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Species

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Species is the newsletter of the Species Survival Commission of IUCN—The World Conservation Union. Commission members, in addition to providing leadership for conservation efforts for specific plant and animal groups, contribute technical and scientific counsel to biodiversity conservation projects throughout the world. They provide advice to governments, international conventions, and conservation organizations.

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One Programme, One Voice

A joint message from the SSC Chair and Head of the IUCN Species Programme

How many species are there in the world? While we do not know with any certainty, estimates vary between 10–100 million, with 15 million species being the most widely accepted figure.

How many species are there on the IUCN Red List of Threatened Species? The 2006 Red List shows assessments for 40,177 species – with 16,119 listed as threatened with extinction. Why so few? To understand this we need to look back at the origins of the IUCN Red List.

It all began in 1963 when Sir Peter Scott first conceived of a 'register of threatened wildlife that includes definitions of degrees of threat'. For the next 30 years, with only some progressive modifications, a system of threatened species categories used in IUCN Red Data books and Red Lists was in place. Although the need to revise the categories had long been recognised, the current phase of development only began in 1989, when the Species Survival Commission (SSC) initiated a more objective, evidence (or science)-based approach. IUCN's Council formally adopted the new Red List system in 1994.

Broad and extensive use in a range of publications and listings produced by IUCN as well as by numerous governmental and non governmental organisations revealed the need for a number of improvements. Over the next few years, following a continuing process of drafting, consultation and validation IUCN Council adopted Version 3.1 of the Red List Categories and Criteria. The adoption and required application of these 'new criteria' explains the relatively low number of species on the IUCN Red List. Nonetheless, work to assess species has continued progressively, with the rate of assessments now increasing year on year.

Among decision makers, the IUCN Red List of Threatened Species remains the most reputable science-based decision making tool for conserving biodiversity on a global scale. It is widely cited in the scientific literature as the most suitable system for assessing species extinction risk and reflects years of accumulated expert knowledge. In short it is the 'gold standard' for assessing the status of the species, widely regarded as the most powerful tool for conservation planning, management and monitoring of trends.

Given the huge number of species on the planet and the relatively low numbers assessed, how can we continue to provide the information so vital for effective protection of our biodiversity? Civil society needs this information for informed conservation priority setting, and the corporate sector needs it to make appropriate development decisions.

Our answer lies in the range of tools now available or under development. Here we briefly summarise our progress with this suite of tools.

We know intuitively that the world's biodiversity is being lost rapidly. But it is important to quantify this, so far as we are able, by measuring trends in the status of biodiversity. The IUCN Red List Index has been developed to determine overall threat status (relative projected extinction risk) over time. It can be calculated for any set of species that have been fully assessed at least twice, and is based on the number of species in each IUCN Red List category and the number moving between categories, owing to genuine status changes only. The IUCN Red List Index for birds (developed in close partnership with BirdLife International) shows that there has been a steady and continuing deterioration in the threat status of the world's birds between 1998 and 2004.

The IUCN Red List Index for amphibians, based on assessments in 2004 and retrospective classifications for 1980, shows that the status of the world's amphibians has deteriorated substantially. Without this kind of information there would be no appreciation of the magnitude of the plight of these animals, and there is no doubt that it has acted as a wake up call.

Once the Global Mammal Assessment is published next year, it will be possible to calculate a Red List Index for the world's mammals – through comparison with assessments published in 1996. In addition, we hope to calculate indices for all cycads and conifers in the near future.

Our current knowledge of the status and trends of global and regional biodiversity are driven by a very small number of known species groups – mostly vertebrates. Working with the Zoological Society of London, we now aim to broaden our understanding of biodiversity. We will do this by assessing the conservation status of a representative sample of the world's poorly known species groups, such as molluscs, corals, crustaceans, insect, spiders, plants, fungi and algae. Through a stratified random sampling process, species will be chosen for assessment at regular intervals to identify trends in extinction risk. In this way we will be able to provide a scientifically robust estimate of the proportion of each group threatened with extinction. This enterprise will also increase greatly the number of species assessed and on the IUCN Red List.

All these indices will provide key knowledge inputs into the key Conventions which track the status of the world's biodiversity. The Parties to the Convention on Biological Diversity (CBD) have pledged to reduce the rate of loss of biodiversity by 2010 – the so called '2010 target'. It is only through the provision of such indices

*SSC remains a vital network,
identifying and adapting to
changing global priorities
and challenges*



by IUCN that we will have any idea of whether or not we have achieved the target. (There is more on how we can develop other species-based biodiversity indicators for the 2010 target on page 22).

We are now moving ahead steadily using a whole range of products based on the IUCN Red List of Threatened Species to build up the most complete picture possible of the state of the world's biodiversity

The CBD, through its adoption of a Global Strategy for Plant Conservation, has also called for a 'preliminary assessment of the conservation status of all known plant species due by 2010'. This ambitious target was conceived as a way of drawing together the huge amount of knowledge existing about the status of plant species – albeit not yet in the standardised form of assessments entered in the IUCN Red List. SSC's Biodiversity Assessments Sub-Committee is now actively discussing a measure to help harness this knowledge to produce preliminary assessments in such a way that would allow us to then proceed to making full assessments as and when resources became available. Such an approach would help us to partner more actively with botanical institutions that have long encouraged IUCN through the SSC to develop such an approach.

Conventions such as the CBD are implemented at national level and another clear call has come from those who wish for IUCN SSC to do more to encourage assessments of species at national and regional levels. Although many national Red Lists are now produced which correctly apply the IUCN Categories and Criteria; others of course do not.

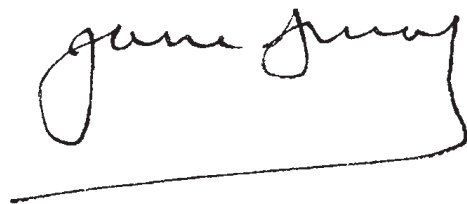
At the World Conservation Congress in 1996 a resolution requested IUCN SSC to develop guidelines for using the IUCN Red List Categories and Criteria at sub-global scales, and these were duly produced. At present, SSC can only authenticate at global level, and so our challenge here is to encourage the correct application of the system. This year we have seen the publication of *The Status and Distribution of Freshwater Fish endemic to the Mediterranean*, published in partnership with the IUCN Centre for Mediterranean Cooperation. Increasingly, we are working with IUCN's regional offices to provide specialist support from the Species Programme staff responsible for overseeing the Red List process. The resulting products will be the outcome of correct applications of our methodology. At national level discussions are now taking place about the need to initiate some kind of certification for national Red Lists so that when the categories and criteria have been applied correctly, the product would be branded accordingly.

Since 2001 a major focus of the work has been to expand the coverage of complete taxonomic group assessments in order to make the overall database more representative of biodiversity as a whole. Following birds and mammals, the first Global Amphibian Assessment was completed in 2004, two much larger projects have also begun, the Global Freshwater Species Assessment and the Global Marine Species Assessment.

So we are now moving ahead steadily using a whole range of products based on the IUCN Red List of Threatened Species to build up the most complete picture possible of the state of the world's biodiversity. In so doing, we hope to bring to the world's attention those species most in need of attention if global extinction rates are to be reduced. We would not be able to do this pioneering work without the unparalleled scientific expertise within the Species Survival Commission network, and for this we would like to express our most sincere appreciation.



Holly T. Dublin
Chair – IUCN Species Survival Commission



Jane Smart
Head – IUCN Species Programme



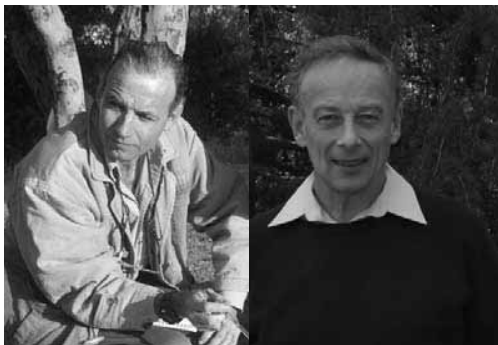
Spotlight on SSC's Unsung Heroes – Part II

This issue of *Species* is the second of a two part series dedicated to profiling the men and women who drive SSC and the global species conservation agenda. All are chairs of SSC's Specialist Groups, Task Forces or Working Groups covering species from polar bears to orchids. They devote their time and energy on a voluntary basis to coordinate the work of their respective groups of experts, ensuring their collective knowledge and expertise feeds into the broader conservation agenda. All are committed to reversing the extinction crisis by providing the science and knowledge needed for sound conservation action, for species and their habitats.

These profiles aim to highlight the expertise, enthusiasm, and commitment shown by these leaders who have an immense impact at all levels, from running grass-roots projects to influencing global conservation policy decisions. Among the profiles emerges a fascinating range of work including guiding field projects on Asian rhinos, reintroducing bison to former natural habitat, running breeding programs for tapirs, devising ways to reduce human-wildlife conflict, and advising on sustainable harvest levels for a wealth of species from crocodiles to medicinal plants.

Antelope

Co-chairs Philippe Chardonnet & David Mallon



Philippe Chardonnet (pictured left) is a wildlife veterinarian specialising in tropical countries. He spent 20 years working as a researcher with CIRAD (*Centre International de Recherche en Agronomie pour le Développement*) on field operations ranging from wildlife management to rural development in Africa, Asia, South America and the South Pacific. His research has included tropical deer farming, development of traditional livestock production, sustainable uses of wildlife, identification of rinderpest Viral disease of cattle, status in African wildlife, training of wildlife veterinarians and wildlife managers, community-based wildlife management. Philippe has also been involved in many conservation operations on specific taxa such

as the giant eland and bongo (C.A.R.), elephant (West and Central Africa), lion (West and Central Africa), jaguar (Brazil), marsh deer (Brazil), rusa deer (South-East Asia and South Pacific), Karatau argali (Kazakhstan), and Kulan (Turkmenistan). Since 2001, he has been the director of *Fondation Internationale pour la Gestion de la Faune (International Foundation for the Conservation of Wildlife)*, a Paris-based NGO devoted to wildlife conservation in developing countries.

David Mallon is a conservation biologist and Associate Lecturer in the Department of Biological Sciences at Manchester Metropolitan University, UK. He gained a master's degree in the ecology of the snow leopard and completed a doctoral thesis on Himalayan ungulates, both in Ladakh, India. The focus of his professional work lies in Central and Eastern Asia, the Indian subcontinent, and the Middle East. He has worked on Red List assessments of antelopes since 1989 and was co-compiler of Part 4 of the IUCN Antelope Action Plan, covering North Africa, the Middle East, and Asia. Recent project work has been in China (Qinghai-Tibet Plateau), Kyrgyzstan, Mongolia, Azerbaijan, and Yemen. These involved biodiversity assessment and monitoring, protected area evaluation, capacity building, and community co-management.

Members of the Antelope Specialist Group for several years, David and Philippe are combining their respec-

Combining their respective field experience to support the world expertise of antelope specialists



tive field experience to support the world expertise of antelope specialists with the intention to better involve the international community in conservation and development issues related to antelopes, such as: improving the knowledge of poorly known antelopes (e.g. bongo, giant eland), initiating and/or boosting field operations for the conservation of threatened antelopes (saiga, giant sable, Przewalski's gazelle), promoting capacity building in antelope range countries, supporting reintroductions of antelopes where extinct, increasing the integration of antelope conservation in sustainable development programmes (such as blue duiker) and making regular status assessments for the IUCN Red List of Threatened Species.

Arabian Plant

Abdulaziz Abuzinada



Dr. Abdulaziz Abuzinada's professional career has focused mainly on education and conservation. Abuzinada was awarded his PhD in Biology from the University of Durham, UK, in 1974 and full Professorship from King Saud University, KSA, in 1986. He worked at the Faculty of Science, King Saud University for 15 years in different posts, and has an extensive record of voluntary work with IUCN: he was the Vice chair of the SSC in 1993-2004, Vice president of IUCN from 2000-04 and has been the Chair of the Arabian Plant Specialist Group since 1996.

Dr. Abuzinada has been the Secretary General of the National Commission for Wildlife Conservation and Development (NCWCD) in Saudi Arabia since its establishment in 1986. In this role, he played a key part in the establishment of 16 national protected areas in Saudi Arabia.

The Arabian Plant Specialist Group (APSG), has already used IUCN criteria and provisional lists to identify some Important Plant Areas (IPAs) in Saudi Arabia and Oman. The group has also contributed to the 2006 update of the IUCN Red List of Threatened Species.

The APSG is currently drafting a strategy for plant conservation to be finalized later this year. Planned future activities include a book on the IPAs of Arabia, use of GIS in databases, publication of leaflets on criteria used to identify IPAs, and the continuation of field surveys for IPAs in other regions.

Asian Elephant

Simon Hedges, Co-chair



Simon Hedges (at right) has over 17 years of experience of wildlife conservation-related research and survey work, endangered species and protected area management, and wildlife policy formulation, including the writing and implementation of wildlife action plans. Most of these 17 years have been spent in Southeast Asia. Since 1998, he has focused on Asian Elephants, particularly on survey method development and human–elephant conflict assessment and mitigation. Over the years, Simon's work has been published in journals ranging from *Molecular Ecology*, *Conservation Biology*, and *Biological Conservation* to *Tropical Biodiversity* and *Kukila* and as chapters in several peer-reviewed books. Simon is currently employed as the Asian Elephant Coordinator for the Wildlife Conservation Society (WCS) where he oversees elephant conservation projects in Cambodia, Indonesia, Laos, Malaysia, Myanmar, and Thailand.

He has co-chaired the Asian Elephant Specialist Group since July 2005 and is also a member of the CITES Monitoring the Illegal Killing of Elephants (MIKE) Program's Dung Survey Task Force and was the lead writer and editor of the new MIKE Dung-based Elephant Survey Standards and Manual.

“Along with the other Co-Chair of the AsESG, Ajay Desai, I see the greatest priorities and challenges for the AsESG as (1) increasing awareness of the perilous status of the Asian elephant, drawing attention to how little is really known about the abundance, distribution, and biology of the species; (2) building consensus for informed and effective action (particularly to address the big three threats, namely habitat loss/degradation, human–elephant conflict, and poaching and trade in elephants and their body parts); (3) capacity-building in the range States; and (4) establishing a revitalized and effective AsESG. A major part of AsESG's work will be to help mould and guide decisions and policies affecting elephant conservation by providing sound scientific information and advice.”

Asian Wild Cattle
James Burton



James Burton has recently assumed the Chair of the Asian Wild Cattle Specialist Group. He earned a degree from Bristol University and Masters in Conservation Biology from Manchester Metropolitan University. His PhD study was on the population genetics and conservation of dwarf buffalo (Anoa) from Sulawesi Island, Indonesia (University of Edinburgh & Roslin Institute). Since 2004 he has continued to develop projects on genetics and conservation of these buffalo and other Sulawesi species in collaboration with Indonesian and European partners. This includes building strong links between *in situ* and *ex situ* conservation.

