

Governors Symington and Beltrones Endorse Biosphere Reserve Agreement

The governors of Arizona and Sonora endorsed a binational network of Sonoran Desert biosphere reserves at the 1996 Arizona-Mexico Commission Plenary Session November 16, 1996. The Honorable Fife Symington, Governor of the state of Arizona, U.S.A and the Honorable Manlio Fabio Beltrones, Governor of the state of Sonora, the United States of Mexico signed a decree of support for the Sonoran Desert Biosphere Reserve Network (The Network).

The Network promotes an integrated program which protects cultural values, promotes sustainable community and economic development in the region, and promotes cooperation between the contiguous protected areas on both sides of the border so as to motivate collaborative resource management of the region's shared resources.

The International Sonoran Desert Alliance (ISDA) is a non-profit, non-governmental, community-based organization whose board of directors represents both Mexico and the United States and members of the Tohono O'Odham and Cucupá/Cocopah peoples. The coalition of ISDA and representatives from the private and public sector have held three international conferences to discuss the mutual dependence of Arizona and Sonora for environmental quality, natural resource management, community and economic development and tourism.

The Network created by the coalition and endorsed by the governors links El Pinacate y el Gran Desierto de Altar Biosphere Reserve - 1,800,000 acres, Alto Golfo de California y Delta del Rio Colorado Biosphere Reserve - 700,000 acres, Cabeza Prieta National Wildlife Refuge - 856,000 acres, Organ Pipe Cactus National Monument Biosphere Reserve - 330,000

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From U.S. MAB Chair D. Dean Bible

I have had an interest in the relationships between human health and environmental change for quite a while. Several years ago taxol was discovered to be a potential major drug to combat ovarian cancer. I experienced firsthand the subsequent alliance between the National Cancer Institute (NCI) and forest managers to collect the bark from the Pacific yew. This was a dramatic lesson of the benefit to human health of cooperation among the health and land management professions.

With my encouragement and that of the U.S. MAB National Committee, the National Institutes of Health and the Southern Appalachian Man and the Biosphere Program (SAMAB), new opportunities are opening to promote multidisciplinary research into the impact of natural and manmade environmental changes on human health.

At our National Committee meetings we have discussed the U.S. Biosphere Reserves as potential areas of exploration for new drugs for the treatment of cancer, AIDS, and cardiovascular and infectious diseases. This "bioprospecting" could be a means of linking conservation, sustainable development and economic growth while addressing vital health issues affecting U.S. citizens. The new effort greatly expands the possibilities of

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On those "zones of cooperation"

During the past week I had the opportunity to participate in a spirited discussion concerning the nature of the zone of cooperation of a model biosphere reserve. One group of proponents focused on the role of the zone of cooperation in biogeographical terms. They were most concerned that the communities within the zone of cooperation are aware of the importance of this region to the designated protected areas and areas of managed use of the biosphere reserve.

These proponents argue that educational and cooperative programs should be developed that stress the interconnectivity of the three types of areas as part of one integrated, functioning ecosystem. Stakeholders in the zone of cooperation should be encouraged to manage their activities in ways that would respect the integrity, value, and sustainability of the protected areas and areas of managed use as keystone elements in their region's



U.S. MAB BULLETIN

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"The mission of the United States Man and the Biosphere Program (U.S. MAB) is to explore, demonstrate, promote, and encourage harmonious relationships between people and their environments building on the MAB network of Biosphere Reserves and interdisciplinary research. The long-term goal of the U.S. MAB Program is to contribute to achieving a sustainable society early in the 21st Century. The MAB mission and long term goal will be implemented, in the United States and internationally, through public-private partnerships and linkages that sponsor and promote cooperative, interdisciplinary research, experimentation, education and information exchange on options by which societies can achieve sustainability." Adopted by the U.S. National Committee for the Man and the Biosphere Program, July 26, 1995.

U.S. MAB is supported by the Agency for International Development; the Department of Agriculture-Forest Service; the Air Force; the Department of Commerce-National Oceanic and Atmospheric Administration; the Department of Energy; the Department of the Interior-Bureau of Land Management, -National Biological Service, -National Park Service; the Department of State; the Environmental Protection Agency; the National Aeronautics and Space Administration; the National Institutes of Health; the National Science Foundation; the Peace Corps; and the Smithsonian Institution.

