed by the photos of the leopards taken with the remote-control release cameras of the WWF. The big cat threatened by extinction captivates people: Students from a nearby village presented a play on the shy predator in the lead-up to the species hunt. And a bakery created a special cake for the Action Day, called 'Land of Leopards'.



RUSSIA - Hunting for species in tiger country: students of Vladivostok University analysing the forest floor using grid squares. Photo: Tatiana Grozetskaya



BENIN - In the villages of the Lama forest, biodiversity is just an arm's length away. *Photo: Mathias Affoukou*

PHILIPPINES - Happy biodiversity explorers: students on a snorkelling tour. *Photo: Myrtle Arias*

DENMARK - Not only cute, also highly endangered: the dormouse (*Muscardinus avellanarius*). *Photo: Jesper Vagn Christensen*

POLAND - Biodiversity stimulates the appetite: picnic for everyone after the excursions in the montane ecosystem of Karkonosze. *Photo: Roksana Knapik*

BENIN

4.6. Dahomey Gap (Lama forest)

Species-rich jungles are being cleared not just in South America or East Asia but also in Africa, for instance in Benin. There, the biodiversity of the Lama forest was scrutinised, an area that has become an oasis of biodiversity surrounded by farmlands. Many highly endangered species in Benin are able to survive in this sanctuary, for instance the Giant pangolin (*Manis gigantea*) and the Red-bellied monkey (*Cercopithecus erythrogaster*). And even trees such as the Butter tree (*Pentadesma butyracea*) – which the group planted in the forest. The yellowish butter that is obtained from its nuts is very popular in local cuisine. Equally important are the medicinal plants. They are used by traditional healers for providing medical care, and they are also a base for modern medicines.

PHILIPPINES

4. - 22.5. Negros Occidental

One province, three reserves and seven camps, with all of this culminating in a ceremony, would be one way to describe the Action 'Day' in the Philippines. Actually, almost the entire month of May was devoted to the topic of »Biodiversity and Development«. School-pupils, teachers and young local politicians attended ecology workshops, snorkelled searching the seabed for sea-

grasses, fish and mussels, discovered bats while looking at caves, explored mangrove forests, did bird-watching... and depicted their newly-gained insights in photography, painting and poster competitions. For most of them had never before dealt so intensively with nature. All of the results could then be admired in the provincial capital of Bacolod City, where more biodiversity experts and politicians discussed how the vital biodiversity of this hotspot could be conserved at the grand final event on the 22nd May.

DENMARK

22.5. Island of Funen

Why do species become extinct? Sometimes because humans make use of them too much, as is the case with fishing. But much more frequently, it is due to their habitat being destroyed. How this happens and what can be done to prevent it was demonstrated by the experts involved in the Day of Action on the island of Fünen. Using the examples of the dormouse (*Muscardinus avellanarius*) and the fire-bellied toad (*Bombina bombina*), both on the Red List, the participants helped with measures to improve the habitat. And here they learnt that the animals can only be saved through cross-border co-operation, in this case between Denmark, Germany, Latvia and Sweden.



INDIA - An idyll worthy of protection: the sacred mountain lakes in the Himalaya State of Sikkim. Photo: Pradip Krishen

POLAND

22.5. Jelenia Góra - Jagniątków (Karkonosze National Park)

The 56 km²-large Polish part of Karkonosze National Park is more than 50 years old. There, in the Parish of Jelenia Góra-Jagniątków, young and adult nature-lovers met for an eco-picnic on the Action Day. The team around Park Officer Roksana Knapik, an expert on moors, had organised three thematic foci: one group engaged in bird-watching, while the second one looked for plants in the forest and the third one explored the animal kingdom. Interviews before and after the excursions revealed that much had been learnt indeed! And to refresh their memories, all of the participants were given an information booklet as a farewell present.

PORTUGAL

22.5. Parque Natural da Arrábida

Carlos Sargedas is greatly impressed: »I can't remember ever having seen so much life in the sea.« The photographer had paid a visit to the Nature Park of Arrábida together with scientists and professional divers. The local diving centres benefit from its marine biodiversity, which is unique in Europe, for the colourful underwater world attracts many tourists every year. However, the tourists do not always behave considerately and thus jeopardise the sensitive ecosystem. What the diving centres can do to protect the natural underwater treasure

trove, and therefore their own income, was discussed at the workshop afterwards.

INDIA

11.5. Khangchendzonga National Park and 13.5. Gangtok (Sikkim)

A crested serpent eagle (*Spilornis cheela*) balances precariously in the moist mountain air. He's trying to get on with his predatory routine but is being strafed by an aggressive pair of tiny drongoes (*Dicrurus macrocercus*). Pema Gyaltzen of the 'Khangchendzonga Conservation Committee' has spotted the spectacle. He is part of a group of Action Day hikers in Khangchendzonga National Park on the flanks of the Himalaya massif, as are the taxonomist Lepcha Sonam and Pradip Krishen, who is well known for his bestselling guide to the trees of India's leafy capital city. Scientific names of bamboo species are being tossed among the group: *Arundinaria hookeria*, *Dendrocalamus hamiltonii*, *D. hookeri*, *D. sikkiensis*... »Look at this« says Gyaltzen, plucking a leaf from an innocuous shrub: »*Edgeworthia gardineri*, it is used for the hand-made paper on which our Buddhist texts are printed.« Stop at a vantage point overlooking the sacred Khecheopalri Lake. From this perspective, it resembles a footprint, which is revered as a mark of the goddess Tara. The lake is enclosed by a dense forest; one participant is getting all excited about »pristine nature«... Wrong! Krishen clucks at a stripe of conifers interrupting the ring