The Group's highest priority is the completion of the first AWCSG Status Survey and Action Plan before the end of this quadrennium

The AWCSG is structured in three Working Groups. Information collated by the Saola Working Group led to the recent update of the Saola Red List Status from 'Endangered' to 'Critically Endangered' since Saola was first described by science in Vu Quang (Vietnam) in the early 1990s. Members of the Working Group are focusing efforts on field conservation actions proposed at the first international Saola workshop in Vietnam in 2004, both in Vietnam and Lao PDR. The effectiveness of this Group is due to the collaboration between multiple NGOs and both national governments.

Increasing the activities of the Large Bovini and the Dwarf Buffalo Working Groups is an important goal for the coming years. The Group's highest priority is the completion of the first AWCSG Status Survey and Action Plan before the end of this quadrennium.

Cat
Co-chairs Urs Breitenmoser & Christine Breitenmoser-Würsten



Urs and Christine both received their PhD in Zoology from the University of Berne, Switzerland. Urs began studying re-introduced populations of Eurasian lynx for his MSc, while Christine worked on the impact of river regulation on riverine birds in the Alps. Since the late 1980s they have both been involved in carnivore conservation work in Switzerland and Europe. For better coordination of carnivore conservation activities, they founded KORA (Coordinated research projects for the conservation and management of carnivores in Switzerland). Urs is also a founding member of the Large Carnivore Initiative for Europe, now a SSC Working Group. Besides leading the KORA, Urs currently holds a position as an assistant professor at the veterinary faculty, where he has been involved in rabies and is teaching epidemiology. Christine has specialised in conservation genetics and is conducting a project on the impact of the bottleneck on the population genetics of reintroduced lynx populations in Europe.

The Cat SG unites 210 cat specialists from 57 countries. The IUCN Red List of Threatened Species provides a framework for the assessment of the status and conservation needs of the species.

Only a tiny fraction of free-living cats are monitored according to standardised methods, and many species have never been studied at all. The published scientific record alone is too incomplete for a sensible surveillance of the wild cats. The Cat Specialist Group is working towards a more comprehensive assessment of the status of the wild cats and consequently the better identification of conservation needs and the more effective implementation of conservation actions. The Cat SG is the only institution working worldwide for the sake of cats, which unites scientists and researchers, officers of governmental agencies, and representatives of non-governmental conservation organisations. It is therefore the appropriate body to develop standards and concepts for the surveillance, conservation, and long-term maintenance of wild cats. The goals of the Cat Specialist Group are:

- Develop and maintain a system of continued surveillance of the status, the distribution and the population dynamics of all thirty-six free-living cat species providing the baseline information needed to update the Cat Action Plan;

The Cat Specialist Group is working towards a more comprehensive assessment of the status of wild cats



- Recruit new Group members from under-represented range countries helping to advance this surveillance, and promote capacity building wherever needed;
- Identify threats to the survival of cat populations, develop concepts and strategies for their conservation, and propose actions and projects to secure their survival;
- Provide the compiled knowledge on the status, conservation priorities and strategies to all scientists, GOs and NGOs involved in cat conservation across the world and help raise awareness for the plight of free-living cats through informing the media and the general public.

Conifer

Aljos Farjon



Aljos Farjon became Chair of the Conifer Specialist Group in 1995, taking over from Chris Page who had founded and chaired the group since it was inaugurated. He began studying conifer systematics in the early 1980s with the publication of his first book, *Pines, drawings and descriptions of the genus Pinus* (1984, second edition 2005). At that time he was based at the Herbarium of the University of Utrecht in the Netherlands, where he remained until 1993 when he moved temporarily to the University of Oxford in England. Until then he had not been very active in conifer conservation matters, although he was a member of the Conifer Specialist Group. His background in conservation had more to do with nature reserves and their management in the Netherlands than with the issue of threatened species of trees on a global scale.

The Conifer Specialist Group, though it has an international membership, is a small group very much driven by a few individuals, most of whom are based in the UK. Once Aljos moved to the UK he quickly became involved and the Specialist Group published a first conservation assessment of all conifers in 1993. This was followed by more detailed assessments once the 1994 IUCN Red List Criteria were published in 1994 and he had taken over the role of Chair of the group. In 1999 the group published the Status Survey and Conservation Action Plan for Conifers. In it they reviewed the earlier assessments and published a Global Red List for Conifers.

The Conifer Specialist Group is very much an advisory body and not one that takes action on the ground in conifer conservation. However, with its links to the UK

based Conifer Conservation Programme of the Royal Botanic Garden, Edinburgh, the group can and does influence such conservation action, e.g. in relation to projects supported by the UK Darwin Initiative grants scheme. Aljos' work as a world specialist in the systematics of conifers (laid down in 8 books and over 60 papers) supports the work of the group as it provides much of the base-line information for conservation. With these two sources of information and input, the Conifer Specialist Group can achieve remarkably much for its tiny active membership.

The most recent and just completed project was to assess all the Data Deficient (DD) conifers (some 10% of the total number of taxa below genus rank or 80 species, subspecies and varieties) using herbarium specimen derived data and GIS information. Sixty of these now have an informative IUCN status, only 20 remain DD. This brings the conifers into line with the cycads as the only taxonomic groups of plants to be completely assessed. The group's main goal for the next 2-3 years will be to repeat that exercise and thereby provide SSC with the first plant group to be assessed twice with a sufficient time interval to make it a useful group for a Red List Index, alongside amphibians and birds. Conifers, despite their modest numbers, are prime candidates for this because of their worldwide distribution in almost all land-based habitats suitable for woody plants.

Crop Wild Relatives

Ehsan Dulloo, Co-chair



Ehsan Dulloo (pictured right), born in Mauritius in 1957, is currently a Senior Scientist at the International Plant Genetic Resources Institute (IPGRI) and leads IPGRI's work on the conservation and management of agricultural biodiversity. Ehsan first joined IPGRI in 1999 as a scientist at the regional office for sub-Saharan Africa, where he was responsible for IPGRI's work on germplasm conservation, with specific emphasis on the southern African region. In his current position, he is responsible for supporting partners from various parts of the world in developing strategies for the effective and efficient conservation of plant genetic resources, as well as supporting research that will improve the understanding of genetic diversity and how it is changing. Another important area of this work is the development of novel conservation methods, both in situ and ex situ, to address species that are too difficult to conserve using conventional means. One of the main projects being implemented is a global initiative in five countries on in situ conservation of crop wild relatives which aims at better conservation in protected areas through improved access to information.

Provide SSC with the first plant group to be assessed twice with a sufficient time interval to make it a useful group for a Red List Index

Before joining IPGRI, Ehsan worked for the Mauritius Wildlife Foundation, a local NGO, where he was the Project Leader for two Global Environment Facility projects on the islands of Mauritius and Rodrigues. From 1982 to 1995, he worked as Assistant Conservator of Forests in the Mauritius Forestry Service, where he was responsible for plant conservation and the scientific management of protected areas in Mauritius and other offshore islands. He helped to develop the first National Park on Mauritius – The Black River Gorges National Park. He has been very active in the conservation of threatened plants in the Mascarenes islands and has implemented many restoration projects. He has also served as a consultant to FAO and IPGRI on many occasions.

Ehsan has had a long association with IUCN and was previous chair of the Indian Ocean Plant Specialist Group (IOPSG) from 1994 to 2005. He now co-chairs the new Crop Wild relative Specialist Group (CWRSG) with Dr Nigel Maxted, University of Birmingham. The concept of CWRSG has been brewing for a number of years within the scientific community at IUCN, IPGRI and the University of

Birmingham. There has been increasing concern over the rampant loss of agro-biodiversity and its negative impacts on the foundations of sustainable agriculture, wealth creation and human well being; this is considered a global problem that requires a global approach to resolution. With the new

structuring of the SSC and the development of the new SSC programme cycle, a request was made in 2004 to the IUCN Plants Committee to address this global issue by setting up the CWRSG. The group was endorsed by the Plant Committee and the CWRSG was formalized on 26 July 2005.

Ehsan has a BSc (Hons) in Environmental Biology (1980) from Queen Mary College, University of London, and an MSc (1990) and PhD (1998) from the University of Birmingham, UK.

There has been increasing concern over the rampant loss of agro-biodiversity and its negative impacts on the foundations of sustainable agriculture

Cycad

John Donaldson



“How does a zoologist end up leading a plant specialist group? I first became interested in cycads during my PhD (in zoology) when I studied the fascinating interaction between these ancient plants and the insects that feed on them. The study inspired a great respect and affection for cycads as persistent survivors of several major extinction events, but also alerted me to the extinction crisis that now threatens the existence of more than half of the ca. 300 species.” says John.

One of the first tasks John undertook as Chair was to co-ordinate the Cycad Action Plan, including an update of the Red List status, and this confirmed that cycads are globally the most threatened group of plants. Since the publication of the Cycad Action Plan in 2003, John’s focus has been on re-organising the CSG to provide innovative and practical solutions to conservation problems. The group is strengthening its capacity in the CSG to contribute to sustainable trade and the efficient functioning of community-based nurseries, to build on the very successful network of *ex situ* collections, to develop species survival plans, and deal with an emerging problem of invasive pests on wild cycad populations.

The CSG has always had a strong scientific base, providing authoritative information on the taxonomy, classification, and biology of cycads that has proved invaluable for the development of the Action Plan, the Red Lists, analyses of trade for CITES, and input into policies.

John says, “My goal is to strengthen this foundation and to bring in young scientists with fresh ideas and new skills, especially those working in important cycad areas in Central and South America, Africa, south-east Asia, and Australia.”

The CSG’s science and conservation activities have also benefited enormously from a series of international congresses held every 3 years since 1987 and, to ensure continuity, the CSG has now established a sub-committee to convene future meetings.

John’s goal is to strengthen this foundation and to bring in young scientists with fresh ideas and new skills

Diver/Loon

Joseph J. Kerekes



Joseph Kerekes is an Emeritus Research Scientist, with Environment Canada. He is a freshwater ecologist with considerable international working experience. He conducted cutting edge research on eutrophication and acid precipitation. He was the co-author of the OECD eutrophication report in 1980 and the scientific leader of a major multi-disciplinary study to investigate the impact of acid precipitation on a super sensitive aquatic system in Eastern Canada. His primary interest is the productivity of inland waters. That led him from the relationship of algal primary production versus nutrients to the role that waterbirds play in inland waters. His current research focuses on the status of the breeding populations of the common loon in the Atlantic National Parks in Atlantic Canada.

The Diver/Loon Specialist Group is working to bring together the loon monitoring efforts of some 14 self-financing regional and local volunteer loon organizations in North America and similar groups in Sweden and the United Kingdom as well as numerous individuals in other countries. This will facilitate the improvement of the accuracy of the world loon population estimates and contribute to the development of sound policies for the protection of loons and their habitats where they are threatened.

Edentate

Gustavo A. B. da Fonseca



Dr. Gustavo A. B. da Fonseca is Executive Vice President and Chief Conservation and Science Officer at Conservation International, as well as Professor of Zoology at the Federal University of Minas Gerais in Brazil. A pioneering field biologist, Gustavo created the first Brazilian graduate program in conservation biology, and he continues to influence global conservation policy in biodiversity monitoring, corridor planning and protected area design.

As chair of the IUCN/SSC Edentate Specialist Group, Gustavo is editor of *Edentata*, the only publication dedicated to the biology, ecology and conservation of the edentates. He recently led a workshop to evaluate the status of the 31 edentate species, the results of which have been incorporated into the latest version of the IUCN Red List of Threatened Species. During the workshop it became clear how little is known about the majority of the edentates, and a great deal of field research will be necessary to better understand their distribution and ecology. But there is no time for a leisurely survey: the edentates are almost universally hunted throughout Central and South America, and the intensity of this predation – combined with the relentless loss of habitat – has already had severe impacts on many edentate species.

To help those species most in need, he oversees the Edentate Conservation Fund, a grants program which sponsors field research on threatened edentates

in the wild. The Edentate Conservation Fund has supported a variety of field projects, including a survey of the edentates of the Argentinean Chaco, a field study of armadillo ecology in the Pampas, and a genetic evaluation of silky anteaters in northeastern Brazil.

“Beyond conservation assessments and the direct support of field research, the most important aspect of conserving the edentates is educating a hungry continent about their deep importance, both ecological and evolutionary, and the need for restraint and respect in our interactions with them. This is no easy task – but it will be vital for the long-term preservation of this exceptional mammalian order.”

There is no time for a leisurely survey: the edentates are almost universally hunted throughout Central and South America

Global Tree

Sara Oldfield



“I was delighted to be appointed Chair of the Global Tree Specialist Group (GTSG) as I have been involved in IUCN/SSC activities since 1979 and remain committed to Red Listing as a basis for conservation action.” says Sara Oldfield.

Her day job since May 2006 is as Secretary General of Botanic Gardens Conservation International (BGCI) and the Secretariat of the GTSG has moved with her to Kew Gardens where BGCI has its head office. Sara's involvement in tree conservation grew out of work on the timber trade which developed after working on CITES issues at Kew in the early days of the Convention.

"I am not a very successful gardener but love visiting botanic gardens around the world as part of my job with BGCI and being with knowledgeable botanists in the field who can identify trees and other plants far more effectively than I can."

The Global Tree Specialist Group was established in 2003 with two objectives:

1. to implement and promote global Red Listing for plants
2. to provide an advisory network for the Global Trees Campaign.

"It is a very exciting time for plant conservation with the Global Strategy for Plant Conservation accepted around the world and significant progress being made towards its 16 targets to be achieved by 2010," says Sara.

Good information on the conservation status of plant species is essential for the success of the Strategy and the GTSG is continuing to work on conservation assessments for priority taxonomic groups of woody plants and also regional assessments for tree species. The group is publishing a series of preliminary assessments designed to stimulate the conservation of tree species and their habitats. BGCI has joined the Global Trees Campaign which was developed by Fauna & Flora International and UNEP-WCMC so that it can support tree conservation action around the world.

Hawaii Plant

Marie M. Bruegmann



The Hawaii Plant Specialist Group arose from the informal coalition of the Hawaii Rare Plant Restoration Group. The Group consists of over 60 participants from over 30 organizations, and meets regularly to share information about monitoring, collection, *ex situ* propagation, reintroduction and restoration projects, and to plan new initiatives. The group's mission is "to prevent the extinction of native Hawaiian plants and provide for their recovery through a cooperatively administered off-site plant conservation system in collaboration with on-site management partners to sample, propagate, and reintroduce rare plants, and to advance the preservation of native plants and their habitats through effective communication and public education."

Currently, the group implements this mission through a Plant Extinction Prevention program, which aims to manage wild populations of extremely rare (less than 50 individuals in the wild) species *in situ*, while also collecting propagules for storage and reintroduction efforts into protected habitat. The group has established this Plant Extinction Prevention program for four of the Hawaiian Islands, and plans to expand to two additional islands this year, along with an archipelago-wide coordinator to oversee the program. The

group is also developing standard protocols for these efforts that address sanitation, genetics, monitoring, measures of success, and adaptive management. The group's goal is to have all rare plant recovery efforts implementing these protocols.