The program is organized into six directorates: Biosphere Reserve, High Latitude Ecosystems, Human-Dominated Systems, Marine and Coastal Ecosystems, Temperate Ecosystems and Tropical Ecosystems.

functioning ecosystem.

Another viewpoint was expressed which focused primarily upon the need to ensure that the legal structures of the relevant land use authorities within the zone of cooperation were fully engaged with the biosphere reserve authorities. Even though biosphere reserves carry no legal or regulatory authority within the U.S. and are purely voluntary associations, these proponents argued that the local land use authorities must be proactively involved. Generally in the U.S. this means the county governments and their land use planning and zoning commissions. If the awarding of biosphere reserve designation requires the explicit approval of each of these local authorities, it was recognized that the resulting zone of cooperation could well resemble a rather patchwork map of non-contiguous areas. The adherents to this view recognized this as a negative, but said it was also a challenge to the biosphere reserve proponents to more actively carry out cooperative and educational programs with the local authorities. They were insistent that explicit recognition and cooperation by such authorities were needed for a fully functional biosphere reserve.

A third view was expressed that the zone of cooperation was really just a potential area within which cooperative conservation and educational programs were to be carried out. According to this view, the zone of cooperation should not be seen as a fixed geographic area, but rather as a fluid, ever shifting area. The boundaries of the zone of cooperation under this view would depend on where there were people, organizations, programs and resources willing to cooperate. It would be inappropriate, therefore, say these proponents to publish any map of a fixed and geographically specified zone of cooperation.

All of these viewpoints, of course, contain strong elements of truth. The U.S. National Committee is dealing with all of these issues as we move to more fully explain ourselves to the broader public. The scientific concepts which underlie the biosphere reserve portion of the MAB program have long been accepted and are generally agreed upon—within the scientific/ecological community. When the biosphere reserve concept is merged to the concepts of sustainable development and there is increasing interest within the private non-governmental conservation organizations in regional ecosystems cooperation, then all of the concepts involved need to be more fully described and understood. It is a spirited discussion and it is exciting to be able to participate in the development and refinement of these concepts.

Roger E. Soles



Increasing Access to Biological Diversity Information At Russian Biosphere Reserves

U.S. MAB, in collaboration with Russia MAB; the U.S. Civilian Defense Research Foundation (U.S. CRDF); USGS Biological Resources Division; Open Data Systems of Alexandria, Virginia, and the Division of Environmental Studies of the University of California, Davis is training Russian technicians to create an electronic communication system to share the scientific data of the Russian Biosphere Reserves.

U.S. MAB submitted a successful proposal to the U.S. Civilian Defense Research Foundation which supports employment for former Russian military personnel.

Organizational meetings were held in December. Russia MAB has identified network administrators, established a training calendar, will host the workshops and order the necessary equipment.

Jason Titus and Ken Arneson from Open Data Systems will go to Russia in April to assist with equipment installation and inventory for additional hardware which may be needed.

Dr. Jim Quinn and assistants from the University of California, Davis, and Dr. Michael Ruggiero from USGS- Biological Resources Division will conduct workshops on MABFauna/Flora in April-May.

The Russian personnel will begin work on the biosphere reserves in May 1997.

U.S. MAB will include the data generated from the Russian Biosphere Reserves into the MABFauna/Flora meta data on the EuroMAB Internet home page (<http://www.euromabnet.org>). It will then be available worldwide.

6th World Wilderness Congress

Abstracts of papers or posters will be accepted until April 1 for presentation at the symposium "Wilderness Designation, Management and Research" part of the 6th World Wilderness Congress to be held in Bangalore, India, October 18-25, 1997.

For further information please contact Alan Watson, Leopold Institute, Box 8089, Missoula, MT 59807, Tel. (406) 542-4197.

The Bolivia Summit Endorses MABNetAmericas

The Bolivia Sustainable Development Summit Declaration and Plan of Action signed at Santa Cruz, Bolivia on December 7, 1996 by Vice President Al Gore and other elected Heads of State and Government of the Americas endorsed MABNetAmericas in Initiative 31.

"Initiative 31. Seek to establish an Inter-American Biodiversity Information Network, primarily through the Internet, that will promote compatible means of collection, communication, and exchange of information relevant to decisionmaking and education on biodiversity conservation, and that builds upon such initiatives as the Clearing-House Mechanism provided for in the United Nations Convention on Biological Diversity, the Man and the Biosphere Network (MABNETAmericas), and the Biodiversity Conservation Information System (BCIS) an initiative of nine programs of the World Conservation Union (IUCN) and partner organizations."