of deciduous trees (*Castanopsis hystrix*, *Quercus lamellosa*). »Those cypresses are not native, they're *Cryptomeria japonica!*« he bristles. Many things could be better in the Park, more natural. But there are some promising approaches: Eco-tourism is gradually being expanded, home-stays are becoming a new livelihood option. The unanimous request, two days later, by 90 participants of a regional planning workshop related to the Action Day in Gangtok, the provincial capital of Sikkim: »We need more of this!«

Further information

Detailed information on the Action Days in all the countries, with photos, videos, background documents and lots more can be found in the internet at www.biodiversity-day.info



The TEEB survey

Project information on the TEEB study, including all results and reports published, is provided at www.teebweb.org

Project partners

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety:

www.bmu.de

Federal Ministry for Economic Cooperation and Development:

www.bmz.de

GEO International:

www.geo-international.de

Federal Agency for Nature Conservation:

www.bfn.de

Deutsche Gesellschaft für Technische Zusammenarbeit:

www.gtz.de

kfw Entwicklungsbank:

www.kfw-entwicklungsbank.de

Convention on Biological Diversity:

www.cbd.int

United Nations Environment Programme:

www.unep.org

International Year of Biodiversity:

www.cbd.int/2010

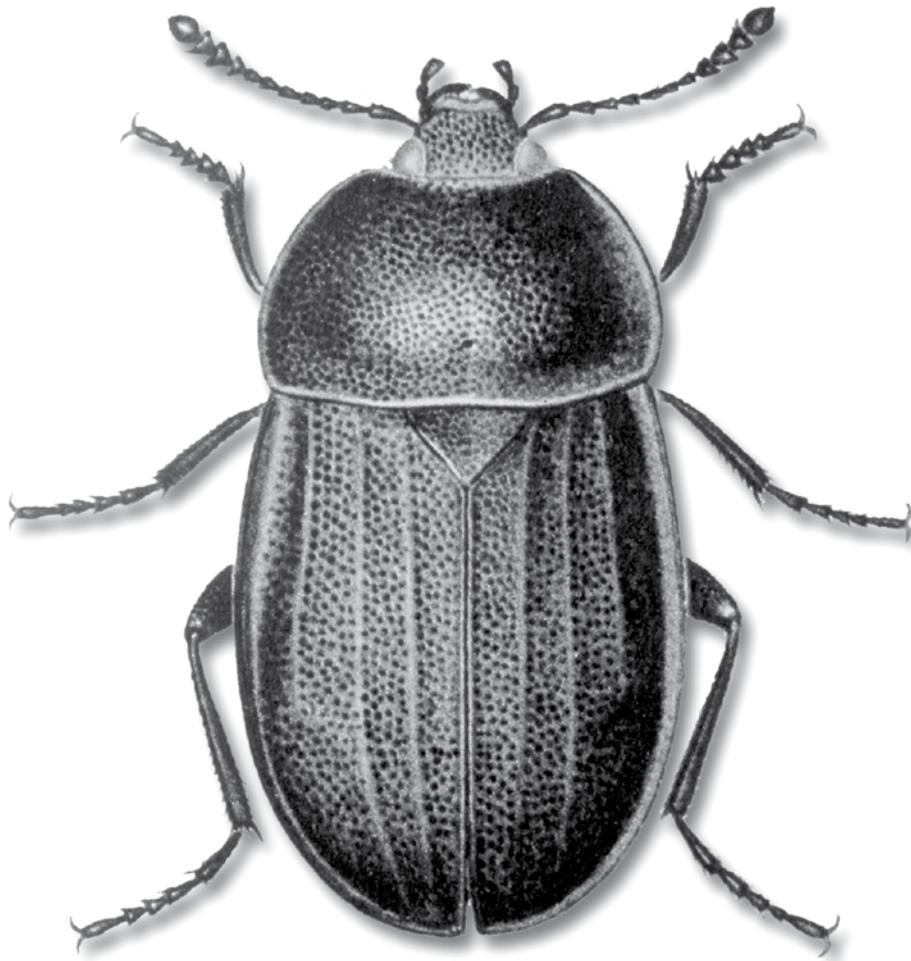
Note of thanks

The project partners would herewith like to sincerely thank the large number of people and organisations that have supported this global project.

With their efforts, their time, their unbelievable creativity, their readiness to co-operate, and, often enough, also with additional funding, they have contributed to making the concept of »biodiversity« more comprehensible to the public at large. And they have successfully shown that and why conserving the biodiversity on Earth – of species, genes and ecosystems – is so vital to all of us. Only their commitment has made it possible to create this global mosaic that so vividly illustrates the value of nature.

Let's continue to develop this exciting approach together in future.

Thank you!



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