The group met in May 2006 and determined five priority actions for the coming year:

- Reintroduction handbook for private landowners interested in rare plant conservation
- Database for the web to make it easier to track and share current actions
- Continue present Plant Extinction Prevention programs
- Provide simple how-to outline for permitting processes
- Mentoring program for landowners

The Group has assessed nearly 200 plant species over the last three years. This represents less than a third of the rare flora of the Hawaiian Islands. They will continue these assessments, processing the rarest species first.

Heron

Jim Kushlan



Jim Kushlan is a biologist and conservationist who has held positions as research associate at the Smithsonian Institution, senior science advisor to the United States Geological Survey, director of Patuxent Wildlife Research Center, and chair and professor of biology at The University of Mississippi. He is currently president of the American Ornithologists' Union, a member of the board of several conservation organizations including the American Bird Conservancy, and recently received the Kai-Curry Lindahl International Conservation Award from the Waterbird Society.

The Heron Specialist Group has recently completed its long term projects on the synopses of the conservation and biology of the herons of the world (published in *The Herons*, Oxford University Press 2005), and *Heron Conservation* Academic Press 2000. Its next major project is the revision of the world action plan for herons, presently available in draft, and delivery of its website to provide better information to conservation decision makers. It is currently revising its list of conservation and research projects. High priority ongoing projects that the group monitors and encourages include: inventory of White-bellied Heron in Bhutan being conducted by the Royal Society for Protection of Nature, Bhutan; evaluating declines in the white race of the Great Blue Heron in Florida, USA

The next major project is the revision of the world action plan for herons



being led by the US Fish and Wildlife Service, conservation of the White-eared Night Heron in China; evaluation of the listing status of several species and subspecies for the Red List; studies of the biology of the breeding Agami Heron; status of large bitterns throughout their ranges; biology and status of tiger herons.

Hyaena

Gus Mills



Gus Mills has studied hyaenas and other large carnivores in Southern Africa since 1972. His book 'Kalahari Hyaenas' on the behavioural ecology of the spotted and brown hyenas was published in 1990. He has also developed a survey technique for spotted hyenas using sound which is now widely used. He has been a member of the Hyaena Specialist Group since its inception in 1982 and Chair since 1991. He has recently retired as a Research Fellow from SANParks and returned to the Kgalagadi Transfrontier Park where he has started a study on cheetah behavioural ecology and conservation biology.

The Hyaenidae is a small family with only four species. As scavengers and hunters they play an important role in ecosystems but also come into conflict with people. The spotted hyaena is the most successful large carnivore in Africa and is equally adept at hunting as it is at scavenging. Brown and striped hyenas in particular can and should co-exist with people as they are predominantly scavengers. The aardwolf is an aberrant hyaena which feeds almost exclusively on termites. Although no species is currently threatened, some populations, especially of the striped hyaena, are. Hyaenas are often needlessly persecuted because of negative attitudes of people, or misunderstanding of their predatory habits. In the past the group has attempted to counter these negative attitudes by producing and distributing educational posters. "We plan to expand this campaign by developing a website which will highlight the ecological role hyaenas play, counter many of the myths associated with hyaenas and provide practical and sound advice as to how to deal with conflicts." A number of important hyaena field studies are being carried out in South Africa, Botswana, Namibia, Zimbabwe, Tanzania, Kenya, Jordan, Iran, Georgia and India. Many of these also have an educational component aimed at the local people living with the hyaenas in an attempt to promote co-existence.

Indian Ocean Islands Plant Vincent Florens



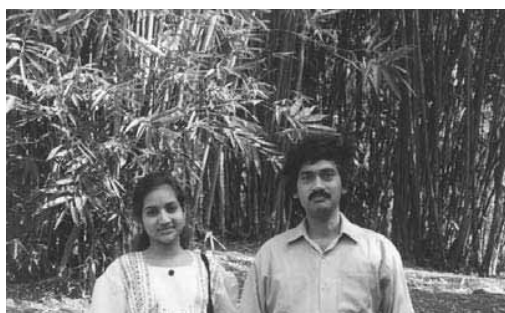
Vincent has been a Specialist Group member since 2001 and a lecturer in ecology at the Biosciences department, University of Mauritius. He started volunteering in 1987 in the Mauritian Wildlife Foundation, a local conservation NGO, where he later worked for his B.Sc. He earned a Master's degree from UEA, Norwich (UK) then worked at the Mauritius Herbarium, a great place to perfect one's plant identification skills, before joining the University where he is a tenured academic since 2003. He is doing a PhD at the Université de la Réunion. Vincent is the Chair of the National Invasive Alien Species Committee (Mauritius), where he is currently helping to produce the country's first IAS National Strategy. He is also an active member of the Wildlife and National Parks Advisory Council and the National Threatened Native Plant Committee which is reviewing the IUCN conservation status of Mauritian flowering plants. These are excellent venues to swiftly turn one's research findings into meaningful policies and measures.

Vincent also has a soft spot for land snails and discovered and described several species endemic to the region and is currently finalising a book on the land snails of the Mascarene islands with co-author Owen Griffiths, a member of the Mollusc Specialist Group. Vincent's main research interest however is the ecology and conservation of Mascarene terrestrial ecosystems with focus on the mechanisms of native forest degradation by the hordes of invasive alien species which today pose the greatest threat to the conservation of the region's native terrestrial ecosystems. His main concern is finding ways to save more than the insignificantly tiny patches of forest (0.02% of the island) currently under conservation management in Mauritius. Vincent's botanical contributions include: relocation of several plant species once believed extinct, finding new species and making additions and corrections to the island's native Flora.

His main concern is finding ways to save more than the insignificantly tiny patches of forest (0.02% of the island) currently under conservation management in Mauritius.

Indian Sub-continent Plant

M. Ahmedullah



Dr. M. Ahmedullah has a longstanding research experience of about 25 years in plant conservation. As an extension of his doctoral work he has been working on endemism in the flora of the Indian region and conservation of threatened plants. He is actively engaged in the Red Listing of the Indian plants. He has about sixty scientific publications, including an edited volume of the Red Data Book of Indian Plants that is slated for release later this year. His main focus on the professional front over the last seven years has been the establishment of the Botanic Garden of Indian Republic (BGIR), which is mandated for ex-situ conservation of endangered plants of the country.

Dr. Ahmedullah had served the ISPSG as Vice Chair for eight years and has assumed Chair of the Group recently. As Chair he has been engaged in the reconstituting process, revamping the group with necessary regional representation. The process warranted redefining the earlier programmes, setting new priorities, development of result-oriented projects and addressing major issues of fund raising. He hopes to develop a strong field assessment programme and

Strengthening the network by inducting a younger team of field botanists in a paradigm shift of focus from 'armchair conservation' to actual field-oriented conservation work

towards this end he is strengthening the network by inducting a younger team of field botanists in a paradigm shift of focus from 'armchair conservation' to actual field-oriented conservation work.

The activities of the ISPSG, with the resultant information base, are planned to influence policy decisions and conservation/protected area management plans in the sub-continent.

"Recognizing that the scope of the national legislations needs to be widened to include critically endangered plants, the Group would sound the red alert on plants that are on the brink of extinction," says Dr. Ahmedullah.

Other priorities of the Group include the development of Action Plans for the Top 50 threatened plants and for specific plant groups and recovery programmes for some prioritized threatened plants in fragile ecosystems. Habitat protection of certain endangered species with community involvement is also being cogitated upon.

Medicinal Plant

Danna J Leaman



Danna Leaman (pictured left) was a founding member of the Medicinal Plant Specialist Group (MPSG) in 1994, and has been the MPSG chair since 2000. She is currently also a member and Vice-chair of the SSC Plant Conservation Sub-committee. She holds a PhD in Biology from the University of Ottawa, Canada, for work on the human ecology of medicinal plant use in Apo Kayan Kenyah communities in Kalimantan (Indonesian Borneo). Her professional career has been a mix of work with development research agencies, conservation organizations, and consultancy work.

For the last few years, the MPSG's major policy-directed work has been a partnership with WHO, WWF, TRAFFIC, and the IUCN Wildlife Trade Programme to revise the *Guidelines on Medicinal Plant Conservation*, originally published by WHO, IUCN, and WWF in 1993. The revision

process has involved a global internet-based consultation in which more than 600 individuals and organizations have participated. Publication is anticipated for 2007. A project for the CITES Secretariat to revise the annotations for medicinal plants listed on the CITES appendices has just been completed.

Work on modes of production and consumption is directed towards the development and implementation of an International Standard for the Sustainable Wild Collection of Medicinal and Aromatic Plants (ISSC-MAP), in partnership with WWF-TRAFFIC Germany, IUCN Canada, and the German Federal Agency for Nature Conservation (BfN). A working draft for implementation trials has been developed in collaboration with a broadly-based advisory group and field consultations.

Capacity for conservation status assessment of medicinal plants is currently strongest among the South Asian and Latin American members of the MPSG. While a global assessment of the conservation status of medicinal plants will be a massive undertaking, concrete plans for regional Red List training and medicinal plant conservation status assessment projects are underway, building toward a global assessment.

A global assessment of the conservation status of medicinal plants will be a massive undertaking

Megapode René Dekker



Darryl Jones (Australian Environmental Studies, Griffith University) and René Dekker (National Museum of Natural History, Leiden) founded the Megapode Specialist Group in 1986, in response to a need to share information among megapode researchers. With only a handful of researchers, difficult access to the literature, and email non-existent, information transfer to and from remote places where

megapodes live was difficult. The Megapode Newsletter became an important stimulus and boosted megapode studies. Coordination of scientific studies and fundraising for conservation projects has become significant and resulted in an increase in young megapodes travelling to remote islands to study the rarest and least known

of the 22 species. During the 1990s megapode studies flourished from the Nicobar Islands to the Moluccas and from Australia to Niuafo'ou. Conferences were held and in 1995 *The Megapodes* was published.

The group's understanding of virtually unknown species such as the Nicobar Megapode, Maleo and Bruijn's Brush-turkey and of the behaviour of megapode chicks increased tremendously, enabling them to write up-to-date conservation plans. Stimulated by IUCN and the World Pheasant Association, five year action plans were published in 1995 and 2000, with the third edition currently under way.

Now, in 2006, the majority of the "first generation" megapodes is gradually disappearing to new jobs, more remote from hands-on conservation and research work. A new generation of young ornithologists is urgently needed to work on islands often without infrastructure and local support. There is need for long-term projects in which this new generation will no longer work as volunteers receiving travel expenses and some additional funding, but will be treated seriously, as professionals receiving local or western salaries.

Currently ten megapode species are threatened. Without structural funding the MSG will be unable to coordinate the next step which is crucial for the survival of Maleo, Bruijn's Brush-turkey, Nicobar and Polynesian Megapode, to name a few.

North American Plant Peggy Olwell



Peggy Olwell, chair of the North American Plant Specialist Group, is the Plant Conservation Program Manager for the Bureau of Land Management, a federal government agency managing more than 260 million acres of public land located in the United States. Peggy has worked in conservation biology for the past 20 years as Endangered Species Program Manager for both the National Park Service and the Bureau of Land Management. Prior to those positions Peggy worked as Conservation Program Manager for the Center for Plant Conservation. Peggy has been involved with IUCN as a member of the Plant Conservation Committee, Cactus and Succulent Specialist Working Group and the Reintroduction Working Group.

In 1994, Peggy Olwell and other U.S. botanists started the Plant Conservation Alliance (PCA), which is a public/private partnership of 10 federal government agencies and more than 250 organizational partners working on plant conservation issues throughout North America. The Plant Conservation Alliance serves as the North American Plant Specialist Group for IUCN. There are five working groups within the PCA: Alien Plant Working Group, Medicinal Plant Working Group, Native Plant Materials Development Working Group, Restoration Working Group, and Public Outreach Working Group.

Each PCA working group is composed of volunteers led by a chair. The Medicinal Plant Working Group has developed two industry symposia as a forum for medicinal plant conservation and sustainable use. The next industry symposium is scheduled for 2007. The Alien Plant Working Group has developed 57 fact sheets which are available on the web. The Native Plant Materials Development Working Group is focused on collecting native seed and working with industry and researchers to develop more ecologically appropriate native grasses and forbs for restoration. Over the past five years more than 2000 collections of native seed have been made. The Restoration Working Group helped develop a restoration experts' directory and a native plant supplier directory. The Public Outreach Working Group has a native plant events directory online and just recently developed two PCA brochures and an exhibit that have been sent to various conferences. In addition to the working groups, PCA has a grant program with the National Fish and Wildlife Foundation which has funded 225 plant conservation projects totaling more than \$11 million since 1995.

The focus for 2006–2007 of the North American Plant Specialist Group is to broaden the participation of partners across the continent. The Plant Conservation

A new generation of young ornithologists is urgently needed to work on islands often without infrastructure and local support

Alliance has worked primarily in the United States; however, we are in discussions with Canadian and Mexican botanists and the Trilateral Committee to facilitate Canadian and Mexican participation.

NatureServe has been appointed as the IUCN Red List Authority for North American Plants north of Mexico.

Orchid

Michael Fay



Michael Fay is currently Head of Genetics at the Royal Botanic Gardens, Kew, and he feels, "I have the good fortune in this post to be able to work on orchids, a group of plants that have fascinated me since childhood".

He studied Genetics for his BSc at the University College of Wales, Aberystwyth, UK, followed by a PhD on Genetic Resources in *Trifolium* at the Welsh Plant Breeding Station.

He has worked at Kew for 20 years, starting out his career there running the Micropropagation Unit where many tropical and temperate orchids were propagated, mainly from seed. The Unit houses the Sainsbury Orchid Project which has been involved in propagating threatened native orchids for reintroduction, notably *Cypripedium calceolus* and *Liparis loeselii*.

"Orchids are a group of plants that have fascinated me since childhood."

Since 1995, Mike has been involved in establishing a programme in conservation genetics at Kew, with a major focus on species from the UK, but with other projects from elsewhere. Orchids continue to be a major focus of his work, and current projects relate to conservation genetics of *Cephalanthera spp.*, *Cypripedium calceolus*, *Dactylorhiza spp.*, *Liparis loeselii*, *Neotinea ustulata*, *Orchis spp.* He also studies genome evolution in several of these groups.

He has a keen interest in the application of scientific techniques to conservation problems, and he maintains a strong working relationship with staff from the appropriate conservation agencies. Attracting funds for these studies is one of his major challenges for the future.

He has just succeeded Phil Cribb as Chair of the Orchid Specialist Group (in Spring 2006) and is slowly finding his feet in the new role!

Pelican

Alain Crivelli



Alain Crivelli has been the Chair of the Pelican Specialist Group of SSC for the Old World since 1978. His work focuses on conservation biology and particularly threatened species (bird, fish, terrapins and amphibians) within the Mediterranean region. Alain has worked extensively on colonial waterbirds, freshwater and brackish fish and ecosystem management.