Signatories represented Antigua and Barbuda, Argentina, The Commonwealth of the Bahamas, Barbados, Belize, Bolivia, Brazil, Canada, Colombia, Costa Rica, Chile, The Commonwealth of Dominica, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, The Dominican Republic, Saint Lucia, Saint Vincent and the Grenadines, Surinam, the U.S.A., Uruguay and Venezuela.

In other MABNetAmericas news, Dr. Brian Bock, MABNetAmericas coordinator, has distributed the MABFauna program, manual, and tutorial (in English, French, Spanish, or Portuguese) to every biosphere reserve in the western hemisphere. He also has compiled a MABNetAmericas directory with updated contact information for each MAB National Committee and each biosphere reserve in the Americas. The directory will be distributed soon and posted on the MABNetAmericas web site (<http://www.mabnetamericas.org>).

Dr. Bock continues to give MABNetAmericas seminars and training sessions on the use of MABFauna at international meetings. In January, he participated in the Smithsonian Institution MAB (SI-MAB) Biodiversity Program sponsored Regional Biodiversity Monitoring course in Panamá. Representatives from every Central American country participated. He is scheduled to make presentations on MABNetAmericas at upcoming international meetings in Belize and Colombia.



MACE Directorate Coral Reef Studies to Continue

The core project of the Marine and Coastal Ecosystem (MACE) Directorate, "Ecological and Socio-Economic Impacts of Alternative Access Management Strategies in Marine Protected Areas," is specifically designed to investigate the natural and social science impacts of alternative access management strategies relating to fishing and recreational diving. The project is beginning the third and final year of Phase-I, which should be completed at the end of 1998.

The study investigates how various access management strategies impact or change the diversity, abundance and behavior of specific species, as well as, the overall condition of the marine ecosystems. The restrictions being examined vary from limitations on harvest of single species to a near complete ban on fishing or entrance to the protected area.

The core project is also examining the related socio-economic changes that occur due to various levels of managed access. Within the socio-economic context of the project, analysis is being conducted to determine allocations of benefits and costs under different access strategies and the resulting community tension or support.

The primary objective of the MACE core project is to produce information that will serve to build more cohesive partnerships between managers, scientists, special interests and the public at large for the development, implementation and operation of marine protected areas. The results of both the social and natural science elements of this core project will also generate stand alone information of use to biosphere reserve managers. This information will form the basis for the development of a reference handbook for managers tentatively entitled "Developing and Assessing Alternative Access Management Strategies for Coastal Marine Protected Areas."

Third year activities project-wide will focus on further revision of the reference handbook and finalization of the volunteer training manual and video. MACE will develop ecological monitoring, education and outreach curricula and conduct a pilot training seminar for national and international marine and coastal protected area managers and staff. The seminar and curriculum will incorporate the reference handbook and various training manuals and videos produced in year two and three of our project, and coordinate/collaborate with the National Oceanic and Atmospheric Administration (NOAA), the National Park Service (NPS), (the United National Education, Scientific and Cultural Organization) UNESCO/IOC and UNESCO/MAB.

The study will quantitatively document present conditions and changes within the Florida Keys National Marine Sanctuary (FKNMS). Year-3 activities will be integrated with the Intergovernmental effort to restore South Florida and will continue to build partnerships for assessing the impacts of the FKNMS management plan. Analysis of socio-economic user surveys begun in 1995 will be completed.

Funding limitations for the abalone recruitment portion of the core project in year-3 will significantly restrict activities. However, Channel Island National Park will continue to support censuses and brood stock population maintenance will be conducted to perpetuate greater adult densities.

MACE will continue coral reef data collection and analyses from our sites in the Hawaiian Islands. There will be an increasing focus devoted to training local and native Hawaiians and other Pacific Islanders in the indicator species methodology in order for them to begin to take over the long-term monitoring of their coral reefs. Groups in the American Flag Pacific Islands (API) Coral Reef Initiatives will be encouraged to participate in these training sessions so that the monitoring of the API and other coral reefs can be continued using this simple, cost effective yet sensitive method. In addition, MACE will integrate this monitoring program with the new U.S. and Global CRI monitoring network. The directorate will initiate a comprehensive survey of local and native Hawaiian Groups to determine cultural and socio-economic impacts from several potential new management strategies for Kaho'olawe Island and other Pacific islands.

PUBLICATIONS (TO DATE) RESULTING IN PART OR WHOLE FROM THE MACE CORE PROJECT

Ault, J.S., Bohnsack, J.A. and G. Meester. 1996. The role of protected marine areas in fishery management: Florida Keys National Marine Sanctuary. *Fisheries Research* (in prep.)

Ault, J.S., Meester, G., and J.A. Bohnsack. 1996. The relative fishing power of divers in tropical reef fish visual surveys. *Fishery Bulletin, U.S.* (in prep.)

Bohnsack, J.A. and J.S. Ault. 1996. Management strategies to conserve marine biodiversity. *Oceanography* 9: 72-82.

Crosby, M.P. and E.S. Reese. 1996. *A Manual for Monitoring Coral Reefs With Indicator Species: Butterflyfishes as Indicators of Change on Indo-Pacific Reefs*. Office of Ocean and Coastal Resource

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SAMAB Health Workshop Well Attended

Representatives from the fields of public health, anthropology, veterinary medicine, water management, air quality and public policy attended the Southern Appalachian Man and the Biosphere Cooperative (SAMAB) sponsored Health Workshop February 3-4 in Knoxville, Tennessee.

D. Dean Bibles, Chair of the U.S. MAB Program, spoke on the workshop theme of how natural resource research and management can be integrated with human health disciplines to reach the goal of sustainability.

Dr. Gordon Cragg, chief of the Natural Products Branch of the National Cancer Institute, and a member of the U.S. MAB National Committee, spoke on the mutual benefits which can accrue with an integrated approach to land management and human health concerns.

Other speakers included, Dr. Paul Epstein, an Associate Director of Harvard's Center for Global Change and Human Health, Dr. Paul Erwin, East Tennessee Regional Health Director, Cory Berish and Rick Dubrow of the Environmental Protection Agency Region IV and representatives from the New Mexico Research Association of Medical and Biological Organizations.

The second day of the workshop was devoted to setting a future course of action in integrating the knowledge of the various participating disciplines.

In other SAMAB news: SAMAB will support a sustainability workshop in early summer. The workshop will develop indicators and criteria for sustainable development using the database developed in the Southern Appalachian Assessment. For further information on the workshop please contact Hubert Hinote. Tel. (423) 436-1701, Fax. (423) 436-5598, E-mail: samab@1x.netcom.com.

(Continued from page 4 - MACE)

Management, National Oceanic and Atmospheric Administration, Silver Spring, MD. 45 pp. (accompanied by a twenty minute video).

Crosby, M.P., G.R. Gibson, and K.W. Potts (eds). 1996. *A Coral Reef Symposium on Practical, Reliable, Low Cost Monitoring Methods for Assessing the Biota and Habitat Conditions of Coral Reefs, January 26-27, 1995*. Office of Ocean and Coastal Resource Management,

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U.S. MAB - Smithsonian MAB Collaboration

MABFauna, MABFlora and Observe all developed through U.S. MAB, and BioMon developed by Smithsonian MAB will be taught as a package of companion software. A training course is being designed by Dr. Brian Bock of U.S. MAB and Jim Cominsky of Smithsonian MAB. The course should be ready for presentation in late May 1997.

MABFauna and MABFlora are computer programs designed to allow users to input, edit, retrieve and create checklists and reports of vertebrate or vascular plant inventory data by allowing users to select options from a preset menu of choices.

Observe is a computer program which allows the user to input field records of vertebrates or vascular plants such as location of observation, habitat, behavior, breeding status and appearance into a database for storage, manipulation and retrieval.

BioMon, Biodiversity Monitoring Database, allows immediate verification and organization of field data for trees and provides a consistent protocol for the storage and management of biodiversity plot data.

The combination of MABFauna, MABFlora, Observe and BioMon provides for the first time a comprehensive package of data management software for biologists interested in basic inventories and censusing, or more systematic long-term monitoring of vascular plants or vertebrates in biosphere reserves and other protected areas.

New Course Offerings from ITC

The International Institute for Aerospace Survey and Earth Sciences (ITC) in the Netherlands announces a new series of master degree courses for 1997. Programs are available in: Rural and Land Ecological Survey; Environmental Systems Analysis and Monitoring; Forest Survey; Geoinformation for Urban Planning; Socio-Economic Information for Natural Resource Management; Forestry for Rural Development; GIS for Cadastral/Urban Management/Rural Applications, and Environmental Systems Analysis and Monitoring.

For information contact: P.O. Box 6, 7500 AA Enschede, The Netherlands. Fax. [31] 53 487-4238. E-mail: education@itc.nl. Internet: <http://www/itc.nl> Some fellowships are available for student support.



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acres, Tinajas Altas (U.S. Bureau of Land Management [BLM]) - 53,000 acres, Gran Desierto Dunes (BLM) - 25,500 acres, and Mohawk Mountains and Dunes (BLM) 113,000 acres. A total of 3.8+ million acres for this network of binational reserves.

The Network would not impose any new land management mandates or development restrictions on public or private lands. The Network will be part of the legacy of friendship and cooperation among the people of the Sonoran Desert.

(Continued from page 9 - Publications)

in land management patterns. The work described here was part of the U.S. MAB Temperate Ecosystems Directorate core project 1992-1995. 1996. 22pp.

STILL AVAILABLE

from U.S. MAB:

MABFauna version 2.0, PC Disks are available for the EuroMAB (Europe, Canada, and the U.S.) and the MABNetAmericas (all of the Western Hemisphere) editions. A Handbook for Users of the MAB Biological Inventory System and a Quick Start Tutorial are also available. MABFauna is a computer program which is designed to allow users to efficiently input, edit, retrieve, and create checklists and reports of vertebrate inventory data. Included is the program Observe which permits the input of records of field observations of vertebrates into a computerized database for storage, manipulation and retrieval. Data which have been entered into MABFauna and Observe may be exported to a flat file for use in any dBaseIII+ compatible data management software. The program and manual are available in English only. *The Quick Start Tutorial* is currently available in English, Spanish, Portuguese, French, Bahasa and Russian.

from others:

Info Mab 24, September 1996 is the newsletter of the Man and the Biosphere Programme. This issue has articles on the news from MAB National Committees, GTOS update, Diversitas operational plan, Urban Ecology, Arid zones, mountains, tropical ecology, coastal and island systems, soil fertility, people and plants. Available from UNESCO-Programme MAB, 7, place de Fontenoy, 1 rue Miollis, 75732 Paris Cedex 15, Fax. (33) (1) 40659897

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cooperative means of exploring other aspects affecting the health of our citizens.

A main theme of the MAB Program which makes it original in comparison with other environmentally focused programs is that human beings are seen as an important element in a complex ecological system. There are many examples of environmental influences on human health and welfare.

At the recent SAMAB sponsored Human Health Conference, which I had the good fortune to attend, an example of the interplay of human health with climatic and environmental factors was dramatically demonstrated. A presentation focused on the sudden outbreak of fatal respiratory infections from hantavirus which occurred in the southwestern United States in 1993. It is thought that the emergence of the deadly hantavirus might, in part, have been associated with an unusual increase in rainfall following an extended drought. This situation favored an increase in rodent food supplies leading to an increase in the number of virus-infected rodents. These rodents in turn transmitted the virus to humans. It was due to the close collaboration between scientists of many disciplines that the epidemic was rapidly and effectively contained. This experience led to the formation of a multidisciplinary organization in New Mexico to study the factors which might lead to such crises. It stands ready to swing into action quickly.

U.S. MAB is well placed to promote similar multidisciplinary efforts. Medical and natural scientists, social workers and education specialists are now discussing the formation of a comparable organization in southern Appalachia under the auspices of SAMAB. Such organizations can play a key role in predicting potential outbreaks of infectious diseases and alleviating the effects on humans by taking preventive measures.

Increased focus on human health issues during the design of new core research will allow U.S. MAB to take a major leadership role in emphasizing that humans form an integral part of all major ecosystems while continuing its innovative policies, programs and research in ecosystem management and biodiversity conservation.



Golden Gate Biosphere Reserve Association

Vegetation mapping of the Golden Gate Biosphere Reserve and Coho salmon restoration were among agenda items discussed at the recent board meeting of the Golden Gate Biosphere Reserve Association (GGBRA).

The Point Reyes National Seashore representative reported great success with the vegetation mapping of several Golden Gate Biosphere Reserve areas. Over \$200k has been raised to map the entire biosphere reserve and have the data available on a geographic information system. The GGBRA board discussed possible funding sources for an additional \$20k expected to be needed.

The Coho Salmon restoration project involves Mount Tamalpais, