



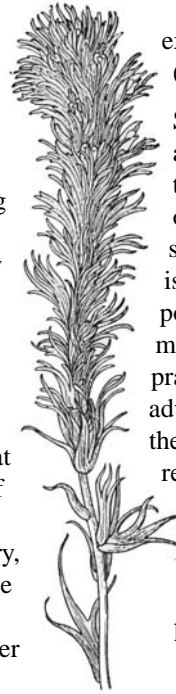
## Say Goodbye to the Rhino (logo, that is)

Choosing a logo is a big deal. A logo is the symbol by which people identify an organization and recognize a group at a glance. Although it became the de facto SCB logo, the line drawing of the rhinoceros with a cattle egret on its back was never a strategic choice. In fact, it was just a copyright-free image I used on a re-launch of SCB's web site in 1996—just an endearing visual. Ideally, the imagery chosen for a logo should transcend cultures and languages (not to mention species) such that at least the essence of meaning of the logo is transmitted to any viewer. Or as one of the fathers of analytical psychology, Carl Jung, might suggest, a symbol must appeal to some part of the human psyche to transcend a single group of people. This is a difficult task. More than one organization has spent hundreds of

see **Logo**, page 3

## Balancing sound science and conservation action by Stephen H. Schneider

I am deeply honored to be receiving the LaRoe award this year, particularly since I shared many values in common with Ted LaRoe. Ted and I met in 1990, when he asked me to give a keynote talk at an ahead-of-its-time interdisciplinary meeting on climate and wildlife. We both stressed sound science as essential, and we equally stressed effective conservation and management. That raises questions about how scientists can enter the murky worlds of popularization, advocacy, and political negotiations—all of which are essential to get action for conservation goals—while at the same time preserving the soundness of the science—mentioning all the uncertainties, missing data, deficient theory, and so forth. How can we be both effective and true to the complexities? Having attempted this juggling act many times over the past three decades, let me offer some



experiences and suggestions (e.g., Schneider 2002a).

Scientists tend to think that advocacy based on a “win for the client” mentality, which often means deliberately selecting “facts” out of context, is unethical. Yet courts of law, political forums, and much of the media are steeped in just such practices. Unaware of how the advocacy game is played outside the cloister of the scientific peer review culture, some scientists, perhaps naively, stumble into a pitfall of being labeled as an advocate lobbying for a special interest—even if they had no such intention.

see **Schneider**, page 12

## SCB strives to increase international capacity

Strategic planning for the future of the Society for Conservation Biology is an iterative and frequently challenging process. The mission of our international society—developing the scientific and technical means for the protection, maintenance, and restoration of Earth's biological diversity—is clear. But there is no obvious strategy for realizing this mission. As a society, we struggle continuously to prioritize objectives, initiatives, and activities in a manner that not only is sensitive to regional and disciplinary opportunities and constraints but also is fiscally responsible.

The formation of international sections and its influence on future SCB activities has become a major focus of our society during the past two years. SCB's Board of Governors met in Tuscon, Arizona, USA from 28–30 March to chart a course for strengthening our programs and services in order to enhance the international capacity

of conservation biology. Twenty-nine members of the Board and staff, including representatives from six of our seven international sections, participated in the intense round of discussions. First, our section presidents, committee chairs, and editors presented short reports and ideas. Building on this strong foundation, working groups examined how five major SCB program areas—annual meetings, publications, education, student affairs, and policy—could be adapted to address the needs and objectives of our members around the world. Issues of equity were paramount in our debates. While we are determined to facilitate global awareness and accessibility of SCB's services and products, we do not want to neglect the critical base of members that has supported SCB throughout its 17-year history. As a board, we wrestle with balancing the location of annual meetings, the

see **Capacity**, page 16

### NEW • Student Affairs Committee

The mission of the Student Awards Committee has been broadened; it is now the Student Affairs Committee. The purpose of this committee is to promote a supportive environment for undergraduate and graduate students in SCB. The committee will accomplish this through a variety of means, including the student awards program, encouraging student participation in meetings, and creating opportunities for interaction among students and professionals. We will coordinate with each of the sections and chapters to ensure sharing of ideas and opportunities. If you are interested in learning more about the activities of this committee or wish to participate, contact committee chair Aram Calhoun, calhoun@maine.edu.

# Keeping records: a family tradition of science and sensitivity

## by Nina Leopold Bradley

In 1935, when Aldo Leopold purchased his Sand County farm, “our refuge from too much modernity,” he and his family began keeping records of seasonal events on the site. As we became more and more familiar with the place, we found more to anticipate and to record in our journal. At that time, of course, climate change was not a part of our thinking. However, with the advent of possible global warming in the subsequent decades, our phenological tradition took on a substantial scientific direction.

Aldo Leopold observed that the events comprising the annual cycle recur year after year in a regular order. He wrote, “A year to year record of this order is a record of the rates at which solar energy flows to and through living things. They are the arteries of the land. By tracing their responses to the sun, phenology may eventually shed some light on that ultimate enigma, the land’s inner workings.”

After twelve years of observation, Aldo Leopold published a scientific paper in *Ecological Monographs*, “A phenological record for Sauk and Dane counties, Wisconsin 1935–45.” In the paper, he compared 328 seasonal events at two stations that were 33 miles apart. His primary findings were

- Spring events during the decade 1935–1945 were two weeks earlier than the same events at the same station in 1881–1885 (Trelease 1884).
- Events at the northern station occurred three days later in spring than at the southern station. The difference in phenology between the two stations was least in early spring and greatest in midsummer.
- Some plants showed little variability in date of first bloom, perhaps suggesting that their phenology is governed more by photoperiod than by weather.
- Bird migration responded to changes in temperature much more quickly than did flowering of plants.

Comparing Leopold’s data from 1936–1947 to data collected at the Sand County Farm from 1976–1998, a 61-year interval, Nina and Carl Leopold published a scientific paper, “Phenological changes reflect climate change in Wisconsin.” Our statistical analysis of 55 spring events revealed that 18 of the events occurred up to two weeks earlier in 1998 than in the 1930s and 1940s (1.2 days per decade), and therefore appeared to be responding to increases in temperature.

Our data also showed that timing of 20 of the events showed no statistically significant change, therefore suggesting that some

species are changing their life cycles in response to climate change while others are not.

Terry Root (2003) has written, “in response to global warming, some species are moving north in the northern hemisphere and some are moving south in the southern hemisphere; and they are moving up in elevation.” She has stated that “morphological traits in species have changed in response to global warming: egg sizes and body sizes have changed; there have also been genetic changes in several insect species.”

If the climatic warming trend continues over the coming decades, stress to biological systems will surely result. Some plant and animal species may be able to adjust their life histories in response to the changing climate. Many species, however, are evidently not able to respond. It is apparent that climate change is already disrupting ecological communities.

Keeping records of phenological events is an enjoyable and interesting hobby. It also has the merit of sharpening one’s sensitivity to the seasonal progressions. Over time, these records can become useful data, necessary to monitoring long-term change.

“Keeping records enhances the pleasure of the search, and the chance of finding order and meaning in these events” (Leopold 1949). With 80 years of hindsight, my father’s work takes on new relevance.

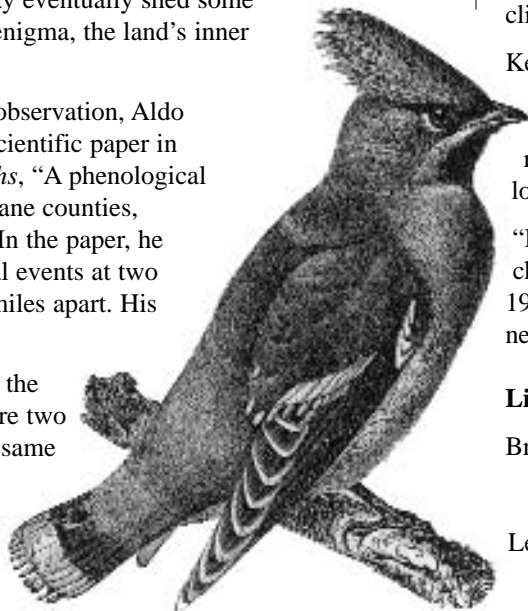
### Literature Cited

- Bradley, N., C. Leopold, J. Ross, and W. Huffaker. 1999. Phenological changes reflect climate change in Wisconsin. *Proceedings of the National Academy of Sciences* 96.
- Leopold, A., and S. Jones. 1947. A phenological record for Sauk and Dane counties, Wisconsin 1935–1945. *Ecological Monographs* 17:81–122.
- Root, T. 2003. Fingerprints of global warming on wild animals and plants. *Environmental Review* 10(3).
- Trelease, W. 1884. *When the leaves appear*. University of Wisconsin Experiment Station.

*The Aldo Leopold Foundation received a 2003 SCB Distinguished Service Award in recognition of their support for a program of diverse ecological research and restoration that has resulted in ecologically sound land management, educational training, and numerous scientific publications.*

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Logo, from page 1

thousands of dollars trying to capture its corporate identity in a logo. Recently, in fact, two well-known conservation organizations spent considerable sums of money to develop new logos. In one case results were highly controversial and in the other case modifications to the original logo produced an outcome almost indistinguishable from the original.

After 16 years without our own symbol, SCB decided it was time to have one. Lacking hundreds of thousands of dollars to spend on a professional marketing firm, we decided to tap the talent of our membership and organized a contest. We asked for a logo that symbolized the breadth of the world's biological diversity and our efforts to conserve it. Further, we asked that the logo represent SCB and, ideally, biological diversity without being busy; be black and white and reducible to small size; and be unique compared to other groups' logos. Finally, we wanted all this in exchange for the possibility of winning the grand sum of US\$250! We were delighted to receive 127 entries from 55 individuals. The Board of Governors selected two logo finalists from artists Chris Lapada and Leila Hadj-Chikh. SCB's membership selected the winner: Lapada's abstract circle, which you will see with increasing frequency. The masthead of the newsletter has been redesigned to feature SCB's new logo.