With financial support of Tour du Valat Foundation, the Pelican Specialist Group has continued since 1978 to get the best picture possible of the pelicans in the Palearctic. In the old world, contrasting figures on pelicans have been observed: on one side, in south-eastern

Europe Dalmatian pelican (*Pelecanus crispus*) breeding colonies are almost all increasing significantly and Great white pelicans (*P. onocrotalus*) are more or less stable; on the other side, in the former USSR, many reports are showing that the situation of pelican breeding colonies is getting worse and numbers of breeding pairs are going down for both species. The reasons for this downward trend are mainly unstable political structure in these countries and fast degradation of wetland habitat. A comprehensive update of the status and knowledge on both species breeding in the Palearctic has been published in 2000 with the collaboration of our corresponding members.

The most challenging project for the Pelican Group for the following years will be a re-introduction project of Dalmatian pelicans in Croatia that was launched in October 2001 during a meeting at Zagreb. A steering committee to handle the re-introduction has been formed with Croatians and foreign experts. The project is being supervised by the Institute for Ornithology in Croatia (Dr Jasmina Muzinic). Since the meeting in Zagreb the project has made slow progress, mainly due to a lack of funds. Thanks to a grant from the San Diego Zoo (USA) a feasibility study has been undertaken in order to choose the location for this reintroduction (three potential sites have been chosen). This feasibility study is ongoing and will include a sociological study on how local people perceive such an introduction in their wetland.

The most challenging project for the following years will be the re-introduction of Dalmatian pelicans in Croatia

Pheasant

Co-Chairs Peter Garson and Rahul Kaul



Peter Garson (Newcastle University, UK) (featured left) has been the Chair since the group's foundation in 1993. He first saw native pheasants in the Himalayas in 1980 when he went to help with the wildlife surveys which eventually led to the declaration of the Great Himalayan National Park in the Kullu (Beas) valley in NW India. Rahul Kaul, his new co-chair, carried out the first ever intensive study of a Himalayan bird

species (the cheer pheasant *Carreus wallichii*) in India for his Ph.D. Peter had helped to build up expertise in wildlife conservation research in northern India during the 1980's, and Rahul then spent over a decade

working for the World Pheasant Association, a UK-based conservation foundation, and producing a substantial team of able young fieldworkers with a special interest in this group of birds. Ever since, Peter has been able to spend more time encouraging similar activity elsewhere in Asia, especially in China. Rahul is now Conservation Director at the Wildlife Trust of India.

Pheasants muster 50 species, of which 21 are currently on the IUCN Red List of Threatened Species, thus making this group exceptionally threatened. The combination of being large, ground based and easy to hunt, together with a strong attachment to forest and thick scrub, renders almost all species vulnerable to the twin effects of over-exploitation and habitat destruction or degradation. Global concern and a growing and active Specialist Group has so far produced two Action Plan editions (1995, 2000), with a third one now in preparation. Each one audits progress on targets set in the previous one and then specifies new priority targets for species (agreed with BirdLife International), and a fresh set of international priority projects. The production of these consensus documents by the whole membership (numbering around 100) has been extremely successful in focusing attention on international and national priorities, particularly in field science, and has resulted in a high completion rate.

The Pheasant Specialist Group is moving on by concentrating on a few key activities. Given the enormous volume of work done on the distribution, status and ecological requirements of pheasants over the past two decades or so, there is an urgent need to translate more of this basic ecological science into practical conservation solutions for threatened species. These then need to be vigorously advocated with Non-governmental and Governmental Organization (NGO and GO) partners

in the range states concerned, and the results of any action carefully monitored in order to assess its effectiveness. With a good number of long-standing members reaching positions of considerable influence in the research, NGO and GO sectors, indigenous technical advice and assistance with project funding are also becoming very effective.

"There are a lot of pheasant species in trouble out there, and helping them to survive in an overcrowded and overexploited world is going to need every convert to the cause that we can recruit!"

The need to find solutions that if possible enhance local livelihoods is perhaps most challenging where a long tradition of subsistence hunting for forest wildlife is now being overtaken by both burgeoning human populations and a developing commercial market for wild meat. Documenting the impact and causes of bushmeat extraction on pheasant populations is thus one of the group's prime concerns. Local capacity building has always been a prominent activity in this Specialist Group, and the Co-chairs involve as many members as possible in the peer review of project proposals that are submitted for endorsement. Now, members of the Co-Chairs' Advisory Committee, a group of expert gamebird biologists based in the UK, are busy with advice and training in techniques, both in situ and ex situ, and are increasingly involved in helping with the production of peer reviewed journal papers as final products from projects.

There are a lot of pheasant species in trouble out there!

Pig, Peccary & Hippo

William L. R. Oliver



William Oliver has spent almost his entire professional life working with and studying threatened species, both in the wild and in captivity. Born and raised in England, he was educated at London and Liverpool Universities, then worked briefly as an ungulate keeper and part-time education officer at Marwell Zoo, before joining the Jersey Wildlife Preservation Trust in 1974. His first field trip at the Trust's behest took him to India in 1977 to study pygmy hogs, which subsequently resulted in an invitation by the late Sir Peter Scott (then SSC Chair) to set up a new 'Pigs and Peccaries Specialist Group'. The new Group was formally launched at its inaugural meeting held to coincide with the SSC Meeting in New Delhi in February 1981. William has chaired the group since that time and has therefore also overseen the publication of the *Pigs, Peccaries & Hippos Conservation Action Plan* in 1993, the Group's merger with the former Hippos Specialist Group in 1998, and subsequent reconstitution as three 'subgroups', each with its own 'Vice-Chair' and/or

'Regional Coordinators'. These three subgroups now operate largely independently of each other, though all now contribute to the bi-annual newsletter, *Suiform Soundings*.

"It's really a team effort," says William. "We have never had much money, but the group has nonetheless orchestrated or assisted a huge array of research and practical conservation management interventions."

These included the first ever formal agreements with national governmental authorities in India and the Philippines enabling development of conservation recovery programmes for the two most threatened suids, the pygmy hog (*Sus salvanius*) and Visayan warty pig (*S. cebifrons*) – both IUCN 'Critically Endangered'.

"When the Group was formed a total of only 8 wild pig species were generally recognised. We're now up to at least 18 species and it's still rising. Moreover, many of these newly recognised taxa are not based simply on the re-appraisal of old material, but on descriptions based on new materials; viz: skulls, occasional skins, first photographs of mature animals and, most recently, genetic analyses. Whilst the resulting divisions proposed by different authors don't always line-up precisely, the emerging genetic evidence suggests we're likely to be confronted with another wave of newly recognised and demonstrably distinct taxa. All of this is both interesting and important, but also a little scary because most of these new taxa are insular forms from S. E. Asia, and often in trouble."

All this is especially true in the Philippines, where William now spends most of his time in his capacity as Director of Fauna & Flora International's 'Philippines Biodiversity Conservation Programme'. The FFI-PBCP currently comprises a suite 30+ threatened species' research and recovery projects and integrated regional biodiversity conservation programmes; all focused in this country's most severely threatened centres and sub-centres of endemism. As it happens, there are not only more endemic wild pigs in the Philippines than any other country, but they are also more seriously threatened endemic pigs in the Philippines than any other country. "We keep thinking we're making headway, but the stakes don't stop rising...."

Pinniped

Kit M. Kovacs



Kit M. Kovacs has worked with marine mammals for the past 25 plus years, commencing fieldwork in the High Arctic in 1978 while still an undergraduate. During her career she has conducted scientific studies on all northern phocid seal species including harbour, grey, harp, hooded, ringed and bearded seals. Kit has also worked with walrus, Antarctic fur seals, white

whales, narwhals and bowhead whales. Most of Kit's research career has been focussed within behavioural ecology and population biology, but she has also done collaborative work within ecophysiology, anatomy, bioenergetics and biochemistry as well. Kit was on Faculty in the Department of Biology at the University of Waterloo for a decade and then did a three year term at University Studies on Svalbard before joining the Norwegian Polar Institute as the Biodiversity Research Programme Leader seven years ago.

The first task of the renewed Seals Specialist Group will be to formulate a new Pinniped Action Plan

In addition to scientific work, Kit has always kept close ties to conservation-oriented NGO's as well as remaining active in science and education. She serves as a network leader for CAFF (Conservation of Arctic Flora and Fauna) and has recently worked intensively with ACIA (Arctic Climate Impact Assessment). Kit is also one of two biological advisers to the Polar Ambassador of Norway regarding CCAMLR (Commission for the Conservation of Antarctic Marine Living Resources).

She is just about to complete a term as the President of the International Society for Marine Mammalogy as she takes on the post of Chair of IUCN's Pinniped Specialist Group. The first task of the renewed Seals Specialist Group will be to formulate a new Pinniped Action Plan—for conservation action targets over the next 5–10 year period.

Salmonid

Co-chairs Xanthippe Augerot & Fred Whoriskey



Xanthippe Augerot (featured left), Ph.D. is the Vice President for Science at the Wild Salmon Center and the Co-Director of the State of the Salmon Consortium, based in Portland, Oregon. She coordinates the Center's research and monitoring activities across the North Pacific, working closely with the Wild Salmon Center's river-based conservation programs. Xan has many years of experience working with fellow salmon conservationists from Russia, Japan, Canada and the United States, both as a doctoral student and then as the Conservation Director for the Wild Salmon Center. As Co-Director of the State of the Salmon Consortium, Xan oversees a multidisciplinary team whose mission is to support a knowledge network across the countries of the North Pacific Rim. This will

develop and share range-wide salmon status and trend assessments and contribute to efforts to sustain salmon biodiversity in perpetuity. Xan was the lead author on the new *Atlas of Pacific Salmon*, co-published with the University of California Press.

Xan is also Co-chair of the IUCN Salmonid Specialist Group (SSG), which serves as the international scientific authority on Red Listing threatened salmonids. The goals of the IUCN SSG are three-fold:

1. Assemble the world's leading salmonid experts to broadly represent salmonid taxa.
2. Facilitate knowledge and public awareness of the plight of rare and threatened salmonid species.
3. Produce cutting edge research that leads to international policy change to protect wild salmonids *in situ*.

Fellow Co-chair Fred Whoriskey presently heads up the Research and Environment Department of the Atlantic Salmon Federation, a North American environmental NGO dedicated to wild Atlantic salmon conservation. He got his PhD degree from Laval University in Quebec City, Canada, and was a professor at McGill University in Montreal prior to accepting his present post. In addition to his work on fish and fisheries, Fred has extensive experience in Environmental Impact Assessment ranging from small local efforts to regional megaprojects. He chairs the Board of the Huntsman Marine Sciences Center, and has served as an advisor or Board Member on other large scale research initiatives including the Pacific Ocean Shelf Tracking (POST) Project, and AquaNet (a Canadian National Center of Excellence in Aquaculture). His present work is focused on researching the causes of severe downturns in Atlantic salmon populations, especially in the southern third of the species range in North America where national authorities have listed many populations as endangered.

As a newcomer to the IUCN salmonid group, he is wisely listening and learning from experienced group co-chair Xan Augerot. He hopes to help IUCN grapple with the complexities of providing both regional and global assessments for salmonid species.

In spring 2006, the SSG completed its first Red List Assessment for endangered salmonids, recommending that a giant and rare species of Asian salmonid, the Sakhalin taimen, be listed as Critically Endangered. The species, indigenous to the southern Russian Far East and Hokkaido Island, Japan, was subsequently added to the 2006 IUCN Red List of Threatened Species.

Southern African Plant Wendy Foden



Wendy currently leads the Threatened Species Programme (based at the South African National Biodiversity Institute in Pretoria) which is in the final stages of preparing an updated Red List of all ~20 000 plant species in South Africa. Her programme is also coordinating conservation assessments for reptiles, butterflies and arachnids in the region and initiatives for birds, marine organisms and various invertebrates groups are in planning stages. Wendy's particular field of interest is the impacts of climate change on biodiversity and she has recently detected clear impacts of climate-driven range shift in a tree Aloe in the arid regions of Southern Africa.

Taxonomic, Red Listing and conservation skills have been successfully developed and fostered by SABONET (the Southern African Botanical Network) over the past 9 years. However, the termination of SABONET in September 2005, has left these activities largely unsupported and uncoordinated at a regional scale. Wendy's vision for the Southern African Plant Specialist Group is to make use of the existing botanical communication and information network to promote and support updates to all plant Red Lists in the region. She recognises that a sound base of taxonomic expertise underpins Red Listing success, and this offers a significant challenge in such a botanically diverse region. The Southern African Plant Specialist Group therefore strives to foster the development of skills and capacity in taxonomic plant studies, herbarium management, botanical collection and the maintenance of *ex situ* plant collections.

While many of the challenges faced in Southern Africa are globally ubiquitous, several are regionally specific. The forum created by the Southern African Plant Specialist Group will allow members to share challenges, successes and lessons learned about Red Listing and implementing plant conservation strategies from both global and regional experiences. Wendy believes that the Southern African Plant Specialist Group network will assist in the provision and coordinated use of Red List information to help make conservation decisions and create policies that are sound and effective both at national and regional levels.

Wendy looks forward with enthusiasm to working with the Southern African Plant Specialist Group team and being a part of the SSC's Specialist Group family!

Threatened Waterfowl

Baz Hughes



The IUCN-SSC/Wetlands International Threatened Waterfowl Specialist Group was established in 1990 and since 1999 it has been coordinated by Dr. Baz Hughes of the Wildfowl & Wetlands Trust (WWT). Baz is Head of Species Conservation at WWT Slimbridge, taking responsibility for WWT's research and field conservation programmes, with a team of 18 staff. The TWSG has 950 members in 146 countries worldwide.

Over the last ten years, there has been great progress in conserving threatened waterfowl. However, action is focused in the affluent western world where conservation funding is relatively easy to come by, whilst threatened species in Eastern Europe, Asia and South America, where help is most needed, continue to dwindle.

So what issues are key to saving the world's threatened waterfowl?

Involve local people

The involvement of local communities, and their appreciation of the economic, functional and aesthetic value of wetlands and their dependent species, is crucial to any long-term wetland conservation project. We therefore need to build community involvement initiatives, led by experienced outreach officers, into our threatened species programmes.

Divert resources

The threatened waterfowl and wetlands most in need of our help are found in Eastern Europe, Asia, Africa and South America. We will therefore target our resources in these areas and convince others in the developed world to do the same. The TWSG will commit itself to ensuring long-term fund-raising and support for our priority species.

Help build expertise

We need to help our in-country partners develop their skills, expertise and capacity. We will do this by twinning WWT's long-standing UK species conservation programmes with those for globally threatened species. We will also develop capacity-building initiatives to pass on our expertise in waterbird conservation (particularly in research, monitoring, catching and ringing, and disease surveillance).

Support field conservation

WWT diverts a significant proportion of funds secured through its UK visitor centre operations into field conservation projects. The TWSG will continue to work with its national and international partners in the zoo world to increase the flow of funds to *in situ* conservation.

Focus on action on the ground

Obviously writing action plans is just the first step in the conservation process – the key to success is ensuring follow-up action on the ground. A dedicated project officer for each species is a must and WWT has recently helped fund a Red-breasted Goose Working Group Coordinator (based in Romania).

Find threatened species champions

The TWSG is working with the African-Eurasian Waterbird Agreement secretariat to establish working groups to implement action plans for the Ferruginous Duck and White-headed Duck. Our challenge is to ensure champions are in place for all threatened waterfowl.

Tortoises and Freshwater Turtles



Anders G.J. Rhodin

Dr. Anders Rhodin became sole Chair of the IUCN Tortoise and Freshwater Turtle Specialist Group (TFTSG) in 2005 after serving as Co-Chair since 2000 with John Behler, who passed away in early 2006. Dr. Rhodin is an orthopedic surgeon as well as a turtle researcher and conservationist who has pursued two parallel professional careers. Born in Sweden and emigrated to the USA in 1958, where he received an undergraduate degree from Dartmouth College, an M.D. from the University of Michigan, and post-graduate orthopedic surgical residency training at Yale University, and has been in private surgical practice in central Massachusetts since 1982. In addition, Anders has been working on turtles since the early 1970s, including several years as an Associate in Herpetology at Harvard University's Museum of Comparative Zoology, focusing primarily on chelid turtles. He is the founding Director of Chelonian Research Foundation (CRF), a philanthropic nonprofit organization established in 1992 for the production, publication, and support of worldwide turtle and tortoise research—CRF administers an annual small-grants program for turtle conservation research that has dis-

Foremost among the group's priorities is the undertaking of a Global Turtle Assessment to update the Red List status for all 300+ species

tributed numerous grants to deserving biologists and conservationists working on endangered turtles and tortoises. Anders is also the founder, editor, and co-publisher of *Chelonian Conservation and Biology*, the world's premier peer-reviewed scientific journal focusing exclusively on turtles and tortoises. Finally, Anders is also Chair of the Turtle Conservation Fund, a funding and strategizing partnership between Conservation International, the TFTSG, and the Turtle Survival Alliance.

The TFTSG is in the process of renewing and expanding its membership and currently has about 150 registered members from over 30 nations, with many more pending. Foremost among the group's priorities is the undertaking of a Global Turtle Assessment to update Red List status for all 300+ species of tortoises and freshwater turtles, the first such comprehensive review since 1996. This process is being led by Deputy Chair Peter Paul van Dijk. Several species have been reviewed already and have been updated on the IUCN Red List of Threatened Species, while many others are in the process of being evaluated through a series of Regional Status Workshops in conjunction with the Global Reptile Assessment being carried out under the auspices of the CABS Biodiversity Assessment Unit at Conservation International. The TFTSG also continues to be active in the CITES arena with on-going input into the advisability of additional listings on the Appendices. As the Asian turtle trade crisis of the last decade has come slowly under increasing control and some manageability, attention of the group is beginning to encompass the increasingly severe threats to chelonians from bushmeat trade and habitat loss in sub-Saharan Africa.

Also of importance for the international chelonian conservation community is the establishment of an annual venue and forum for the professional exchange of information, ideas, and networking. An annual chelonian conservation symposium will strengthen cohesiveness and community structure to help chelonian conservation grow as a field. The TFTSG and its Task Force, the IUCN Turtle Survival Alliance, Co-Chaired by Rick Hudson and Dwight Lawson, are working together to firmly establish such a forum, with the next annual symposium, now the 4th annual meeting, scheduled for August 10–13 in St. Louis, MO, USA.

Veterinary

Co-chairs William B. Karesh & Richard Kock



In 2000, Dr. William Karesh (pictured left) and Dr. Richard Kock became the co-chairs of the IUCN Veterinary Specialist Group (VSG). The VSG nearly doubled in size during that time by the addition of wildlife health experts, created a publicly accessible

database of its members and their areas of taxonomic, geographic, and disciplinary expertise (www.iucn-vsg.org), and has organized regionally to better serve the information needs of interested parties. The VSG has taken an active role in a number of international conferences and initiatives such as the launch of the Animal Health for the Environment and Development (AHEAD, www.wcs-ahead.org) effort now being embraced by the Southern African Development Community, a series of international meetings under the theme of "One World – One Health" (www.oneworldonehealth.org). VSG members (and the regional coordinators and Co-chairs) have been extremely active with a wide range of pressing topics today including global efforts for avian influenza surveillance in wild birds and diclofenac toxicity and vulture declines in Asia

Since its inception eighteen years ago, William Karesh has directed the Field Veterinary Program for the Wildlife Conservation Society (WCS). He has pioneered initiatives focusing attention on problems raised by the interactions among wildlife, people, and their animals. His programs cover terrain from Argentina to Zambia. The FVP is leading efforts in the Congo Basin to reduce the impact of diseases such as Ebola, measles, and tuberculosis on endangered species such as gorillas and chimpanzees, as well as humans living in the region. Last fall, he led an expedition in Mongolia discovering H5N1 highly pathogenic avian influenza in wild birds and the virus isolate was selected by WHO as a candidate for the human vaccine. The first of its kind, the WCS Field Veterinary Program fulfills the need for health-related programs and technical advice among government agencies, natural resource managers, and conservation organizations around the globe. To date, the FVP has initiated and facilitated hundreds of projects in Asia, the Americas, Africa, and Eastern Europe. Projects are linked with local government authorities as well as international bodies such as WHO and FAO.

There would be more rational action in conservation if there was more thought given to what we are doing and why

“Looking forward, we will continue to focus on the health issues that link wildlife, domestic animals, and people at local, regional, and global scales.” says William.

Dr. Richard Kock has spent 24 years in wildlife health, the last 15 in Eastern Africa. He is acutely aware of the significant discrepancy between the developed and less developed countries regarding opportunities for professional development in this field. He has worked hard to promote his colleagues in Africa, establishing networks and undertaking extensive training of veterinarians. He is currently back in UK at the Zoological Society of London.

“I believe that whilst conservation is the abstraction of the western world or preserve of the academic community and not locally driven, it is irrelevant.” says Richard. Wildlife vets are needed in every country and should bring to the scientific community the ethics and welfare standards that are essential if science is not to be just another exploitation of the natural world for the benefit of individuals. Vets can also act as a bridge between the protectionists of nature and wildlife and those seeking a living from the natural resources.

As these are game species, the final objective is to ensure their sustainable use

The method of engagement within the VSG is relaxed: the website is the hub and ensures that problems are addressed by the most experienced members. The membership uses this system as a forum for information and

communication. The co-chairs bring to the main IUCN body and others issues of importance and act as a conduit for concerns about wildlife health. This is particularly important for emerging problems, which rapidly ensures the Specialist Group is up to speed on the science. In this age where emerging disease issues are a concern, this is becoming a core of the work. For example, the avian influenza debate and pressing for banning diclofenac, the agent behind the vulture extinction crisis in South Asia.

“Something which concerns our group is getting more dynamic dialogue but in this busy increasingly communication swamped world there is rarely time for reasoned debate or so it seems. This is a pity as there would be more rational action in conservation if there was more thought given to what we are doing and why,” says Richard.

Woodcock and Snipe Yves Ferrand



Yves has been involved in Woodcock research for nearly 25 years. He completed his PhD in Zoology at the University of Montpellier, France and has been working for the *Office national de la chasse et de la faune sauvage* in France since 1981, where he is in charge of woodcock and snipe research. His research concentrates on the monitoring of these quarry species, and to this end, he has initiated and participated in the development of woodcock and snipe research in Central and Eastern Europe, mainly in Russia. He has also initiated and taken part in woodcock research in collaboration with European Universities and Research Centres focused on more specific topics like their behaviour in wintering grounds, population dynamics and genetics. Finally, an important part of this work is feed back to official organisations, naturalists and hunter associations through reports, papers and books.

Since 2002, Yves has been the Chair of the Woodcock and Snipe Specialist Group (WSSG). This Group aims to provide up-to-date knowledge on the eight woodcock and 18 snipe species in the world, as well as encouraging new research and facilitating contacts between researchers. The WSSG also plays the role of a platform for biologists, conservationists and wildlife managers interested in woodcock and snipe to share and exchange information. As these are game species, the final objective is to ensure their sustainable use. At the moment, most research activities are carried out in Europe and North America. In the future, special efforts will be made to improve knowledge of the African, South American and Asian species.

Feature:

IUCN-SSC species-based indicators for the 2010 biodiversity target

The Convention on Biological Diversity (CBD) has set a target of reducing the rate of biodiversity loss by 2010, and needs indicators by which to measure progress towards this target. The World Conservation Union (IUCN) has a key role to play in 13 of the 18 headline indicators adopted by the CBD at the 8th Conference of the Parties, in Curitiba, Brazil, this year. The data underpinning the IUCN Red List of Threatened Species will help the development of a range of indicators, such as threats to biodiversity or those tracking sustainable use. With adequate resources for indicator development and coordination of its activities, IUCN will be able to deliver a whole suite of timely, relevant and cost-effective indicators for 2010.

Species are widely accepted units of biodiversity, and thus by measuring trends in species, we can measure trends in biodiversity. Data on species distribution, density, habitat, ecology, biology and threats give insight into the drivers and impacts of biodiversity loss. Species data are therefore fundamental to measuring progress towards the 2010 target.

Current IUCN indicators for 2010

IUCN is currently involved in a whole range of headline indicators, within four of the CBD's seven focal areas (see table below). As a result of its unrivalled global data on species, much of IUCN's work on indicators occurs through the SSC. The SSC's species data are either implicitly or explicitly incorporated into many indicators. The following are some examples:

- The SSC produces the internationally recognised IUCN Red List of Threatened Species using data from its expert volunteer network and specific assessments. These data form the basis of the Red List Index and the recent Sampled Red List Index, which use a comparison of subsequent species assessments as an indicator of **change in the status of threatened species**.
- Species data from the SSC will feed into the WCPA's (World Commission on Protected Areas) measure of protected area **management effectiveness**, demonstrating the impact of conservation action on species.
- The Sustainable Use Specialist Group is one of the lead organisations developing indicators for **sustainable use** of biodiversity.
- The Invasive Species Specialist Group is working with the Global Invasive Species Programme on the indicator for **trends in invasive alien species**.
- The Medicinal Plants Specialist Group and TRAFFIC (a joint programme of IUCN and WWF) have plans to develop an indicator of biodiversity for food and medicine, which would create synergies with the sustainable use and **health and well-being of communities who depend directly on local ecosystem goods and services indicators**.

Proposed new indicators for 2010

Currently there are several clear gaps in terms of indicators, particularly those that measure threats to biodiversity. Indicators could be developed focusing on specific threat processes such as emerging diseases, climate change or habitat loss/degradation/fragmentation, based on subsets of the Red List or Sampled Red List

| Focal area | Headline Indicator | IUCN Involvement | IUCN Lead/Support |
|---|--|------------------|-------------------|
| <i>Status and trends of the components of biodiversity</i> | Trends in extent of selected biomes, ecosystems, and habitats | SSC, CEM* | Support |
| | Trends in abundance and distribution of selected species | SSC | Support |
| | Coverage of protected areas (inc. management effectiveness) | WCPA*, SSC | Lead |
| | Change in status of threatened species | SSC | Lead |
| | Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socioeconomic importance (sub-indicator) | SSC | Support |
| <i>Sustainable use</i> | Proportion of products derived from sustainable sources | SSC | Lead |
| | Trends in exploited/traded species | SSC | Lead |
| <i>Threats to biodiversity</i> | Trends in invasive alien species | SSC | Support |
| <i>Ecosystem integrity and ecosystem goods and services</i> | Water quality of freshwater ecosystems | SSC | Support |
| | Trophic integrity of other ecosystems | SSC | Support |
| | Connectivity/fragmentation of ecosystems | SSC, CEM* | Support |
| | Health and well-being of communities who depend directly on local ecosystem goods and services (sub-indicator) | SSC, CEM* | Support |
| | Biodiversity for food and medicine (sub-indicator) | SSC | Lead |

*CEM – IUCN Commission on Ecosystem Management

*WCPA – IUCN World Commission on Protected Areas

indices. Given that the methodology is well-developed and these threat processes are already explicit in the Red List database, these indicators would be relatively rapid and inexpensive to develop by 2010. IUCN could develop similar indices relating to particular taxa, biomes or ecosystems. By incorporating species data from the Red List database into the Living Planet Index, an indicator of trends in populations of vertebrates from around the globe, a more sensitive measure of changes in biodiversity could be produced. Currently the Living Planet Index covers only vertebrate species, but with improved data availability, invertebrates and plants could be included.

Resources required for IUCN-SSC's indicator development 2006-2009

Considerable resources are needed to support both the implementation of relatively well-developed indicators and the development and testing of potential new indicators. In addition, an updated species database and central coordination of indicator activities are integral to the efficient development and monitoring of all species-based indicators. Without these resources in place, there is a danger that IUCN-SSC's critical indicators work will have to be severely scaled back.

Priority indicator areas needing resources for 2006-2009

- Red List Index and Sampled Red List Index
- Coverage and effectiveness of protected areas
- Sustainable use

- Trends in invasive alien species
- Indicators of other threatening processes (e.g. climate change, emerging diseases, habitat loss)
- Trophic integrity of ecosystems
- Connectivity/fragmentation of ecosystems
- Health and well-being of communities and biodiversity for food and medicine
- Regional and national subsets of the above

The future post-2010: 'next generation' indicators

The 2010 target is just one step in an ongoing process to measure and slow the rate of biodiversity loss. As 2010 is less than four years away, we need to start thinking now about new and improved indicators for the longer term. Of particular importance are indicators that relate to sustainable use, given the recognition of the role of biodiversity in poverty alleviation and in processes beyond the CBD such as the Millennium Development Goals. Whilst the development of appropriate indicators for the sustainable use focal area has proved challenging, the SSC's Sustainable Use Specialist Group has identified several promising potential indicators of sustainable use, relating to sample commodity groups in use or trade. Work to develop these and other new indicators urgently needs to be started, and resources sourced now for this important work.

News Round-up

The 2006 IUCN Red List of Threatened Species

The 2006 update of the IUCN Red List of Threatened Species included 3,219 taxa (3,183 species) assessments/re-assessments which are the result of the work and commitment of a large number of SSC Specialist Group volunteers, and our Red List partners. Many Specialist Groups also contributed material for the Red List launch media package to help make it an outstanding success.

Full press release:

Release of the 2006 IUCN Red List of Threatened Species reveals ongoing decline of the status of plants and animals

The number of known threatened species reaches 16,119. The ranks of those facing extinction are joined by familiar species like the polar bear, hippopotamus and desert gazelles; together with ocean sharks, freshwater fish and Mediterranean flowers. Positive action has helped the white-tailed eagle and offers a glimmer of hope to Indian vultures.

784 species have been declared officially *Extinct* and a further 65 are only found in captivity or cultivation. Of the 40,177 species assessed using the IUCN Red List criteria, 16,119 are now listed as threatened with extinction. This includes one in three amphibians and a quarter of the world's coniferous trees, on top of the one in eight birds and one in four mammals known to be in jeopardy.

The 2006 IUCN Red List of Threatened Species brings into sharp focus the ongoing decline of the earth's biodiversity and the impact mankind is having upon life on earth. Widely recognized as the most authoritative assessment of the global status of plants and animals, it provides an accurate measure of progress, or lack of it, in achieving the globally agreed target to significantly reduce the current rate of biodiversity loss by 2010.

"The 2006 IUCN Red List shows a clear trend: biodiversity loss is increasing, not slowing down," said Achim Steiner, Director General of the World Conservation Union (IUCN). "The implications of this trend for the productivity and resilience of ecosystems and the lives and livelihoods of billions of people who depend on them are far-reaching. Reversing this trend is possible, as numerous conservation success stories have proven. To succeed on a global scale, we need new alliances across all sectors of society. Biodiversity cannot be saved by environmentalists alone – it must become the responsibility of everyone with the power and resources to act," he added.

Melting icecaps ...

Polar bears (*Ursus maritimus*) are set to become one of the most notable casualties of global warming. The impact of climate change is increasingly felt in polar regions, where summer sea ice is expected to decrease

by 50–100% over the next 50–100 years. Dependent upon Arctic ice-floes for hunting seals and highly specialized for life in the Arctic marine environment, polar bears are predicted to suffer more than a 30% population decline in the next 45 years. Previously listed by IUCN as a conservation dependent species, the polar bear moves into the threatened categories and has been classified as *Vulnerable*. (Clarifications on the IUCN Red List threat categories can be found in the Notes to Editors).



Polar bear *Ursus maritimus*

... dying deserts ...

Humankind's global footprint on the planet extends even to regions that would appear to be far removed from human influence. Deserts and drylands may appear relatively untouched, but their specially adapted animals and plants are also some of the rarest and most threatened. Slowly but surely deserts are being emptied of their diverse and specialized wildlife, almost unnoticed.

The main threat to desert wildlife is unregulated hunting followed by habitat degradation. The dama gazelle (*Gazella dama*) of the Sahara, already listed as *Endangered* in 2004, has suffered an 80% crash in numbers over the past 10 years because of uncontrolled hunting parties, and has been upgraded to *Critically Endangered*. Other Saharan gazelle species are also threatened and they seem destined to suffer the fate of the scimitar-horned oryx (*Oryx dammah*) and become *Extinct in the Wild*.

Asian antelopes face similar pressures. The goitered gazelle (*Gazella subgutturosa*) is widespread across the deserts and semi-deserts of central Asia and the Middle East and until a few years ago had substantial populations in Kazakhstan and Mongolia. Both countries have seen sharp declines because of habitat loss and illegal hunting for meat. The gazelle has been reclassified from *Near Threatened* to *Vulnerable*.

... and empty oceans

A key addition to the 2006 Red List of Threatened Species is the first comprehensive regional assessment of selected marine groups.

Sharks and rays are among the first marine groups to be systematically assessed, and of the 547 species listed, 20

The 2006 Red List shows a clear trend: biodiversity loss is increasing, not slowing down



% are threatened with extinction. This confirms suspicions that these mainly slow-growing species are exceptionally susceptible to over-fishing and are disappearing at an unprecedented rate across the globe.

The plight of the angel shark (*Squatina squatina*) and common skate (*Dipturus batis*), once familiar sights in European fish-markets, illustrates dramatically the recent rapid deterioration of many sharks and rays. They have all but disappeared from sale. The angel shark (upgraded from *Vulnerable* to *Critically Endangered*) has been declared extinct in the North Sea and the common skate (upgraded from *Endangered* to *Critically Endangered*) is now very scarce in the Irish Sea and southern North Sea.

As fisheries extend into ever deeper waters, the deep bottom-dwelling gulper shark (*Centrophorus granulosus*) is listed as *Vulnerable* with local population declines of up to 95%. This fishing pressure, for its meat and rich liver oil, is well beyond their reproductive capacity and sustainable fishing. Populations are destined to decline in the absence of international catch limits.

“Marine species are proving to be just as much at risk of extinction as their land-based counterparts: the desperate situation of many sharks and rays is just the tip of the iceberg,” said Craig Hilton-Taylor of the IUCN Red List Unit. “It is critical that urgent action to greatly improve management practices and implement conservation measures, such as agreed non-fishing areas, enforced mesh-size regulations and international catch limits, is taken before it is too late.”

Freshwater fish assumes top slot on extinction list

Freshwater species are not faring any better. They have suffered some of the most dramatic declines: 56% of the 252 endemic freshwater Mediterranean fish are threatened with extinction, the highest proportion of any regional freshwater fish assessment so far. Seven species, including carp relatives *Alburnus akili* in Turkey and *Telestes ukliwa* from Croatia, are now *Extinct*. Of the 564 dragonfly and damselfly species so far assessed, nearly one in three (174) are threatened, including nearly 40% of endemic Sri Lankan dragonflies.

“We need fish for food, but human activities in watersheds, through forest clearance, pollution, water abstraction and eutrophication are major factors influencing water quality and quantity. This has a major impact on freshwater species, and in turn on the wellbeing of riparian communities,” said Dr Jean-Christophe Vié, Deputy Coordinator, IUCN Species Programme.

In East Africa, human impacts on the freshwater environment threaten over one in four (28%) freshwater fish. This could have major commercial and dietary consequences for the region. For example, in Malawi, 70% of animal protein consumed comes from freshwater fish. The lake trout or Mpasa (*Opsaridium microlepis*) from Lake Malawi is fished heavily during its spawning runs upriver but has suffered a 50% decline in the past ten years, due to siltation of its spawning grounds and reduced flows due to water abstraction. It is now listed as *Endangered*.

As well as being an important source of food, freshwater ecosystems are essential for clean drinking water and sanitation. Over a billion people worldwide still do not have access to safe water. The continuing decline in wetlands and freshwater ecosystems will make it

increasingly difficult to address this need and maintain existing supplies.

With their semi-aquatic habitat, dragonflies are proving to be useful indicators of habitat quality above and below the water surface. In the densely populated Kenyan highlands, where many rivers originate, the Endangered dragonfly *Notogomphus maathaiae* of mountain forest streams is being promoted as a flagship species to create awareness for their potential as “guardians of the watershed”. Protecting its riverside forests will also help the farmers of the foothills, by guaranteeing soil stability and a steady flow of water. It is very appropriate that this dragonfly has been named in honour of African Nobel Prize winner Wangari Maathai, a tireless campaigner for the protection of the world’s natural resources in the fight against poverty.

95% decline of hippo populations in Democratic Republic of Congo – now listed as Vulnerable

Larger freshwater species, such as the common hippopotamus (*Hippopotamus amphibius*) are also in difficulty. One of Africa’s best known aquatic icons, it has been listed as threatened for the first time and is now classified as *Vulnerable*, primarily because of a catastrophic decline in the Democratic Republic of the Congo (DRC). In 1994 the DRC had the second largest population in Africa—30,000 after Zambia’s 40,000—but numbers have plummeted by 95%. The decline is due to unregulated hunting for meat and the ivory of their teeth.

“Regional conflicts and political instability in some African countries have created hardship for many of the region’s inhabitants and the impact on wildlife has been equally devastating,” said Jeffrey McNeely, IUCN Chief Scientist.

Another casualty of political instability and unrest is the much less well known pygmy hippo (*Hexaprotodon liberiensis*), restricted to only a handful of West African countries. This shy forest animal was already classified as *Vulnerable*, but illegal logging and the inability to enforce protection in core areas has pushed it into ever decreasing fragments of forest. It is now classified in the higher threat category *Endangered*.

More comprehensive picture of threatened Mediterranean plants

The 2006 Red List includes additional species from the Mediterranean region, one of the world’s 34 biodiversity hotspots with nearly 25,000 species of plants – of which 60% are found nowhere else in the world. In the Mediterranean, the pressures from urbanization, mass tourism and intensive agriculture have pushed more and more native species, like the bugloss *Anchusa crispata* and centuary *Femeniasia balearica* (both *Critically Endangered*) towards extinction. The bugloss is only known from 20 small sites and less than 2,200 mature centuary plants remain.

The IUCN Red List – a wake up call to spearhead biodiversity action

But what can be done to halt and reverse the decline of the Earth’s biodiversity on which so much of our own well-being depends?

SSC remains a vital network, identifying and adapting to changing global priorities and challenges





Pallid Squill *Scilla morrisii*

The IUCN Red List of Threatened Species acts as a wake up call to the world by focusing attention on the state of our natural environment. It has become an increasingly powerful tool for conservation planning, management, monitoring and decision-making. It is widely cited in the scientific literature as the most suitable system for assessing species extinction risk.

In addition to being the most reputable science-based decision-making tool for species conservation on a global scale, it is being more widely adopted at the national level. At least 57 countries now use national Red Lists, following IUCN criteria to focus their conservation priorities.

Conservation does work

Thanks to conservation action, the status of certain species has improved: proof that conservation does work. Following large recoveries in many European countries, the numbers of white-tailed eagles (*Haliaeetus albicilla*) doubled in the 1990s and it has been downlisted from *Near Threatened* to *Least Concern*. Enforcement of legislation to protect the species from being killed, and protective measures to address threats from habitat changes and pollution have resulted in increasing populations.

On Australia's Christmas Island, the seabird Abbott's booby (*Papadula abbotti*) was declining due to habitat clearance and an introduced invasive alien species, the yellow crazy ant (*Anoplolepis gracilipes*), which had a major impact on the island's ecology. The booby, listed as *Critically Endangered* in 2004, is recovering thanks to conservation measures and has now moved down a category to *Endangered*.

Other plants and animals highlighted in previous Red List announcements are now the focus of concerted conservation actions, which should lead to an improvement in their conservation status in the near future.

The 300 kg Mekong Giant Catfish (*Pangasianodon gigas*) of South-east Asia is one of the largest freshwater fish in the world and was listed as *Critically Endangered* in 2003. Adopted as one of four flagship species by the Mekong Wetlands Biodiversity and Sustainable Use Programme, it is the focus of regional co-operation on fisheries management issues and conservation activities.

Swift action since the dramatic 97% population crash of the Indian Vulture (*Gyps indicus*), listed as *Critically Endangered* in 2002, means that the future for this and related species is more secure. The veterinary drug that unintentionally poisoned them, diclofenac, is now banned in India. A promising substitute has been found and captive breeding assurance colonies will be used for a re-introduction programme.

Many other species, such as the humphead wrasse (*Cheilinus undulatus*) (listed as *Endangered* since 2004),

Saiga antelope (*Saiga tatarica*) (listed as *Critically Endangered* since 2002) are also the subject of concerted conservation campaigns.

"These examples show that conservation measures are making a difference," concluded Achim Steiner. "What we need is more of them. Conservation successes document that we should not be passive by-standers in the unfolding tragedy of biodiversity loss and species extinction. IUCN together with the many actors in the global conservation community will continue to advocate greater investments in biodiversity and to mobilize new coalitions across all sectors of society."

Full release package:

<http://www.iucn.org/themes/ssc/redlist2006/redlist2006.htm>

Saving the Pride of Africa: Governments pull together to conserve their lions

A new strategy to safeguard the future of the African lion in southern and eastern Africa was agreed at the conclusion of a workshop held in Johannesburg, South Africa, in January. Results will be combined with those from the west and central Africa workshop, held in 2005, to develop a continental lion conservation strategy. The meeting was attended by stakeholders from range state governments, local community representatives, lion biologists and safari hunters and convened by IUCN, notably the SSC Cat Specialist Group and IUCN Regional offices, and the Wildlife Conservation Society.

Full story:

http://www.iucn.org/en/news/archive/2006/01/13_pr_lion.htm

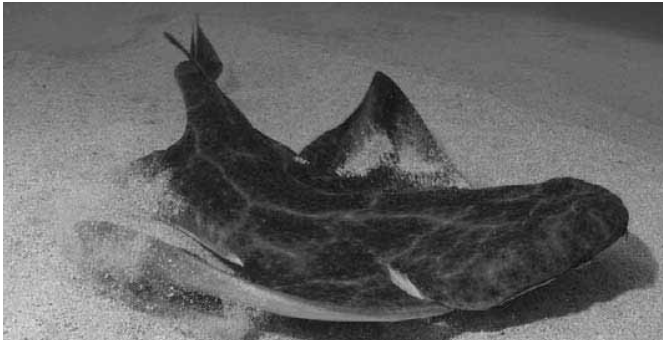
Big hopes for Endangered Asian Elephant

For the first time, the 13 Asian countries which still have wild populations of Asian elephants came together to discuss the main issues threatening its survival. Classified as "Endangered" on The IUCN Red List of Threatened Species, the population has declined over the past 50 years to an estimated 30,000–50,000 animals in the wild. The meeting, held in Kuala Lumpur, Malaysia, was convened by the Government of Malaysia, and facilitated by IUCN, in particular its Species Survival Commission (SSC). Regional consensus on ways to secure the species' future was the main aim of the meeting and the need for trans-boundary cooperation was highlighted throughout the discussions.

Full story:

http://www.iucn.org/en/news/archive/2006/01/27_pr_asian_elephant.htm

Sting in the Tale for Sharks and Rays



Angel shark *Squatina squatina*

In February, the SSC Shark Specialist Group convened a three-day expert workshop that examined the conservation status of nearly 100 species in the Northeast Atlantic and Mediterranean. Species were evaluated using the IUCN Red List Categories and Criteria, and the workshop confirms the widely-accepted notion that slow-growing sharks and rays are exceptionally vulnerable to over-fishing, and that deep-water species are being depleted at an alarming rate. Sharks and rays are now amongst Europe's most threatened animals.

Full story:

http://www.iucn.org/en/news/archive/2006/02/20_pr_sharks.htm

SSC at the 8th Conference of the Parties of the Convention on Biological Diversity

At the 8th Conference of the Parties of the Convention on Biological Diversity held in March in Curitiba, Brazil, the CBD formally adopted a set of indicators that will be used to measure progress toward the 2010 target. IUCN is playing a key role in 13 of the 18 indicators adopted, demonstrating the importance of IUCN's data, particularly data from the IUCN Red List of Threatened Species and the SSC Specialist Group network, in helping the CBD to measure the 2010 target.

Full story:

http://www.iucn.org/en/news/archive/2006/03/31_indicators.htm

See also feature in this issue: SSC Species based Indicators and the 2010 Biodiversity Target

First Red Listing Assessments of Plants in the Eastern Arc Mountains of East Africa

The Eastern Arc Mountains and Coastal Forests of Kenya and Tanzania hold at least 1,800 endemic or near endemic plant species. An inaugural Plant Red Listing Workshop for the region was held in Dar es Salaam, Tanzania, from 27 February to 3 March 2006, as a first step in the process of evaluating the conservation status of all the endemic and near endemic species in these areas. In total, an initial 176 taxa were evaluated and 123 (71%) taxa were assessed as *Threatened* (30 CR, 53 EN, 40 VU), and an additional 12 as *Near Threatened*.

Full story:

http://www.iucn.org/en/news/archive/2006/03/09_plants.htm

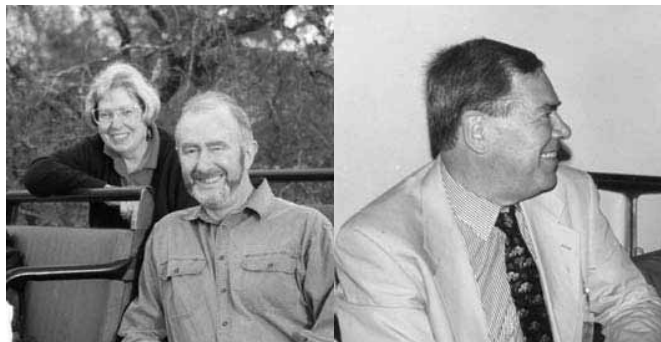
Bowhead Whales resurface near Svalbard

Scientists recently spotted several bowhead whales (*Balaena mysticetus*) near Svalbard where they have only been spotted a few times in the last few decades. Two weeks of searching on a recent research mission to the arctic waters between Greenland and the Svalbard Archipelago (Norway) was rewarded with 8 whale sightings, several of which involved multiple whales (3, 3 and 7 plus whales spotted together). The sightings give a glimmer of hope for the recovery of the "Spitsbergen stock" of bowheads, a population that is *Critically Endangered*.

Full story:

http://www.iucn.org/themes/ssc/news/2006_articles/bowhead_whales.htm

SSC Honours Two of its Dedicated Members



Rod East

Robin Sharp

The IUCN Species Survival Commission (SSC) is an exceptional network of experts who make their time and considerable talents available through more than 100 Specialist Groups and Task Forces. Realizing that the voluntary contributions of these experts often pass with little formal notice, the SSC has established an awards system to recognize and celebrate more publicly



the extraordinary contributions of its membership. The SSC Chair, Dr Holly Dublin, is pleased to announce the names of two recipients for 2006.

Rod East has been presented with the **Sir Peter Scott Award for Conservation Merit** for 2006, in recognition of his extensive involvement in the SSC as a long-standing member and Co-Chair of the Antelope Specialist Group. Among his outstanding contributions are the publication of *Antelopes: Global Survey and Regional Action Plans for Africa* south of the Sahara, the African Antelope Database 1998, the series of *Antelope Survey Updates*.

Robin Sharp, in recognition of his extensive contribution to the SSC's work on sustainable use, most notably his chairing of the European Chapter of the Sustainable Use Specialist Group, has been awarded the **Harry Messel Award for Conservation Leadership**. He has chaired the European Regional Group since its foundation in 1997, and it now has 140 members in 40 countries.

The Sir Peter Scott Award is the "senior" SSC award, dating back to 1984. It is presented to individuals in recognition of significant and long-term service to conservation through their work with the SSC or associated institutions. Achievements are recognizable as considerable and noteworthy contributions to the conservation of wild fauna and flora, especially threatened species.

The Harry Messel Award, established in 2004, recognizes exemplary service to the SSC, especially from individuals who have made a specific contribution to species conservation on the ground or through their leadership, as part of the work of an SSC Specialist Group or Task Force.

Web-feature:

http://www.iucn.org/themes/ssc/news/2006_articles/sscawards2006.htm

Note from editor: Since this web story was released, we are saddened to report that Rod East, who was suffering from a terminal illness, passed away peacefully in the company of his family on 4 August. A tribute to Rod will appear in the Antelope Specialist Group newsletter, *Gnusletter* and in the next SSC E-bulletin.

SSC Mourns Loss of one of its Rhino Champions

Thomas John Foose (1945-2006)

Tom Foose, lately Program Director for the International Rhino Foundation, unexpectedly passed away on 17 May 2006 at his home in Waynesboro, Pennsylvania, USA.

Tom dedicated his life to bridging gaps among people with diverse interests and perspectives, as well as using science to foster national and global collaborations for threatened species management. His many unforgettable characteristics; his sporty safari attire, his mischievous smile and the twinkle in his eye whenever a rhino came into view, will be missed by many.

His close association with rhinos and rhino conservation started with a Ph.D. study at the University of Chicago on Feeding Strategies of Ruminant versus Nonruminant Ungulates and he obtained his doctorate in 1982. From 1981 to 1990 he served as the Conservation Director for the American Zoo and Aquarium Association (AZA), and along with Dr. Ulie

Seal, developed the concept of the Species Survival Plan (SSP) program for endangered species. Such programs now are the cornerstone for captive species management for all regional zoo associations.

In 1991, Tom was one of the founders of International Rhino Foundation (IRF), which embodies his lifelong passion for rhino conservation, both in zoos and in nature. Tom was the IRF Program Director from 1993 until his death, and the driving force behind the IRF conservation programs that now span all species and most range states.



Tom was one of the founders of International Rhino Foundation, which embodies his lifelong passion for rhino conservation

Tom was a Program Officer of the IUCN Asian Rhino Specialist Group for as far as memory goes back. He was involved in the design and implementation of many programs, projects, strategies, action plans, including IUCN SSC Global Captive Action Plan (GCAP) and Global Animal Survival Plans (GASPs) for all species of rhino.

Over the past ten years, his primary focus was leading development and implementation of global and national conservation strategies and action plans for rhinos in Asia and Africa. Most recently, Tom initiated the Sumatran Rhino Captive Global Management and Propagation Board (GMPB), was closely involved with the design of the Vision 2020 Program for Indian Rhino in Assam and the Rhino Century Program to restore the populations of Javan and Sumatran Rhino in Indonesia to viable levels.

Nico van Strien, IRF

Specialist Group Updates

Amphibian

Key amphibian site now protected

The Amphibian Specialist Group has recently helped safeguard a critical last refuge for several highly threatened amphibian species in Colombia's Sierra Nevada de Santa Marta. Habitat loss remains the single largest threat to amphibians worldwide, so the protection of this site which supports such a high diversity of threatened species is an important step in the fight to stem the current amphibian extinction crisis.

Among 595 AZE (Alliance for Zero Extinction) sites identified worldwide (www.zeroextinction.org), Sierra Nevada de Santa Marta has the second highest number of "trigger species," – that is those species whose threat status (based on the IUCN Red List of Threatened Species) and level of endemism make a particular area a conservation priority. At least six Critically Endangered and Endangered amphibian species are found only at this site, a number of which were rediscovered during a recent survey.

Located adjacent to the Parque Nacional Natural Sierra Nevada de Santa Marta, the newly created El Dorado Nature Reserve is situated on the northwestern slope of the Sierra Nevada de Santa Marta massif. This peak reaches 5,775 meters above the nearby Caribbean Sea, making it the tallest coastal mountain in the world. Separated from the Andes mountain chain by semiarid regions, the mountain's isolation explains the high rate of endemism found within its self-contained tropical and alpine ecosystems.

Upon learning that the site was earmarked for development, three member organizations of the AZE stepped in to take action. Conservation International teamed up with the American Bird Conservancy (ABC) to help Fundación ProAves, a Colombian NGO, purchase the 1,600 acre site. The reserve is now being managed by Fundación ProAves, who plan to monitor amphibians and promote ecotourism at El Dorado, encouraging safe and sustainable enjoyment of the site's biodiversity while ensuring the survival of the threatened species it was created to protect.

Cetacean

The Pilot Yangtze Freshwater Dolphin Expedition

The primary objective of the pilot expedition was to develop a scientifically rigorous methodology for estimating the abundance and distribution of the Critically Endangered baiji (*Lipotes vexillifer*) and Endangered Yangtze River population of finless porpoise (*Neophocaena phocaenoides*). The pilot survey took place along a 235km section of the middle reaches of China's Yangtze River between the cities of Wuhan and Yueyang, in March this year. It will be followed by a full-range survey from Yichang to Shanghai (2 x 1,700 km long) in November later this year.

To develop successful conservation management plans to better protect the dolphin and its threatened freshwater habitat, scientists and decision-makers need

basic, accurate information on the number of dolphins left in the river and their distribution. In actual fact, nobody knows where the last baiji live. Only two opportunistic sightings were reported along a 1500 km stretch of river in 2005.

It was concluded that a more opportunistic sampling approach should be adopted and a computer model based analysis method used to estimate the number and distribution of remaining dolphins and porpoises. This was because the high level of shipping and navigational restrictions would make it impossible to use the standard methodology for surveying dolphins in oceanic and less industrialized river habitats.

The expedition team included staff from Tian-e-Zhou and Xinluo Baiji Reserves, local Fisheries officials, scientists and PhD students from the IHB as well as invited international cetacean survey and water quality specialists from NOAA (National Oceanic and Atmospheric Administration (US)) and EAWAG (Swiss Federal Institute for Environmental Technology). The team spent eight days aboard the IHB's KeKao No.1 research vessel.

They conducted observational surveys with binoculars and the naked eye, made acoustical recordings of ambient noise under various environmental conditions, and took water and sediment samples from the Yangtze main channel, Dongting Lake and the Shishou Oxbow Reserve. They then spent a further day at the Institute of Hydrology, reviewing and summarizing the findings of the pilot expedition. During the whole expedition, 40 sightings of finless porpoise were made and about 83 individuals were found. No baiji were sighted.

The expedition was co-organized by the Institute of Hydrobiology of the Chinese Academy of Sciences (IHB, CAS), the Changjiang Fishery Resources Administrative Committee of Ministry of Agriculture of China and the Swiss baiji.org Foundation and co-sponsored by Swiss watchmaker Swatch and pen-knife producer Victorinox. The issue of "Nature" published on June 26 introduced this expedition.

New Zealand Plant Red List Authority

Threatened Vascular Plants of New Zealand – Where are we at?

The New Zealand Plant Conservation Network (NZPCN) is the Red List Authority for New Zealand's plants. It maintains a policy of updating (on a provisional basis) threatened plant conservation assessments, partly to fulfill its IUCN responsibilities but also because many new taxa, most of which are threatened, are being recognised and these are not catered for by the latest publication in March 2004. Hopefully a formal re-listing will take place soon.

Currently the NZPCN fact sheets for Acutely Threatened list 127 taxa (57 Nationally Critical, 51 Nationally Endangered and 19 Nationally Vulnerable). In 2004 122 taxa were listed (47 as Nationally Critical,

54 as Nationally Endangered, 21 as Nationally Vulnerable). The overall numbers suggest a gain of 5 taxa, however, within the subcategories there have been 10 gains in Nationally Critical, three losses in Nationally Endangered and two in Nationally Vulnerable). What has happened?

Firstly, since 2004 there has been an impressive increase in taxonomic literature dealing with new indigenous species. Since 2004, 11 taxa have been described, all of which provisionally qualify as Acutely Threatened, indeed seven as Nationally Critical. Examples include *Myrsine umbricola* and *Pseudowintera insperata*. Thus these increases are not due to poor conservation management but in fact reflect an impressive improvement on the countries vascular plant biosystematic knowledge.

NZPCN has also chosen to list *Botrychium lunaria*, *Calochilus herbaceus* and *Hibiscus trionum* – taxa for which there is still some doubt as to the correct application of these names to some or all New Zealand examples. However, as these taxa are so severely at risk of extinction, continuing to await formal revision seems a risky conservation venture (especially for globally distributed species such as *Botrychium lunaria* and *Hibiscus trionum*), therefore NZPCN had elected to list these species under currently accepted and available names. The caveat is that for these three species the NZPCN fact sheet clearly notes the taxonomic issue.

Less pleasant has been the gain to “Acutely Threatened” of seven taxa some of which had been regarded as “Chronically Threatened” or even as “At Risk”. The

serious plight of kakabeak (*Clianthus maximus*) has been described in a previous issue of *Trilepidea*, the NZPCN newsletter. The other six taxa to move up in category are *Juncus holoschoenus* var. *holoschoenus*, *Senecio kermadecensis*, *S. lautus* var. *esperensis*, *Aciphylla dieffenbachii*, *Epilobium hirtigerum*, and *Utricularia australis*. On the positive, one of these, *Epilobium hirtigerum* has long been regarded as “Data Deficient”, its new provisional status reflects improved knowledge resulting at long last from numerous listings prompting field survey and interest.

On the flip side conservation management coupled with informed survey has bought good news for *Cortaderia turbaria* (was Nationally Critical now Nationally Endangered), *Aciphylla traversii* (was Nationally Endangered now Chronically Threatened/Gradual Decline), *Astelia chathamica* (was Nationally Endangered now Chronically Threatened/Gradual Decline), *Bulbinella modesta* (was Nationally Endangered now At Risk/Sparse), *Carex inopinata* (was Nationally Endangered now Data Deficient), *Embergeria grandifolia* (Nationally Endangered now Chronically Threatened/Serious Decline), *Boehmeria australis* subsp. *dealbata* (Nationally Endangered now At Risk/Range Restricted), *Dracophyllum longifolium* var. *septentrionale* (Nationally Vulnerable now Data Deficient), and *Leptinella featherstonii* (Nationally Vulnerable now Chronically Threatened/Gradual Decline). It should be noted that the situation for *Cortaderia turbaria* is still very volatile.

Species Programme Updates

Biodiversity Assessment Unit

Global Mammal Assessment

The Global Mammal Assessment (GMA) continues to progress well and a series of successful workshops have taken place over the past six months. These include the GMA Andes Small Mammal Workshop, covering over 500 species, held in Colombia; a squirrel workshop, India; a Philippines mammal workshop, Palawan, the Philippines; a European mammals workshop, Austria; and southeast Asian mammals, two workshops (Indonesia and USA).

Workshops are being prepared for small carnivores in Vietnam in July and Asian primates in September. Preparation for marine mammal assessments is advancing well. Tom Jefferson has been contracted to do the data preparation for pinnipeds and small cetaceans and Justin Cooke for the large whales. This will lead to two workshops in early 2007.

Some mammal data, notably Edentates, Afrotheria, Polar bear and hippos were included in the 2006 IUCN Red List of Threatened Species.

Global Amphibian Assessment

Global Amphibian Assessment work was dominated by completing the GAA update to be released in the 2006 IUCN Red List of Threatened Species. All existing species accounts were updated and corrected to incorporate very extensive taxonomic changes, most notably involving the New World tree frogs. In total, 179 species were added to the GAA, and the total number of amphibian species therefore increased to 5,918. NatureServe have been contracted to update the GAA website and the new site was launched on 4 May, to coincide with the 2006 IUCN Red List.

As part of the 2007 GAA update, workshops are currently being planned for Mesoamerican salamanders, Madagascar and Africa.

Work has started in earnest on the production of the Threatened Amphibians of the World book, to be based on the 2006 GAA. A new book on reptiles and amphibians of the Mediterranean, produced in collaboration with IUCN Mediterranean Office and the Publications Unit should be published later this year (see below).

Global Reptile Assessment

Data for the Seychelles and Mediterranean reptiles were prepared and submitted for inclusion in the 2006 IUCN Red List of Threatened Species. Editing and review of the Mexican data (covering 800 species) is continuing, following the September 2005 workshop and the plan is to include these species in the 2007 Red List.

Preparations of the data for the West Asian reptile workshop to be held in the second half of 2006 continue, and there is growing voluntary activity in two regions from the scientific networks that took part in the GAA: Melanesia / Pacific, and the Caribbean islands. Work continues with the Tortoise and Freshwater Turtle Specialist Group to prepare a funding proposal to complete the assessments of all freshwater and land turtles by early 2008.

The preparation of the book *The Status and Distribution of Reptiles and Amphibians of the Mediterranean Basin* is nearly complete and should be published later this year.

Global Marine Species Assessment

A six-year, US\$2 million core grant, via Conservation International has been awarded to the Global Marine Species Assessment (GMSA), starting in July 2006. This grant will allow a team to be built up which can focus on various activities, including support to Specialist Groups. A priority is to help the Shark Specialist Group (SSG) complete its assessment work in 2007.

The report of the GMSA strategy meeting, held in November 2005 has been completed and following up from this, possible priority taxonomic groups for assessment from both the invertebrates and the macroalgae are being identified (the priorities among the fish and the plants already having been worked out). Habitat Authority File revisions for marine and coastal habitats, collaborating were completed in May.

A meeting was held with the Census of Marine Life (CoML) Scientific Steering Committee at which the relationship between the CoML and GMSA was discussed and agreed. It was agreed that GMSA would lead on the collection and provision of conservation-related information, and would collaborate closely with the participating CoML programmes. One of these collaborations – with FishBase – is already firmly in place. FishBase has provided all of its data to IUCN which has been incorporated into the SIS. Preliminary distribution maps in GIS for high-priority fish species, where these do not already exist are also being produced, and so far, over 300 species have now been mapped.

Plant Assessments

A preliminary workshop on plants in the Eastern Arcs of Kenya and Tanzania was held in February and 123 species were listed as threatened. All the cycad assessments in the IUCN Red List of Threatened Species will be updated by the end of 2006 and support is being provided to a group of botanists in Ethiopia to do assessments of the endemic plant species in this country.



Toussaintia patriciae



Communications

IUCN New Visual Identity

The new look of *Species*, the SSC newsletter is a direct result of the implementation of the new IUCN visual identity. It is being introduced throughout 2006, and is based on the Union's statutes and resolutions, the IUCN Programme, the last External Review, and the positioning strategy approved earlier this year by Council.

The visual identity will help strengthen IUCN's profile and influence by projecting a strong, consistent image around the world. It reinforces all elements of IUCN (members, Commissions, Secretariat) working together as one dynamic, cohesive union.

The new visual identity lays out who can use the logo and how to use it, especially for members, Commissions and partners. It also provides basic design rules and guidelines for all materials from the Secretariat and Commissions, including books, websites, brochures and stationary.

Commission materials will be clearly recognizable as IUCN (especially important now that the work of all commissions is integrated with the overall IUCN Programme), but Commissions will still have their own logo and their own distinct flavour in materials. A special unique identity is being developed for the IUCN Red List and Red List products and the first publication to use this,—*The Status and Distribution of Freshwater Fish Endemic to the Mediterranean Basin*—has recently been published.

The implementation of the new visual identity will be a gradual roll-out process but already a lot of material has been produced following the new guidelines, including the SSC E-bulletin and Species Programme Concept Papers.

For more information, please contact Andrew McMullin from the Species Programme, or the IUCN Logo Helpdesk at logo@iucn.org.

SSC Website Revision

To bring the SSC website into line with the overall new IUCN visual identity and to give it a fresher look, a major revision of the SSC website was undertaken in early March. This is the first major step in an evolving process and further refinements are planned. Comments and feedback from SSC members are most welcome. Please contact Julie Griffin, who has been taking the lead in this project, at julie.griffin@iucn.org

Freshwater Biodiversity Assessment Unit

The Freshwater Biodiversity Assessment Unit of the Species Programme has had another busy and productive six months.

Publication of the Mediterranean Freshwater Fish Assessment

The Status and Distribution of Freshwater Fish Endemic to the Mediterranean Basin report was published in early 2006, as the culmination of a workshop held in collaboration with the IUCN Centre for Mediterranean Cooperation. The report details the main threats to species and highlights centres of species diversity and threats for the 253 freshwater fish species endemic to the region. This report is the first of a "new look" future

series of IUCN SSC regional biodiversity assessments. (http://www.iucn.org/themes/ssc/our_work/freshwater/regional_madagascar.htm).

Pan- Africa Freshwater Biodiversity Assessment

The EC funded Pan-Africa Freshwater Biodiversity Assessment project is progressing well. With our partners, Wetlands International and the South Africa Institute for Aquatic Biodiversity (SAIAB), we are running two regional workshops, one in South Africa in June and one in Ghana in July to evaluate the assessments of nearly 2,000 freshwater species that have been undertaken over the past 8 months. The Freshwater biodiversity assessment programme has also worked with the Zoological Society for London towards the development of a 'National Red List of Mongolia Freshwater Fish', which will soon be published.

Strengthening pro-poor wetland conservation using integrated biodiversity and livelihood assessments

The other major initiative is the Darwin Funded Project which is developing a methodology for integration of the three disciplines of biodiversity, livelihoods and economic valuation with a focus on wetland conservation. We hope to use the outputs from this project to further develop the "livelihoods" and "use" components of the SIS. The project is focused on two demonstration sites at the Stung Treng Ramsar site (Cambodia) and the Rufiji floodplain, Tanzania, in partnership with the IUCN regional programmes and the University of East Anglia, UK. The project was initiated in October 2005 and held its first two workshops and field trips at each of the sites in March and May through which the project was introduced to the partners and the implementation plans were formalised. Activities in both countries are now moving ahead.

Global Freshwater Fish Specialist Group

The IUCN Freshwater Fish Specialist Group had its second meeting in March this year, held with the support of Chester Zoo. The management structure of the group has now been formalised with a number of regional vice-chairs appointed and the priority objectives of the group have been confirmed and activities are underway to raise funds for a Global Freshwater Fish Assessment.

2006 IUCN Red List of Threatened Species

Finally, as a result of the previous years work, in collaboration with many SSC members, a large number of new freshwater taxa have joined the 2006 IUCN Red List thus helping to raise awareness of the serious threats to these species.

Red List Unit

A major element of work over the first six months of this year has been the preparation and launch of the 2006 update of The IUCN Red List of Threatened Species. Staff also attended a series of Red List assessment workshops, including Sharks of the NE Atlantic, in Peterborough, UK, and plants in the Eastern Arc Mountains of Kenya/Tanzania.

2006 IUCN Red List of Threatened



Species update 4 May 2006

The total number of reassessments/new assessments is 3,219 taxa (3,183 species). The total number of species re-assessed is 871, of which 172 have been uplisted, 139 downlisted, 33 have moved to Data Deficient and 527 haven't changed. There have been 59 genuine changes in status (as opposed to changes due to improved knowledge or taxonomic changes) but only five improvements – all birds.

The main groups assessed for the 2006 update were birds (2005 and 2006 assessments), amphibians, Mediterranean species (freshwater fish, reptiles and island plants), dragonflies and damselflies, mollusks, East African freshwater fish, sharks, groupers and wrasse, salmonids and certain mammals, notably Afrotheria, antelopes, some cetaceans, hippopotamus and polar bear. In addition to Mediterranean island plants, some cycads and conifers were also assessed. See full press release on: http://www.iucn.org/en/news/archive/2006/05/02_pr_red_list_en.htm

IUCN Red List generates more visits to IUCN website

The press release was released on 2 May, due to the embargo being broken on 30 April by a UK Sunday newspaper, although the 2006 database was not available until 4 May. Press coverage was maintained for most of the week, with excellent coverage worldwide with the involvement of IUCN regional and country offices.

The number of visits to the IUCN website increased 6 fold during the release and the number of hits on the Red List website was over 2 million for a nine day period compared to a monthly average of 2.5 million.

Main changes to Red List website

The database now includes over 7,000 distribution maps and over 2,000 searchable synonyms. Taxonomic notes have been included and range and population information has been split for birds and plants.

The server had to be moved to a commercial data centre earlier in the year.

Species Information Service

Progress continues on the Species Information Service, which is being developed to manage the vast amount of information gathered via Red List species assessments and other global and regional species assessment projects. Early SIS developments are focusing on the development and implementation of effective, powerful tools for collecting and managing species information at the field level, as well as the data management functions required at the Red List unit level to obtain peer reviews, compile, and publish the IUCN Red List of Threatened Species.

The SIS Data Entry Module (DEM) has undergone a complete renovation and is now ready for release to SSC groups and other partners doing Red List assessments. Besides enhancements to the installation, usability, and data management features of the application, the new DEM also incorporates data collection on livelihoods, use, ecosystem services, and more.

In addition to an upgraded Data Entry Module, SIS, in partnership with Conservation International, has renovated the Red List management database that is used to compile, verify, and prepare all submitted Red List

assessments for publication in the IUCN Red List of Threatened Species. The combination of the new DEM and new Red List database mark the completion of SIS Version 1.0, which is a major step in the realization of the Species Information Service. This first step allows us to now move towards an even more integrated, powerful, accessible version of SIS to manage and disseminate species information.

If you would like more information on the new Data Entry Module or need to download and install it to complete Red List assessments, please send an e-mail to sistechsupport@iucn.org.

The Biodiversity Use and Trade (Wildlife Trade) Unit

The overall goal of the unit is to promote the conservation of wild species subject to trade by assessing the effect of trade on the status of species, and generating appropriate recommendations and conservation strategies.

The Programme, with TRAFFIC, were contracted by the CITES Secretariat to carry out a review of Significant Trade for selected species earlier this year. The Review assessed status and trade information for 23 CITES-listed animal and plant species with conclusions per range State on whether trade is detrimental or not. SSC Specialist Groups have provided invaluable input. Results were presented and discussed at the CITES Plants and Animals Committee meetings in July 2006. Two new projects funded by CITES have been initiated: 'Identification of Acipenseriformes species in trade' (in collaboration with the Sturgeon Specialist Group) and 'Making Non-Detriment Findings for trade in *Ptyas mucosus* (Oriental Rat Snake)' (with TRAFFIC South East Asia).

A new initiative is being developed to gather and analyse data on species use and trade, and on the links of such use to human livelihoods. Understanding the importance of species to livelihoods will influence to what extent policy makers prioritize conservation of species which determine livelihood strategies for many, particularly the rural poor. The Biodiversity Use and Trade (Wildlife Trade) Unit has been instrumental in the development of an extensive data entry module, which will become part of the IUCN Species Programme's Biodiversity Assessments. This new area of the Assessments will become a key focus for our work in the future.

End Notes

Publications

The Status and Distribution of Freshwater Fish Endemic to the Mediterranean Basin



The first in a series of regional Mediterranean assessments, this publication has evaluated 253 endemic freshwater fish, of which 56% are threatened with extinction. This is the highest proportion for any regional species assessment undertaken so far. The report reinforces the idea that biodiversity has been lost in the Mediterranean, and more actions are needed to meet the agreed global target to significantly reduce the rate of biodiversity loss by 2010. It has been compiled and edited by Kevin Smith and William Darwall of the Species

Programme Freshwater Biodiversity Assessment Unit with support from the IUCN Centre for Mediterranean Cooperation

Full details:

www.iucn.org/themes/ssc/news/2006_articles/med_fufish_pub.htm

Full report:

<http://iucn.org/places/medoffice/cd%5Ffufish/>

DNA and Tissue Banking for Biodiversity and Conservation

A joint publication between IUCN and the Royal Botanic Gardens, Kew, arising from a collaborative project on DNA banking, phylogeny and conservation of the South African flora. *DNA and Tissue Banking for Biodiversity and Conservation* provides the practical and legislative framework necessary to establish more DNA banks and is essential reading for anyone wishing to understand the application of genetic technologies to conservation. For more information see: www.kew.org

The Growing Influence of the IUCN Red List of Threatened Species

Two articles published recently in peer-reviewed journals cite the importance of the IUCN Red List of Threatened Species for conservation. The first, *The Value of the IUCN Red List for Conservation*, published in *Trends in Ecology and Evolution* (Vol. 21 No.2 February 2006) highlights how the Red List, in conjunction with the comprehensive data compiled to support it, has become an increasingly powerful tool for conservation planning, management, monitoring and decision making. The second paper, *An Evaluation of Threatened Species Categorization Systems Used on the American Continent* published in *Conservation Biology*, (Vol. 20, No. 1, 14–27) evaluated 25 systems from 20 countries and concludes that “the current World Conservation Union system is the most suitable for

assessing species extinction risk.” In the scientific debate on the benefits and drawbacks of the use of indicators and threatened species lists, the merits of the IUCN Red List Index are explained in *Biodiversity Indicators based on Trends in Conservation Status: Strengths of the IUCN Red List Index* published in *Conservation Biology* (Vol. 20 no2 April 2006)

Species Staff Comings and Goings

Petra Crofton of the Species Programme’s Wildlife Trade Unit left IUCN in June after two and half years to move with her family to Gloucestershire in the west of England.

Julie Griffin is the new Species Programme intern based at IUCN headquarters. Julie has a degree in environmental science and policy from Duke University (US) and two years’ experience with Project WILD, leading wilderness initiatives and training.

Michael Hoffmann, a South African national, has joined the Species Programme at the Biodiversity Assessment Unit in Washington DC. Prior to joining IUCN, Mike spent three years based in the Center for Applied Biodiversity Science at Conservation International.

Vineet Katariya has joined the Species Programme working in the Cambridge, UK office. She has a dual role, working both on Species Information Service (SIS) technical support and using her extensive GIS skills to help SIS organize all the spatial data generated from (and needed for) species assessments.

Hugo Ruiz Lozano started as the new Species Programme Finance Assistant on 27 March. Hugo is from Mexico. He is fluent in all IUCN official languages. He has a law degree and has experience in accounting and finance. He will deal mainly with payments, donor and consultant contracts, reports, and will keep the Knowledge Network updated.

Carol Poole has joined as Assistant to the SSC Chair, and started on 2 March. Carol has a biological undergraduate background, an MPhil in Environmental Management and a number of years work experience to stand her in good stead for her new role.

Amy Spriggs former SSC Chair’s Assistant has left to take up a new post with Conservation International in Cape Town, SA and we wish her every success in her new job.

Helen Temple started on 20 March as the Red List Assistant working on European mammals, based at the Red List Office in Cambridge. She has a PhD from studying the ecology, cooperative breeding and conservation of the White-breasted Thrasher, a rare and endangered bird restricted to two small West Indian islands.

Photo Credits

- Cover Fungia di Basiliscu (*Pleurotus nebroden-sis*) entered the 2006 Red List as Critically Endangered and is currently the only mushroom on the Red List. This mushroom only occurs in northern Sicily, growing in scattered localities in the Madonie Mountains. It is estimated that less than 250 individuals reach maturity each year. The species has been sought-after since ancient times, and today remains a prized species.
By Giuseppe Venturella
- Page 22 Chinese yew *Taxus chinensis*
By R. Nicholson
- Page 24 Polar bear *Ursus maritimus*
By Robert and Carolyn Buchanan
- Page 26 Pallid squill *Scilla morrisii*
By Charalambos Christodoulou
- Page 27 Angel shark *Squatina squatina*
By Simon Rogerson
- Page 31 *Toussaintia patriciae*
By W.R. Luke

Contributions to *Species 46* should be sent to Team Species by 17 October 2006.
Email: species@iucn.org

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Hard copies of *Species* are available only upon request. SSC members are encouraged to receive the SSC monthly electronic news bulletin. Please contact Team Species at species@iucn.org for more information. Species is available electronically at: www.iucn.org/themes/ssc/