Chris, a freelance graphic designer ([www.LapadaVisual.com](http://www.LapadaVisual.com)), says that his design philosophy is "Simple is better." He feels an identity should reflect the heart and soul of the designer as well the client. "[His objectives were to] convey SCB's hope, strength, vision, and passion. It's a signature. The logo should be unique, memorable, simple, easily readable, powerful, and radiate personality, which represents the diversity of SCB."

When asked about the development of the logo, Chris replied, "The design in itself was an evolutionary process. After many concepts and sketches, creating an identity that captures all the diversity of the planet was a challenging task. My vision for this logo incorporated the use of plants, water, and animals. It was a challenge that pushed the limits of my creativity."

And what does the logo symbolize to its creator? "The logo illustrates my life-long goal, the conservation of the cycle of life. The logo in itself depicts the very cycle that gave life to us all. The overall circular shape of the bird's body represents mother earth, our shelter, provider, and protector. The outer ring is a representation of the notion that life always ends where it once began. The ocean waves symbolize the twist and turn that may lay ahead in my journey and all the while I have my companion to remind me that I'm not alone. Everywhere I go I'll hear the rustling of the leaves talking to me and I'll have the singing of the birds to provide me with the tranquility that I've always sought after."

To all of the talented artists who contributed their creative energies and presented us with so many options and thus a remarkably difficult decision, we offer our sincerest thanks. SCB has entered a new phase—without the rhino, but with a new logo that symbolizes our clear vision for the future.

*Alan Thornhill, Executive Director*

## SCB ELECTIONS

The following individuals were elected to the Board of Governors of the Society for Conservation Biology in the 2003 general election. A total of 410 ballots were received. Approximately 75% of the ballots were submitted online. The new Board members will begin their three-year terms of office at the end of the 2003 annual meeting.

**John Robinson, President Elect**  
**Devra Kleiman, Botanical Garden, Zoological Garden, Public Aquarium, or Natural History Museum**  
**William Sutherland, University or College**

Three positions will be open in the 2004 election

- Non-governmental organization
- Governmental agency
- Social sciences

As always, these positions are open to nominees from any country. Nominees must be SCB members in good standing. By agreeing to stand for election, nominees indicate their willingness to serve SCB by attending, generally at their own expense, all Board of Governors meetings during their three-year term of office. Board meetings occur at each annual meeting. They are scheduled on the day prior to the first day of scientific sessions and during the meeting (rarely conflicting with concurrent sessions). Another Board meeting is held in February or March (location varies). In addition, Board members are expected to be actively engaged in directing SCB through committee work and by working with local chapters.

The deadline for nominations is **1 September 2003**. Please send nominations, including the nomination category and complete contact information for the nominee, to Erica Fleishman, Center for Conservation Biology, Department of Biological Sciences, Stanford University, Stanford, CA 94305-5020, USA, [efleish@stanford.edu](mailto:efleish@stanford.edu).

### **Donations to SCB promote the science of conservation biology and protect the diversity of life on Earth**

- Donate appreciated stocks, bonds, or mutual funds. If you donate equities owned more than a year, you can avoid tax on the capital gains and reduce income tax by deducting the fair market value as a charitable contribution.
- Make a bequest to SCB in your will. A bequest may reduce taxes on your estate.

*Please send donations to*  
Stephen Humphrey  
Chief Financial Officer, SCB  
College of Natural Resources and Environment  
Box 116455, 103 Black Hall  
University of Florida  
Gainesville, FL 32611-6455, USA

## Death Notices

José Márcio Corrêa Ayres, 49, a Brazilian zoologist who was widely credited with saving the world's largest swath of protected rain forest and who received a 2002 Distinguished Service Award from SCB, died of lung cancer on 7 March 2003 in New York City. At the time of his death, Ayres served as senior conservation biologist at the Wildlife Conservation Society. Ayres battled and reasoned with bureaucracy, the resource extraction community, and even some fellow environmentalists and researchers to create the Mamirauá-Sustainable Development Reserve, Brazil's first such area, in 1996. Two years later, Ayres set up the adjacent Amana Sustainable Development Reserve. Together, the reserves and an adjacent national park produced the Amazon's largest environmental corridor, more than 57,000 square km of seasonally flooded forest.

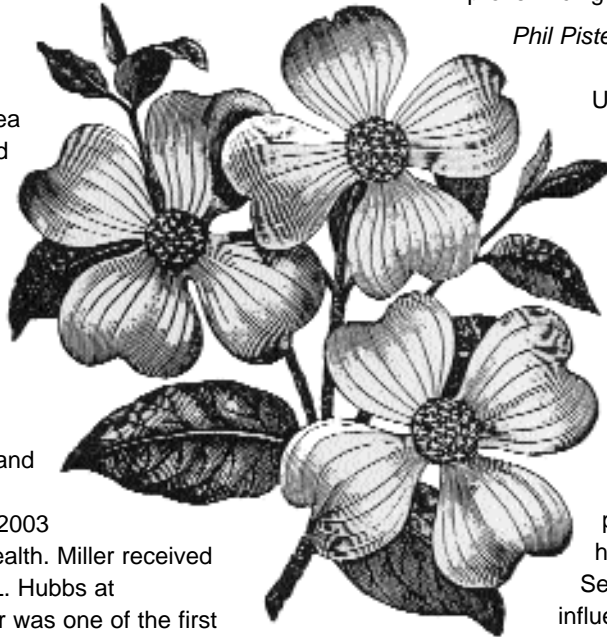
John Robinson, President Elect of SCB, noted that Ayres

"fundamentally changed the way Brazil thought about its protected area system . . . Basically what Márcio did was say, 'Hey: people are part of this landscape. And we can work with the people towards common interests so that together, we can actually make this park system functional.'" Ayres is survived by his wife, two sons, a brother and sister, and his parents.

University of Michigan ichthyologist and conservation biologist Robert Rush Miller passed away on 10 February 2003 following an extended period of ill-health. Miller received his Ph.D. under the legendary Carl L. Hubbs at University of Michigan in 1944. Miller was one of the first ichthyologists to become a conservation activist. His 1961 paper, "Man and the changing fish fauna of the American Southwest," constituted perhaps the first call to arms for fish conservation, and almost surely the first one coming from a museum ichthyologist. Miller's Ph.D. dissertation, *Cyprinodont Fishes of the Death Valley System*, provided the basis for my own work in the conservation of desert fishes, later resulting (in 1969) in formation of the Desert Fishes Council. Bob went on to publish more than 250 papers. Almost a career-long project was his book *Freshwater Fishes of Mexico*, co-authored by W.L. Minckley and S.M. Norris. This book, now in press, will serve as a fitting memorial to a great scientist and

conservationist. Bob was the consummate ichthyologist. I clearly recall an incident after we had labored to save a seed population of the Owens pupfish (*Cyprinodon radiosus*) prior to re-establishing them in a newly-constructed refuge pond. This period of intimacy during the long winter of 1969–70 caused us almost to know each individual pupfish by name. So when Bob and Carl Hubbs came to Bishop to make the long-awaited introduction into the Owens Valley Native Fish Sanctuary, the first thing Bob did was to drop 200 of them alive (nearly half) into a large crock of formalin to take back to the collections at University of Michigan. This was hard for us, but Bob knew that sufficient live material would remain to re-establish a viable population in its type locality. In closing, it should be noted that Bob was a man of diverse interests. He seldom missed a football game in Michigan stadium although the coaches (according to Bob) seldom accepted his suggestions on how to improve Michigan's football program. Go Blue!

*Phil Pister, Desert Fishes Council*



Ulysses S. Seal, Chairman of the Conservation Breeding Specialist Group since its inception several decades ago, succumbed to cancer on 19 March 2003. Throughout his career, Seal made tremendous contributions to human health, animal health, wildlife conservation, and the development of effective processes for collaboration. He also inspired, challenged, and worked with an extensive network of friends and colleagues to address the problems of conservation about which he felt so passionately. It is a tribute to Seal, and to his direct personal influence, that the CBSG now has more than 1000 members, more than 130

organizational and individual sponsors, and a positive global sphere of impact. When asked what guidance he could provide to future Chairs and to the CBSG, Seal responded that the CBSG has the people and the philosophy it needs to make a difference to conservation around the world. He said that specific advice from him was unnecessary and unwarranted, because the organization needs to continue to grow in whatever directions its members can take it, making maximal use of their talents, resources, and passion to conserve the natural world that sustains us. Condolences and best wishes to his successors.

## SCB Members' Meeting • Duluth, Minnesota, USA • 1 July 2003, 3:30 – 5:30 P.M

The annual SCB members' meeting is your best opportunity to learn about SCB's objectives, initiatives, and activities—and to ensure that they reflect your interests and priorities. Please

join the Board of Governors, editors of SCB's publications, Executive Office staff, and fellow members from around the world for this brief, informative, and participatory meeting and

reception. Nominations for open Board positions also will be accepted at the meeting. No concurrent sessions or other events will be scheduled during this time. See you in Duluth!

# INTERNATIONAL SECTION NEWS

## AFRICA

The Africa Section ratified its Bylaws, and has been defining and outlining the specific activities of our officers, as we are still at an early stage in our development as a section. We are preparing a database of conservation biologists who are African nationals, as well as a contact list to develop linkages with other institutions, including universities in Africa. These activities meet both our short term and long term goals of increasing membership, creating community, and contributing to capacity building.

The Africa Section will meet during the 2003 annual meeting, and all interested SCB members are encouraged to attend. We are interested in hearing ideas for how the section can benefit conservation biology and conservation biologists in Africa. For more information on the section please contact Paula Kahumbu (Paula@kws.org) or Beth Kaplin (bkaplin@antiochne.edu).

*Beth Kaplin*

## AUSTRAL AND NEOTROPICAL AMERICA

### Events at the 2003 Annual Meeting

The development of sections as mechanisms for successful international cooperation among SCB's members will surely increase the flow of technical and financial resources for strengthening conservation capacity in regions outside North America. Communication among sections requires not only the participation and incorporation of members in each geographic region, but also sharing of information and assistance among sections throughout the world. To facilitate such efforts, ANA has organized a symposium, to be held during the 2003 annual meeting, that will (1) inform SCB members about the future plans of the ANA Section, (2) encourage participation, comments, and suggestions, and (3) identify common interests and concerns with members of other sections.

During the symposium, members of the ANA Board will present a summary of the proposed three-year strategic plan for the section, an analysis of the current status of conservation biology in the region (e.g., training opportunities and scientific output), and a synopsis of the Cuban National Conservation Strategy as a case study of a successful conservation initiative from the region. Finally, there will be an open discussion to solicit input from current and potential members of the section.

One of the major concerns of ANA is to make informed decisions about what to do and how to carry out useful actions. As identified during the Board of Officers meeting in September 2002, training and scientific products are among the most important objectives and limitations of the discipline of



conservation biology in Austral and Neotropical America. Several members accepted the challenge of gathering information about these issues, and their results will be presented during the symposium. *Education in conservation biology in Latin America and the Caribbean*, organized by Miguel Marini, will provide an overview of the current status of education in conservation biology in the region. A preliminary survey among 47 universities from 12 countries found that 72% of the universities offer at least one course in conservation biology, most using lectures on theory, field exercises, and readings of scientific papers. The typical course in the region covers (1) general aspects of conservation biology, (2) biodiversity, (3) fragmentation, island biogeography, and metapopulations, (4) concepts in ecology and evolution, (5) extinction, (6) threats and human impacts, (7) sustainable development and use of biodiversity, and (8) management and solutions. Cristian Olivo also will present an analysis of the scientific contributions of the section and its perspectives. The final results of these two surveys will help to define future education policies throughout Latin America and the Caribbean and to facilitate improved scientific cooperation.

We invite all members from ANA and other sections to this symposium, to join the ANA section or participate in its activities, and to continue building the SCB of the future.

*Miguel A. Vázquez, Javier Simonetti, and Miguel Marini*

### Integrating Conservation Actions in Mesoamerica

During the past Congress of the Mesoamerican Society for Biology and Conservation, we participated in the workshop *Integrating Conservation Actions in Mesoamerica*. The main objective of the workshop was to identify potential areas and mechanisms of collaboration between organizations with regional agendas. Participants included the Mesoamerican Society for Biology and Conservation, the Central American Commission of Environment and Development, the Mesoamerican Biological Corridor, The Nature Conservancy, World Wildlife Fund, Wildlife Conservation Society, Conservation International, World Conservation Union, Birdlife International, and the Instituto El Zamorano.

Each organization gave a presentation on its mission, working regions, and future vision. Institutional overlaps and gaps were synthesized to identify areas of collaboration and action needs. Two final presentations illustrated the importance of working together: a synthesis of regional conservation priorities and threatening infrastructure projects and a brief synthesis of the state of Central American protected areas.

During the second day, participants were divided in two groups to discuss protected areas and corridors (defined as areas outside legal protection). Each group discussed potential collaboration in terms of priority regions and issues. The exercise allowed all the institutions to sit around the same table and assess their strengths and complementarities to fulfill their common agenda: biodiversity conservation.

At the end of the workshop, the group of representatives of the participant organizations signed the Declaration of Heredia, an agreement expressing their willingness to strengthen regional cooperation and to generate a common agenda to fortify and consolidate conservation actions and sustainable development in Mesoamerica. The door is open for other organizations to join this collaborative initiative. The Declaration was extremely well received by the participants of the congress. It represents a great success for the conservation of Mesoamerica. Now, time to work together! For more information on the Mesoamerican Society for Biology and Conservation, including its next congress in Chiapas, or to read the Declaration of Heredia, visit [www.socmesoamericana.org](http://www.socmesoamericana.org).

*Carlos Galindo-Leal, Matt Foster, Leo Sotomayor, and Rafael Calderon*

### **Manantlán Institute of Ecology of the University of Guadalajara Wins National Nature Conservation Award**

On 27 November 2002, the President of Mexico, Vicente Fox Quesada, presented the "Recognition for Nature Conservation" in the academic / research category to the University of Guadalajara's Manantlán Institute of Ecology and Conservation of Biodiversity (IMECBIO-South Coast Campus). This newly instituted national award was created by the National Commission of Natural Protected Areas (CONANP) of the Mexican federal government to recognize significant accomplishments in one of the world's most important countries for the preservation of biological diversity.

IMECBIO has achieved international and national prominence for creating the Sierra de Manantlán Biosphere Reserve, presently considered one of the priority conservation sites in North America. IMECBIO also has constructed innovative conservation / development initiatives by forging strategic alliances with local indigenous and ejido rural organizations, municipal governments, and the federal agency managing the biosphere reserve. SCB has a long history of interaction with IMECBIO. The latter organization hosted SCB's 1994 Annual Meeting in Guadalajara, Jalisco and co-hosted the workshop on Nature Conservation in Cuba, held at the 2001 meeting in Hilo, Hawaii. Eduardo Santana, one of IMECBIO's representatives for the award, has served on the Board of Governors of SCB and on various SCB committees during the past ten years.

## **ASIA**

The Asia Section is the last of the designated SCB regional sections to come into existence and we are pleased to announce that we have arrived! Our first organizational meeting took place at the 2002 annual meeting in Canterbury and was well attended. Several fundamental decisions were made at that time and a Steering Committee was formed. Pralad Yonzon of Nepal graciously agreed to chair that committee.

Geographically the Asia Section covers a vast and diverse area—some nine times zones wide, it stretches from the Mediterranean to the Pacific, and from Siberia to Sri Lanka. Hence, one of our first orders of business was to subdivide the section into regions. Four regions were proposed and adopted:

East Asia, South Asia, Southeast Asia, and Central Asia / Middle East. To adequately represent the diversity of cultures, climates, and conservation issues within the section, we decided that the Board of Directors would consist of 12 members, with at least one member from each region and no more than two from any one country. We also decided that a maximum of three board members could reside outside Asia.

Recruitment into the section was rapid, and the required minimum membership of 100 was reached by November 2002 (membership now stands at 263). Elections were called in January 2003 and a slate of 20 candidates put forward. The results of the election were announced on 29 March. Hiroyoshi Higuchi of Japan received the highest number of votes and has agreed to serve as President of the Board. He also will be representing the East Asia region. The other 11 Board members, their country of residence, and the region they represent are

Habib Ahmad (Pakistan), South Asia  
Danilo Balete (Philippines), Southeast Asia  
Cara Lin Bridgman (Taiwan), East Asia  
Tom McCarthy (United States), Central Asia / Middle East  
Jeffrey McNeely (Switzerland), Asian Region  
Yoshihiro Natuhara (Japan), East Asia  
Linda Olsvig-Whittaker (Israel), Central Asia / Middle East  
Batbold Otgoid (Mongolia), East Asia  
Andrew Smith (United States), Central Asia / Middle East  
Eric Wikramanayake (Sri Lanka), South Asia  
Pralad Yonzon (Nepal), South Asia

The new Board of Directors soon will be determining duties and assignments and lengths of service, and will begin to develop bylaws for the section.

### **A Region of Conflict**

The eyes of the world recently have been focused on Asia for less auspicious reasons. War in Afghanistan and Iraq, and the threat of war in Kashmir and elsewhere, has dominated world news. What frequently escapes the attention of the popular press is the heavy toll that such armed conflict takes on the environment. In September 2002, a UNEP post-conflict mission traveled to Afghanistan to assess the environmental impacts of past conflict there.

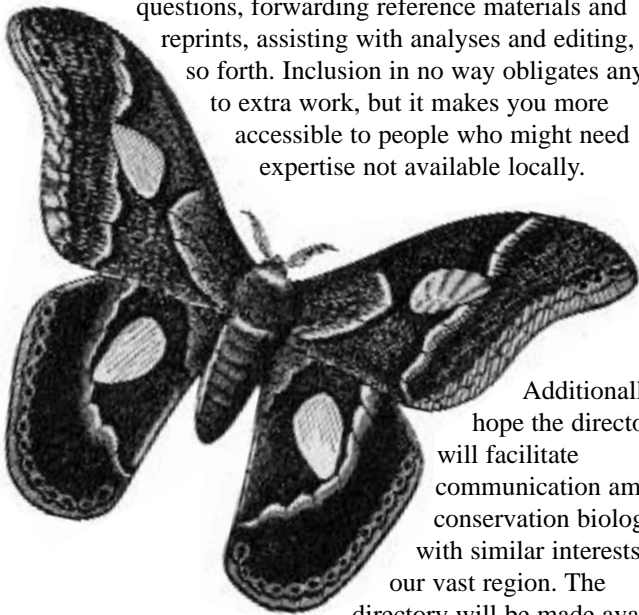
The mission was comprised of 20 international and Afghan scientists and experts, including Project Coordinator Peter Zahler and wildlife expert Charudutt Mishra (both members of SCB's Asia Section). Teams of experts visited more than 70 sites in Afghanistan to assess such vital environmental issues as wildlife, protected areas, pollution "hotspots," water resources, deforestation, waste and sanitation, air quality, and desertification. The work also addressed issues such as environmental impact assessment, framework environmental laws, regional cooperation, and Afghanistan's participation in international environmental conventions. The UNEP environmental assessment report for Afghanistan (and photographs from the mission) can now be accessed at <http://postconflict.unep.ch>.

*Tom McCarthy*

## AUSTRALASIA

SCB–Australasia has been busy recruiting new members and membership of the section now stands at 308. The breakdown of membership is fairly evenly split between “regional” members (155) and “other” members (153). We are working on increasing awareness and membership of SCB–A in the region. In December 2002, we awarded two prizes of a two-year membership in SCB (with *Conservation Biology*) for the best student poster and paper at the Ecological Society of Australia / New Zealand Ecological Society meeting in Cairns. We will continue this theme by awarding another student prize at the New Guinea biological conference in Papua New Guinea in August 2003 and at other future meetings. We are also liaising with Harry Recher and SCB in the hope of formalising relations between the journal *Pacific Conservation Biology* and SCB.

The conservation committee of SCB–A thanks the many SCB members who provided input regarding activities and services the committee should undertake. Several possibilities are under consideration and volunteers lined up to assist. Our first step will be to compile a directory of conservation biologists who are active in the region or willing to provide expertise and assistance to conservation practitioners and students in the region, particularly those from nations with limited resources. The directory will help conservationists in the Pacific region find biologists who can help them, perhaps by answering questions, forwarding reference materials and reprints, assisting with analyses and editing, and so forth. Inclusion in no way obligates anyone to extra work, but it makes you more accessible to people who might need expertise not available locally.



Additionally we hope the directory will facilitate communication among conservation biologists with similar interests in our vast region. The directory will be made available

in electronic or hard copy to remote locations and will be posted on the web as a PDF document. The committee will strive to keep the directory up-to-date. If you would like to be included, please send your name, full contact details, relevant web site(s), and a short paragraph (100 words or less) on your expertise and interests to SCB–A, Directory of Australasian Conservation Biologists, c/o Andrew Mack, Wildlife Conservation Society PNG Programme, P.O. Box 277, Goroka, EHP, Papua New Guinea, FAX +675-732-2461, amack@wcs.org (email preferred).

Angie Penn and Andrew Mack

## EUROPE

The first months of existence have been an active time for the European Section, with progress being made by several section committees. The membership subcommittee produced a draft plan to increase the number of European members in SCB. Highlights of the plan include identification of a contact person in each country. This person will communicate with scientific societies and other groups to disseminate information about SCB and benefits of membership. One plan is to register the SCB European Section as a co-sponsor of national meetings of biological and environmentally-oriented societies. To help begin the membership drive, contact András Báldi, baldi@ludovika.nhmus.hu.

The policy committee produced a draft resolution supporting the protection of the Bialowieza Forest in Poland. The forest provides habitat for the European Bison, wolf, bear, and 38 other vertebrate carnivores and is the last largely intact lowland forest ecosystem in central Europe. A 10,000 ha national park protects about 10% of the remaining old growth forest, with the rest being threatened by logging interests. The resolution was approved with 103 votes in favor and zero opposed. The approved resolution will be sent to European national environmental offices and to the EU commission. Contacts aimed at developing opportunities for growth of section activities have also been made with the Nature and Biodiversity unit of the Environmental Directorate, with the European Platform for Biodiversity Research Strategy (EPBRS), and with BioPlatform, the EU’s biodiversity research network. To participate in this work, contact the policy committee chair, Martin Dieterich, dieterim@fh-nuertingen.de.

The communication committee established an email list server to contribute to the section’s goal of improving the means of communication between SCB members, conservationists, managers, and national policy bodies. This moderated list is currently hosted by the Yahoo groups web site, and is open to everyone regardless of SCB or Yahoo membership. The list server functions to disseminate information on job openings, opportunities for collaboration, scholarships, assistantships, funding, and professional meetings broadly related to biodiversity conservation. To subscribe, send an empty email to euro\_cons\_bio-subscribe@yahoogroups.com, then reply to the confirmation message. The European Section’s communications committee would appreciate your subscription, and also your efforts to increase awareness of the list among colleagues, especially those from outside of academia. The list has seen light traffic over its first weeks of existence, so your mailbox will not be flooded. To help develop further communication and web tools for the European Section, contact Peter Pearman, pearman@zool.unizh.ch.

The internationalization of SCB is presenting a wealth of opportunities for European Section members to participate in SCB’s international committees. At the recent SCB Board of Governors Meeting in Tuscon, Arizona, at which the section was represented by Peter Pearman, several committee chairs expressed their enthusiasm for greater participation by

Europeans in defining the international direction of SCB. The European Section presented a statement of the challenges accompanying the goal of expanding European participation in SCB. Concomitantly, publication editors and standing SCB committees on policy, membership, and education expressed interest in identifying European Section members to expand the composition of their activities and committees. Contact section President Luigi Boitani, l.boitani@pan.bio.uniroma1.it, for more information.

### Focus: Hungary

The first Hungarian conservation biology congress was held 14-17 November 2002 in Sopron. Conservation biology in Hungary dates to the 1960s, when Pál Juhász-Nagy urged a more evolutionary approach to conservation. This was the first congress devoted entirely to conservation biology and was attended by more than 400 participants, who presented eight plenaries, 24 talks, and 180 posters. The broad range of institutional affiliations of the participants reflected the integrative approach of the discipline.

university, college	48%
research institute	11%
nature conservation administration	22%
NGO	11%
others (e.g., zoo, school)	8%

Diversity of sponsorship was obvious as well. In addition to the Nature Conservation Authority (the main sponsor), several national parks, research institutes, the Hungarian Scientific Research Fund, and the Hungarian Academy of Sciences supported the congress. Perhaps the greatest achievement was that both researchers and conservation practitioners contributed to organizing the congress.

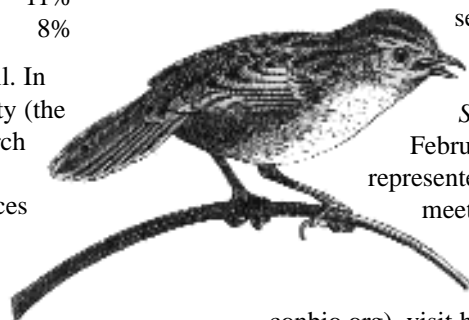
A short questionnaire in Hungarian, developed by András Báldi, was distributed to all participants. Sixty-six responses were received, a return rate of approximately 17%. The first questions asked about attitudes toward the development of the discipline of conservation biology in Europe. Respondents replied that a regular congress, a website, and a national journal on conservation biology are desirable. Two notable points were the perception of the importance of activities for conservation biology at a European level, suggesting that linguistic barriers to international activities are diminishing, and the perception of the importance of meetings and the internet as means of communication. More than two-thirds of respondents were unfamiliar with SCB (currently only three SCB members are from Hungary). However, once informed, 40% of the respondents expressed interest in becoming a member of SCB and 8% stated their willingness to contribute to the activities of the European Section. These results suggest many Hungarian conservationists and researchers want greater international interaction, and suggest timely opportunities for the expansion of SCB activities in Europe.

Luigi Boitani, Peter Pearman, and András Báldi

## MARINE

The Marine Board members have been busy finalizing details for two symposia sponsored by the Marine Section that will be held at the 2003 annual meeting. The two symposia, *Comparing Marine and Terrestrial Ecosystems: Implications for Conservation Theory and Practice* and *Marine Reserves: A Global Perspective*, have been scheduled for Wednesday 2 July. A plenary session by Oregon State University marine ecologist and 2003 SCB Distinguished Service Award recipient Jane Lubchenco also is scheduled for 2 July. In addition, Lubchenco will be presenting a video developed by the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), *The Science of Marine Reserves*. The short video presentation and discussion session will occur at an evening session in Duluth. And to continue marine traditions, the Marine Section will be hosting an additional social event at the annual meeting. Times and locations for each event will be announced at the meeting. If you are interested in assisting with planning or hosting of any of the marine events, please contact Carolyn Lundquist (c.lundquist@niwa.co.nz).

Our Board members also have been busy with other activities to increase the voice of marine conservation. President John Ogden and Board member Elliott Norse organized a session at the annual meeting of the American Association for the Advancement of Science, *Ocean Use Planning: Towards Sustainable Use of the Ocean*, held on 16 February 2003. Board member Leah Gerber represented the Marine Section at SCB's Board meeting in March in Arizona (see page 1).



For more information on the section or to join the marine listserv (marinelist@conbio.org), visit <http://conbio.net/SCB/Activities/Sections/Marine/> or contact any of the Marine Section's officers.

Carolyn Lundquist

## NORTH AMERICA

In December 2002, the Bush Administration proposed sweeping revisions to the regulations governing planning and management of the U.S. National Forests. In response, the North America Section convened a committee of scientists to file comments on the proposed changes on behalf of the section. The panel was chaired by Norm Christensen and included Erica Fleishman, John Marzluff, Adina Merenlender, Scott Mills, Peter Moyle, Barry Noon, and Don Waller. Their comments to the Forest Service were submitted in April. The scientists applauded portions of the proposed regulations that would foster a more collaborative, holistic approach to resource planning. However, the committee also concluded that "other proposed changes are misguided and, if implemented, will likely increase threats to biodiversity and, thereby, diminish ecosystem functions and services provided by our National Forests." The full report is available on SCB's web site.

David Wilcove

see **Sections**, page 15

## What does the SCB Education Committee do?

Four years ago, as a result of a strategic planning exercise, SCB's Board of Governors created an ad hoc committee to explore ways in which the educational component of the SCB mission, which until then largely had been overlooked, could be addressed. Two years later, the members of SCB voted to make this ad hoc committee a standing committee, a permanent part of SCB's efforts to provide for "the education, at all levels, preparatory and continuing, of the public, of biologists, and of managers, in the principles of conservation biology." Those of us who have been involved with the committee through all or part of this time were given the challenging opportunity to figure out exactly what that mission ought to mean and how to make it happen. The essential character of SCB is dynamic, and we always will seek to transform and grow in new and better directions. So it will be with the Education Committee. But enough time has passed since the committee's inception that it is reasonable to feel that we have a pretty good picture of what the committee is capable of and what it can offer the members of SCB as a whole.

Unlike several of SCB's standing committees, the Education Committee has a fairly broad charge. This has led us over the last four years to tackle a wide array of projects. In any given year we may take on ten to 15 projects, depending on the number of people on the committee and the depth of their enthusiasm and effort. Projects develop in one of two ways: proactively and reactively.

Proactive projects emerge from within the committee itself. Because the committee is open to all members of SCB, it actually represents a tremendous pool of creativity on the subject of conservation education. In fact, many people join the committee specifically because they have a project in mind and would like to work on it with the resources of the committee and the help of other like-minded souls. Examples of such projects include a survey of undergraduate conservation biology programs, the conservation literacy guidelines, the web site of undergraduate conservation biology teaching resources, the evolving list of continuing

conservation education courses, an expansion of conservation education discussions in *Conservation Biology*, and the presentation of regular symposia at the annual meetings. Numerous other projects are currently in development, as we hope will always be the case.

Reactive projects emerge from outside the committee. These most commonly take the form of a program or curriculum review. Over the years we have consulted with numerous faculty on the establishment or revision of conservation biology programs, at both the undergraduate and graduate level, and in countries around the world. Our reviews have (so far) all been done via the internet, and serve as an inexpensive yet fast and expert form of feedback from conservation biology's largest and most diverse professional society. These reviews do not result in an endorsement by SCB. Unlike other professional societies, SCB does not feel that it is in anyone's best interest for it to engage in professional certification of programs. But the reviews do provide valuable advice that will help any program better meet their educational objectives, and we invite any program interested in this service to contact us.

Another current project that began from outside the committee is our advisory role with the Network of Conservation Educators and Practitioners, a collaborative project that is developing a large set of web-based teaching modules intended to promote conservation education in countries all around the world. Although this project has only recently begun, a number of modules are close to completion and have so far been prepared in English, Spanish, French, Vietnamese, and Laotian. The Education Committee is also working with SCB media consultants on the development of a conservation biology FAQ intended for use by journalists and other interested members of the public.

What else should we be doing? The list is nearly endless. We are limited only by our imaginations and by time. Clearly, SCB's recent initiative to improve its international scope and representation

highlights the importance of the Education Committee to expand its focus and services to more effectively promote conservation education globally. It also expands the domain of SCB's "collective wisdom" about conservation education, and the committee now needs to focus on making the experience and resources successfully developed in one region available to SCB members throughout the world. We welcome any suggestions for projects, or the identification of existing resources that could be shared via the SCB web site.

But further, we welcome your time. We know that this is not a resource that any of us has in any great abundance. The truth, however, is that good ideas fall by the wayside if someone does not step forward to help bring them to life.

We have accomplished a great deal in the last four years with the hard work and devotion of more than 50 committee members, and SCB as a whole owes them much thanks for their efforts. Yet I believe that we can do much more, and that the best is yet to come.

*Steve Trombulak, Chair*  
[trombulak@middlebury.edu](mailto:trombulak@middlebury.edu)

### • WEB MANAGER NEEDED •

The Education Committee is looking for someone to join the committee as its web manager. An increasing number of the services that the Education Committee provides to SCB members and to the educational community at large involve our web site. At the same time, the growth in those resources has outstripped our ability to update the site in a timely manner. Clearly, this will not do. Therefore, we are looking for someone with web skills and a willingness to aid SCB to be the Education Committee's web manager. The level of web programming skills need not necessarily be great; an ability to simply add text to the existing web site and update links would be of great help, although obviously we would be happy to take advantage of advanced skills as well. The time commitment would be small, but the ability to post additions to the site in a timely manner is important. If you think you might want to help the committee in this way, please contact Steve Trombulak.

## 2003 ANNUAL MEETING: Updates and program

The local organizing committee looks forward to welcoming you to Duluth for the 2003 SCB annual meeting. Located at the western shore of Lake Superior and home to 86,000 residents, the city of Duluth is built into a steep, rocky cliff, with numerous streams flowing down into Lake Superior. From every sunrise on the water to every sunset over the city heights, Duluth offers the perfect backdrop to this year's meeting, which focuses on the conservation of land and water interactions.

"It's fitting to host this meeting on the coast of Lake Superior," said Carl Richards, director of Minnesota Sea Grant and co-chair of the 2003 meeting. "It's one of the largest lakes in the world in a region with an extremely high density of inland lakes, rivers, and wetlands next to urban, agricultural, and forested areas. The areas where land meets water are dynamic. Most house unique species and are exposed to a host of human and natural disturbances. Through this meeting, we will encourage dialogue on this subject as well as a host of other conservation biology topics."

The meeting will be held at the Duluth Entertainment Convention Center (DECC), located on the Duluth harbor and adjacent to the Canal Park district, featuring waterfront architecture, unique shops, art galleries, museums, coffee houses, restaurants, and bars. The Lakewalk—a pedestrian pathway beginning in Canal Park and stretching along the Lake Superior shoreline—ambles past quiet city parks, sculpture and rose gardens, and the Aerial Lift Bridge. For more information on Duluth's numerous events and attractions, visit the Duluth Convention and Visitors Bureau's web site, [www.visitduluth.com](http://www.visitduluth.com).

The 2003 SCB meeting will open on Saturday evening (28 June) with a formal welcome and reception. Scientific presentations will take place during the following four days, Sunday through Wednesday (29 June–2 July).

**The annual SCB members' meeting will be held 3:30–5:30 P.M. on Tuesday, 1 July.** This is your best opportunity to learn about SCB's recent initiatives, including efforts to increase the international capacity of conservation biology, and to provide the Board of Governors with feedback on all aspects of SCB's activities and operations.

The banquet and awards ceremony will take place on Wednesday evening.

The scientific program will include 600 oral and poster presentations as well as 15 invited symposia, nine workshops, and seven organized discussions. More than 1000 scientists are expected to attend the meeting, with presenters representing 42 different countries. A preliminary schedule for the meeting is available on the meeting web site, [www.conbio.org/2003](http://www.conbio.org/2003).

Several exciting and entertaining events will be held in conjunction with the 2003 SCB meeting. Following the welcome and reception on Saturday evening, SCB participants are invited to join a Gallery Hop to several local art galleries. The galleries will be displaying artwork related to the meeting theme of land and water interactions from 23 June through 5

July. A concert will be held on Sunday evening and is open to all SCB participants. The concert will showcase three different groups comprised of some of the region's top musicians, and will feature traditional and contemporary music from "Celtic" countries, Scandinavia, and American Indians. Boogie on the Boat will be held on Monday evening. Join us on board the Vista Star yacht for an evening cruise on Lake Superior, including live music, dancing, and a cash bar (space is limited for Boogie on the Boat, so register early).

Hosts of the 2003 meeting include the University of Minnesota Duluth, Natural Resources Research Institute, Sea Grant College Program, Continuing Education, and the University of Minnesota Conservation Biology Graduate Program.

Visit the meeting web site, [www.conbio.org/2003](http://www.conbio.org/2003), to register on-line or to download a PDF version of the registration form. Note that registrations received after 15 June 2003 will be held for on-site registration on the first day of the meeting. Also note that field trips not meeting minimum enrollment requirements will be cancelled.

The city of Duluth is a popular travel destination in the summer, particularly around the U.S. Independence Day holiday (4 July). Participants are strongly encouraged to make all reservations for travel and lodging as soon as possible. For more information on travel and lodging options, visit the meeting web site or contact Kris Lund, [scb2003@d.umn.edu](mailto:scb2003@d.umn.edu).



### PLENARY SESSIONS

The organizing committee is delighted to announce an outstanding group of plenary presentations to be given by the following distinguished scientists. Plenary presentations will take place each morning, Sunday through Wednesday.

**Conservation challenges for a new century.** Michael Dombeck, University of Wisconsin–Stevens Point; former Chief, U.S. Forest Service; and 2003 SCB Distinguished Service Award recipient.

**The cumulative effects of land-use changes and other human activities on boreal freshwaters.** David Schindler, University of Alberta.

**Wetland restoration: improving landscape strategies and site-based tactics.** Joy Zedler, University of Wisconsin–Madison.

**Mutiny for the bounty: the ethics, science and politics of restoring oceans.** Jane Lubchenco, Oregon State University and 2003 SCB Distinguished Service Award recipient.

## INVITED SYMPOSIA

Visit the meeting web site for detailed descriptions.

**Conservation in a warmer world: Great Lakes ecosystems, climate change and the need for new approaches for ecosystem protection.** Organized by Susanne Moser (Union of Concerned Scientists).

**The interface of land-use planning and biodiversity protection.** Organized by Richard Knight (Colorado State University).

**Maintaining connections for nature: the importance of connectivity for conservation.**

Organized by Kevin Crooks (University of Wisconsin–Madison) and Sanjayan Muttulingam (The Nature Conservancy).

**Human interaction with aquatic systems: how knowledge of aquatic systems impacts individual and institutional action.** Organized by Institute for Social, Economic and Ecological Sustainability, University of Minnesota.

**The future of conservation biology in Austral and Neotropical America.** Organized by SCB's Austral and Neotropical America Section.

**Values, ecology and management: integrating biodiversity and Great Lakes fisheries management.** Organized by Lisa Eby (University of Montana) and Karen Mumford (University of Georgia).

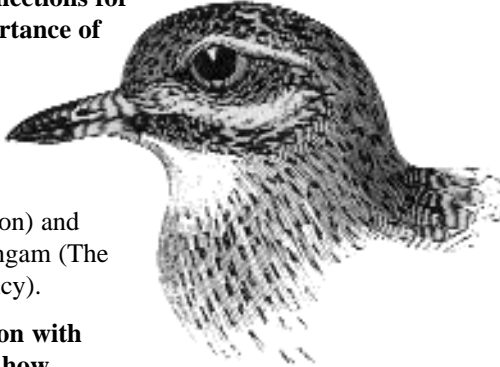
**Reversing the paradigm: science-based conservation planning in the boreal forest.** Organized by David Schindler and Fiona Schmiegelow (University of Alberta).

**Freshwater biodiversity conservation: transitioning from priorities to action.** Organized by Robin Abell (World Wildlife Fund) and Jonathan Higgins (The Nature Conservancy).

**Protecting moving targets: integrating movement ecology and conservation practice.** Organized by Sarah Mabey (North Carolina State University), Kimberly Hall (Michigan State University), Maile Neel (University of Massachusetts), Neal Williams (Princeton University), and Erika Zavaleta (University of California, Berkeley).

**Coastal wetland vegetation as a harbinger of environmental change.** Organized by Carol Johnston (Natural Resources Research Institute, University of Minnesota–Duluth) and Joy Zedler (University of Wisconsin–Madison).

**Community involvement in crane and ecosystem conservation on three continents.** Organized by James Harris and Jeb Barzen (International Crane Foundation) and Buddy Huffaker (Aldo Leopold Foundation).



**Comparing marine and terrestrial ecosystems: implications for conservation theory and practice.** Organized by SCB's Marine Section.

**Education in conservation biology: translating education into practice.** Organized by SCB's Education Committee.

**Conservation planning for wide-ranging species: challenges and strategies.** Organized by Thomas Good (National Marine Fisheries Service).

**Marine reserves: a global perspective.** Organized by Carolyn Lundquist (National Institute of Water and Atmospheric Research) and Elise Granek (Oregon State University).

## WORKSHOPS

Visit the meeting web site for detailed descriptions.

**Skills for effective public participation.** Organized by David Bidwell (The Perspectives Group, Inc).

**Cybertracker: a data collection tool for land-managers, ecologists and wildlife biologists.** Organized by Jonathan Poppele (University of Minnesota).

**Genetically modified organisms.** Organized by James Avevor, Simon Obeng, Ruth Ashiokai, and Francis Osei Yaw (Kwame Nkrumah University of Science and Technology).

**Development of a herptile monitoring program for the Lake Superior basin.** Organized by Lake Superior BiNational Program–Terrestrial Wildlife Community Committee.

**Teaching ecosystem management.** Organized by Gary Meffe (Editor, *Conservation Biology* and University of Florida) and Richard Knight (Colorado State University).

**People and reefs: ICRAN—a partnership for prosperity.** Organized by Seema Paul (United Nations Foundation) and Kristian Teleki (International Coral Reef Action Network).

**Teaching conservation at the university level: inquiry-based exercises for the classroom, laboratory and field.** Organized by Eleanor Sterling, Nora Bynum, Ian Harrison, and Melina Laverty (American Museum of Natural History) and James Gibbs (State University of New York).

**Large scale ecological restoration.** Organized by Amanda Fuller (The Sauk Prairie Conservation Alliance) and Paul Zedler (University of Wisconsin–Madison).

**Conservation biology and the social sciences: new possibilities for collaboration.** Organized by J. Peter Brosius (University of Georgia) and Tracy Dobson (Michigan State University).

## FOR MORE INFORMATION

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[www.conservationbiology.org/2003/](http://www.conservationbiology.org/2003/)

Schneider, from page 1

When the scientist merely acknowledges the credibility of some contentious information or endorses actions that affect stakeholders differentially, opposing advocates often presume the scientist is spinning the information for some client's benefit. I hear that accusation constantly in the global warming policy debate. Even when the expert admits the full range of considered possibilities and refers to extensive, peer-reviewed assessments, the opposition accuses the expert of currying favor from some alleged funding agent—after all, isn't that what everybody else is doing?

Is there a solution to this “advocacy-truth” conundrum? Can a scientist walk the fine line between broad, nuanced assessment (i.e., sound science) and clear, definitive messages delivered via the advocacy sound-bite system in which we are forced to operate to achieve conservation objectives?

On the one hand, it is indeed the responsibility of an expert to report honestly the range of plausible outcomes, and then to estimate a subjective probability distribution—and a subjective confidence associated with that estimate—for each outcome (see, e.g., Schneider 2002b). In other words, a technical expert has an obligation to describe what he or she believes to be a range of consequences—“what can happen”—and the relative likelihood of each event occurring—“what are the odds.” Moreover, not all our probabilistic estimates—subjective as they may be by clear admission—carry equal confidence, as some aspects of complex problems are well-established (based on considerable experimental and theoretical backup), whereas other aspects are quite speculative—and we must make the distinction among those categories in our assessments as well. In a sound-bite advocacy world that is a tall order indeed.

On the other hand, an expert could have a personal opinion on what society ought to do with this risk assessment. Can a scientist who expresses such value preferences about a controversial topic also provide a fair assessment of the factual components? In other words, is the scientist-advocate an oxymoron? This may be a feasible tightrope to walk—but, even if one is scrupulously careful to separate factual from value-laden arguments, will the

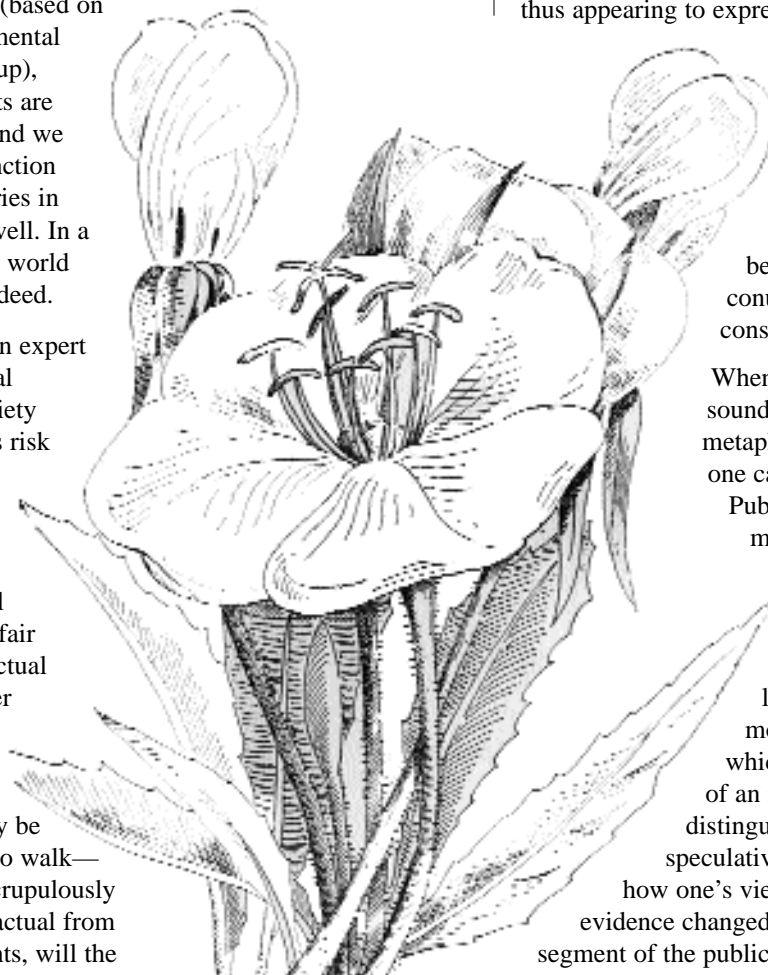
outside world of advocates and advocate institutions buy it? Is it possible to both express what we believe ought to be done about possible outcomes and at the same time provide as fully “objective as we can be” scientific assessments of the likelihood of such outcomes?

Personally, based on playing the scientist-advocate role many times, I believe this dual role is not an oxymoron, but is riddled with pitfalls. The scientist-advocate must work hard to separate out the “positive” from the “normative”—that is, separate the factually based aspects from the value components of a debate. But, no matter how hard we try to be objective and forthcoming, there are always biases that creep in—often unconsciously. And an unconscious prejudice can be even worse than a conscious one. At least consciousness of bias creates the opportunity to openly distinguish the factual from the normative, by choice. But an unconscious prejudice creates the illusion of impartiality. With unconscious prejudice or ideological zeal, advocates—including scientists—can be captured by their perception of “objective truth” and may not even recognize the need to reveal their biases. We need to run our science and outreach activities through a community of colleagues, to help us find any subsurface biases.

The more we discuss our initial assessments with colleagues of various backgrounds, the higher the likelihood we can illuminate unconscious biases. We may not ever reach the archetype of “pure objectivity,” but pure objectivity is, of course, a standard myth in science. Hanging up our citizenship at the door of the hearing room because we have a Ph.D.—and thus appearing to express no opinions on policy to maintain a pretense of some higher calling as an “objective scientist”—is not the path to objectivity. Rather, only active effort to make our biases conscious and explicit is likely to effectively keep our science-advocacy more objectively based and thus allow us to better manage the “advocacy-truth” conundrum and be more effective in conservation action.

When an expert is willing to play in the sound-bite world and communicate with metaphors and analogy, there is one more step one can take to be as responsible as possible.

Public scientists or scientific bodies that make public statements can also produce a hierarchy of backup products ranging from op-ed pieces, which are often a string of written sound-bites themselves, to *Scientific American*-length popular articles that provide more moderate depth, to full length books, which document in greater detail the aspects of an issue that are well understood and which distinguish them from those that are more speculative. Books can also provide an account of how one's views have changed as the scientific evidence changed. Even if only a vanishingly small segment of the public really wants this level of detail, this



hierarchy of articles and books in the popular and scientific literature provides credibility and integrity to the popularization process. And because “full disclosure” (like archetypal “scientific objectivity”) is simply not possible in time-constrained congressional or media debates—where metaphors and sound-bites have to do the job—then the hierarchy of back-ups is crucial for elaborated disclosure beyond these forums.

Table 1 summarizes my primary “rules” to minimize being misrepresented in the “real world.”

Table 1. Responsible advocacy of value positions and popularization “rules”

- Make your values and biases conscious — use the relevant scientific / technical communities to help you overcome your own dogmatism and denial
- Make your values and biases explicit and separate them from your scientific priors on probabilities and consequences
- Struggle to prevent personal value positions from distorting your subjective priors on the probabilities of various outcomes or “facts”
- Defend value positions separately from scientific assessments of probabilities and consequences
- Encourage popularizers who follow responsible practices, and censure those who are unclear, obscure or biased, which harms efforts to educate and elucidate

These guidelines are not without their dangers, too. Many have ignored my disdain for advocates who don’t make their values conscious and explicit and asserted that my very willingness to maneuver in the sound-bite/advocacy world is tantamount to promoting exaggeration. Nothing could be farther from reality—worthwhile activities rarely come without risks.

In summary, responsible advocacy or popularization is not, in my view, an oxymoron—but it takes discipline to minimize trouble. You’ll never please everyone, especially because many continue to think scientists should stay out of the policy arena. But if we do, then we merely abdicate the popularization to someone else—probably to someone less knowledgeable or responsible. In my view, staying out of the fray is not taking the “high ground;” it is just passing the buck. Good luck, and remember, conservation needs both sound science and effective advocacy.

#### Literature Cited

Schneider, S. H. 2002a. Keeping out of the box. *American Scientist* 90:496–498.  
 Schneider, S. H. 2002b. Can we estimate the likelihood of climatic changes at 2100? *Climatic Change* 52:441–451.

*Stephen Schneider received the 2003 Edward T. LaRoe III Memorial Award from SCB in recognition of his leadership in translating principles of conservation biology into real-world conservation, in large part through his public service at the U.S. National Center for Atmospheric Research.*

## Call for 2004 Award Nominations

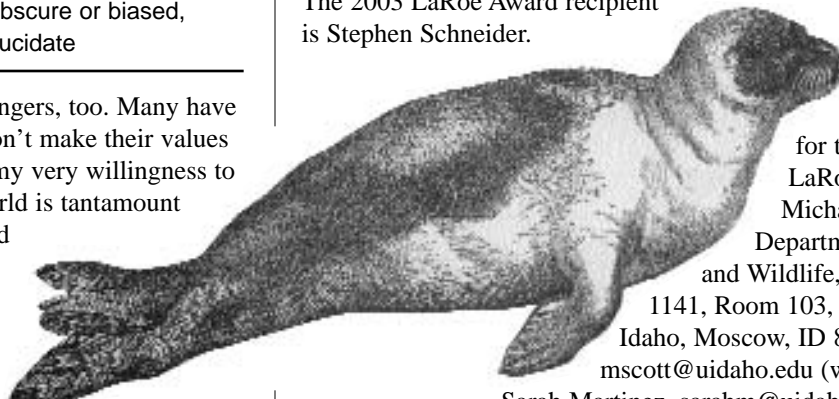
### Edward T. LaRoe III Memorial Award

The Edward T. LaRoe III Memorial Award is given annually to an individual with a distinguished record of research and outstanding application of science to the conservation of our biological resources. The intention of the award is to recognize the innovative application of science to resource management and policy. Although all scientists will be eligible for the award, because of Edward LaRoe’s distinguished career as a public servant, preference will be given to employees of governmental resource management agencies or science agencies.

Past recipients of the LaRoe Award are

2002	John Lawton
2001	Robert Pressey
2000	Phil Pister
1999	Chandler Robbins
1998	J. Michael Scott
1997	Barry Noon
1996	Kathy Ralls
1995	Reed Noss

The 2003 LaRoe Award recipient is Stephen Schneider.



Please send nominations

for the 2004

LaRoe Award to J. Michael Scott,

Department of Fish

and Wildlife, P.O. Box 44-

1141, Room 103, University of

Idaho, Moscow, ID 83844-1141,

[mjscott@uidaho.edu](mailto:mjscott@uidaho.edu) (with copies to

[Sarah Martinez, sarahm@uidaho.edu](mailto:sarahm@uidaho.edu)).

Nominations should be in the form of a nominating letter with an accompanying resume of the nominee. Multiple letters of support for nominees are encouraged. Nominations must be received by **1 October 2003**.

### Distinguished Service Awards

SCB annually presents awards for distinguished service in the field of conservation biology. For the 2004 awards, SCB is soliciting nominations from its members and others working in the field of conservation biology. Among the categories eligible for awards are

- Academia
- Government
- Outside academia and government
- Social, economic, and political work
- Education and journalism

To obtain a nomination package, please contact Eleanor Sterling, Awards Committee Chair, [sterling@amnh.org](mailto:sterling@amnh.org). Nominations must be received by **1 October 2003**.

# Announcements

## Funding

The Research Program at Earthwatch invites proposals for 2004 field grants. Earthwatch is an international, non-profit organization dedicated to sponsoring field research and promoting public education in the sciences and humanities. Past projects have been successfully fielded in, but are not limited to, the following disciplines: animal behavior, biodiversity, ecology, ornithology, endangered species, entomology, botany, and resource and wildlife management. Interdisciplinary projects are especially encouraged as is multinational collaboration. Earthwatch primarily supports post-doctoral researchers or equivalent scholarship, including commensurate life experience. Proposals are welcome from advanced scholars and professionals of any nationality, covering any geographic region. Applicants intending to conduct research in foreign countries are strongly encouraged to include host-country nationals as part of their research staff. More information is available at <http://www.earthwatch.org/research/> or from Michelle Jost, Earthwatch, 3 Clocktower Place, Suite 100, Box 75, Maynard, MA 01754-0075, USA, (800) 776-0188 x 214 or (978) 461-0081 x 214, FAX (978) 461-2332, [research@earthwatch.org](mailto:research@earthwatch.org).

The Garden Club of America (GCA) invites applications for US\$8000 graduate fellowships in ecological restoration to support specialized study in ecological restoration at a leading accredited university in the United States. The University of Wisconsin–Madison Arboretum will administer the fellowships. Selection criteria include the degree to which the proposed fellowship work addresses the objectives of the GCA, as well as the excellence of the student's academic and personal qualifications. For the purposes of this scholarship, "ecological restoration" is defined as "the process of assisting the recovery and management of ecological integrity. Ecological integrity includes a critical range of variability in biodiversity, ecological processes and structures, regional and historical context, and sustainable cultural practices." Letters of application must be received by 15 January 2004. Decisions will be made in March. For guidelines and further information, contact Gregory Armstrong, University of Wisconsin–Madison Arboretum, 1207 Seminole Highway, Madison, WI 53711, USA, (608) 262-2748, FAX (608) 262-5209, [gdarmstr@facstaff.wisc.edu](mailto:gdarmstr@facstaff.wisc.edu).

Each year, the Gopher Tortoise Council awards the J. Larry Landers student research award to the best student proposal submitted to the Council. Proposals can address undergraduate or graduate research concerning the biology of the gopher tortoise or any other relevant aspect of habitat conservation in

the uplands of the southeastern United States. The amount of the award varies, but has averaged US\$1000 over the last few years. Proposals should be limited to four pages and should include a description of the project, a concise budget, and a brief resume of the student. Submit proposals to Bob Herrington, Chair of Research Advisory Committee, Georgia Southwestern State University, Department of Biology, Americus, GA 31709, USA by 31 August 2003. Additional information is available at <http://gophertortoiseCouncil.org/>.

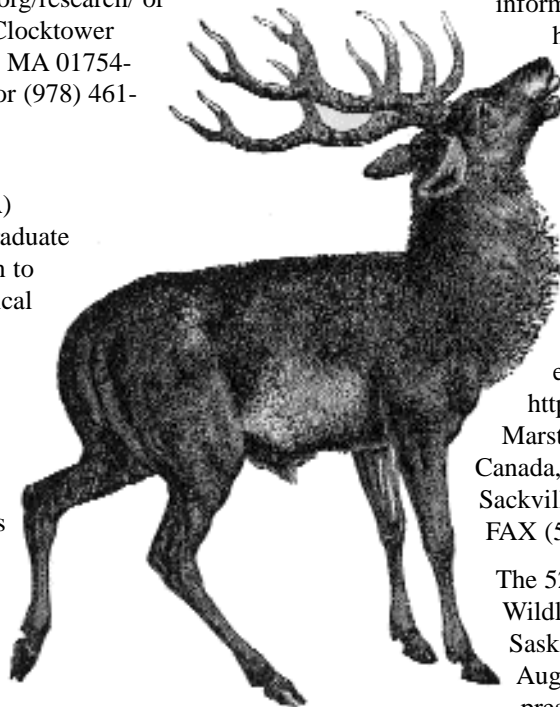
## Meetings and Workshops

The 83rd Annual Meeting of the American Society of Mammalogists will be held 21–25 June 2003 in Lubbock, Texas. Non-members who are interested in attending the meeting or presenting papers should contact Robert Baker, Department of Biological Sciences, Texas Tech University, Lubbock, TX 79409, USA, [rjbaker@ttu.edu](mailto:rjbaker@ttu.edu). For additional information and online registration, see <http://www.dce.ttu.edu/ASM2003/>. For more information about the ASM, see <http://www.mammalsociety.org>.

The fourth conference of the working group on aquatic birds of the International Society of Limnology, *Limnology and Waterbirds 2003*, will be held in Sackville, New Brunswick, Canada from 4–9 August 2003. The preliminary announcement and the return form of expression of interest are available at <http://www.links.umoncton.ca/lw/> or from Amy Marsters, Canadian Wildlife Service, Environment Canada, P.O. Box 6227, 17 Waterfowl Lane, Sackville, NB E4L 1G6, Canada, (506) 364-5079, FAX (506) 364- 5062, [amy.marsters@EC.GC.CA](mailto:amy.marsters@EC.GC.CA).

The 52nd annual international meeting of the Wildlife Disease Association will be held in Saskatoon, Saskatchewan, Canada from 11–14 August 2003. This meeting will include presentations and posters on all aspects of wildlife disease, with special sessions on the population effects of disease, immune function and other bioindicators of disease, and cervid diseases. For complete information, visit the conference web site at <http://wildlife.usask.ca/WDA2003> or contact Claire Jardine, [claire.jardine@usask.ca](mailto:claire.jardine@usask.ca).

The Centre for Research into Ecological and Environmental Modelling (CREEM) will host introductory and advanced distance workshops from 10–17 September 2003. The aim of these workshops is to train participants in the latest methods for design and analysis of distance sampling surveys, including line and point transects, automated survey designs, adaptive sampling, incorporating covariates into the detection function, and spatial modeling of density. Participants will also learn to use the Distance software program. For further information and forms see <http://www.ruwpa.st-and.ac.uk/workshop2002/>

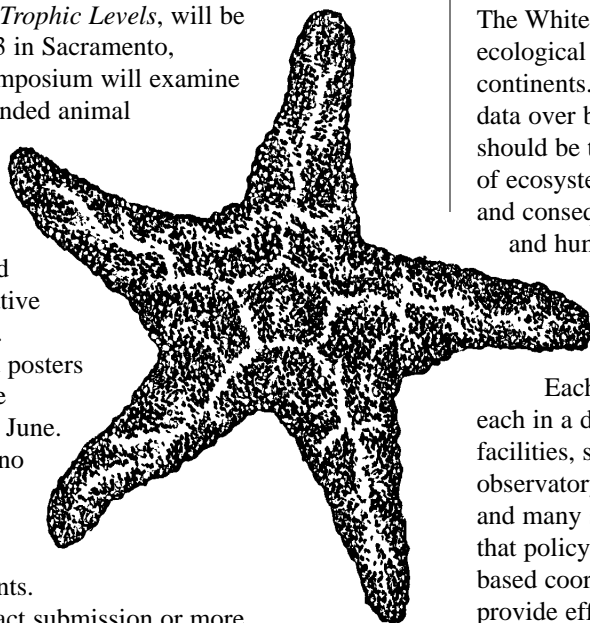


workshoppage.php or contact Catherine Brown, CREEM, University of St. Andrews, The Observatory, Buchanan Gardens, St. Andrews, Fife, KY16 9LZ, Scotland, +44 1334 461829, FAX +44 1334 461800, cathy@mcs.st-and.ac.uk.

The seventh Neotropical Ornithological Congress will take place in Chile's Puyehue National Park from 5–11 October 2003. The congress is sponsored jointly by the Neotropical Ornithological Society (NOS) and the Unión de Ornitólogos de Chile (UNORCH). The scientific program will include plenary lectures, concurrent symposia sessions, oral papers, poster sessions, and round-table discussions. English and Spanish will be the working languages of the congress. The deadline for proposals for symposia, workshops, and round-tables is 30 June 2003. Submit proposals and abstracts through the congress web site (<http://www.nocchile.cl>), available in both English and Spanish. Proceedings will be published as a special peer-reviewed issue or supplement of *Ornitologia Neotropical*. Membership in the NOS is inexpensive and open to all with interests in the study of birds of the neotropics. For more information visit <http://www.neotropicalornithology.org> or contact Ellen Paul, [epaul@concentric.net](mailto:epaul@concentric.net).

A symposium on invasive species, *Accidental and Purposeful Introductions of Animals: Investigating Species Interactions at Different Trophic Levels*, will be held 14–16 October 2003 in Sacramento, California, USA. The symposium will examine both intended and unintended animal invasions in terrestrial and aquatic ecosystems, with an emphasis on introduced species of vertebrates and their interactions with native animal and plant species. Abstracts for contributed posters and oral sessions must be received no later than 15 June. Authors will be notified no later than 1 August. Symposium proceedings will be published and distributed to all registrants. For instructions on abstract submission or more information, contact Cynthia Graves Perrine, [cperrine@dgf.ca.gov](mailto:cperrine@dgf.ca.gov). Abstracts also may be submitted online. For more information see <http://www.tws-west.org>.

The fourth Southern Connections Conference, *Towards a Southern Perspective*, will be held in Cape Town, South Africa from 19–23 January 2004. Southern Connections is a large group of scientists from all continents who study aspects of biology and earth history of the southern continents. The conference will be hosted by the University of Cape Town and affiliated scientists and institutes. Topics will include ecology, biogeography, phylogeny, phylogeography, history, and human land-use. For more information, contact Elizabeth Danckwerts, P.O. Box 2760, Clareinch, 7740, South Africa, +27 21 683 5522, FAX +27 21 674 3269, [SC2004@botzoo.uct.ac.za](mailto:SC2004@botzoo.uct.ac.za), [www.uct.ac.za/conferences/SC2004](http://www.uct.ac.za/conferences/SC2004).



**Sections**, from page 8

## NEON

Four years ago the U.S. National Science Foundation proposed a National Ecological Observatory Network (NEON), a collection of well-equipped ecological observatories around the country. The underlying concept was that ecological research needs major, equipment-intensive sites. These sites would be analogs of oceanographic research vessels—resources too expensive for any one investigator but that might be shared among multiple independent investigators. NSF estimated that each observatory would require at least US\$10 million for construction, with annual operating costs of US\$3 million. Congress twice declined to appropriate the requested funds.

In March 2003 the American Institute of Biological Sciences released a white paper on the first results of its Infrastructure for Biology at Regional and Continental Scales (IBRCS) project (Holsinger et al. 2003). The objective of IBRCS, funded by NSF, was an elaboration of the scientific rationale for NEON. To develop this paper the IBRCS Working Group drew on three sources: its members, who represented major ecological groups and disciplines, information from prior planning workshops, and public comments from town meetings.

The White Paper identified a critical need to learn how local ecological processes can be scaled up to ecoregions, biomes, or continents. This requires simultaneous collection of relevant data over broad geographical and temporal scales. NEON's goal should be to investigate the structure, dynamics, and evolution of ecosystems in the United States and to investigate the pace and consequences of biological change resulting from natural and human influences. The practice of single investigators or small teams working at single sites cannot effectively address ecological challenges rooted over large scales.

Each regional observatory in the NEON network (up 16, each in a different ecosystem) will itself be a network of facilities, such as field stations or national parks. Each observatory will include an extensively-instrumented core site and many satellite observatories. The White Paper suggested that policy for the network be set by an open, membership-based coordination organization. NEON also is expected to provide effective channels of outreach and education.

Conservation biologists realize that although we cannot quantify the national extent of any problem with as few as 16 sites, gaining insights into conservation issues requires both vision and logistical wizardry. Participation of SCB in the NEON Coordinating Organization may increase the potential of NEON to contribute effectively to conservation research.

*Raymond O'Connor was elected to represent SCB on the IBRCS Working Group*

## Literature Cited

Holsinger, K.E., and the IBRCS Working Group. 2003. IBRCS white paper: rationale, blueprint, and expectations for the National Ecological Observatory Network. American Institute of Biological Sciences, Washington, D.C. [http://ibracs.aibs.org/reports/pdf/IBRCSWhitePaper\\_NEON.pdf](http://ibracs.aibs.org/reports/pdf/IBRCSWhitePaper_NEON.pdf).

## A message from SCB's Board of Governors

At its March meeting, the Board of Governors of the Society for Conservation Biology discussed the growing trend of unilateralism that has led to the conflict in Iraq. The Board agreed in principle that this trend undermines the global cooperation necessary to conserve the biodiversity of Earth and provide a sustainable future for its human inhabitants. The war in Iraq, while extremely troubling, is but one of several recent, prominent



unilateral policy decisions with global consequences, including failure of all nations to ratify the Convention on Biodiversity and the Kyoto Protocol, and lack of collaboration on the CITES Convention. The United States is not the sole country responsible for this problem—many other nations have acted selfishly when

it comes to conserving the planet's biological heritage and resources. But as a global leader in technology, power and influence, the United States has a disproportionate responsibility to set a strong example and should be among the first to agree to cooperate in protecting Earth's ecological health. SCB is considering a statement to be issued from the 2003 annual meeting in Duluth, urging the United States to be the first country to stop the trend of unilateral action and to lead the nations of the world in working together to conserve global biodiversity.

## Capacity, from page 1

geographic emphasis of our publications, and the nature of our interactions with decision-makers.

Professional societies, like ecological systems, are dynamic. While our decisions are not made lightly, we try to be pragmatic and to maintain SCB's future options. Although the financial status of SCB over time has improved dramatically under the stewardship of Stephen Humphrey, we still have considerably more goals than funds. Are we taking effective steps? Do you have alternative suggestions? Our elections (see page 3) and annual members' meetings (see page 4) are excellent opportunities to help ensure that SCB reflects your vision. However you choose to communicate with us, the Board of Governors and Executive Office welcome your insights and feedback on expanding our global capacity to conserve biological diversity.

### **New talent joins *Conservation In Practice***

SCB welcomes Beth Fenkner, our new Marketing Manager for *Conservation In Practice*. Beth graduated from University of California, Davis with a B.S. in Biology and an emphasis in Evolution and Ecology. She then spent two years serving in the U.S. Peace Corps in Ghana, and has spent the past four years managing marketing and outreach initiatives within the high tech and non-profit conservation sector. Her skills and interests are a strong match to our organization's needs and we look forward to her assistance in furthering the growth of *Conservation In Practice*. Welcome Beth!

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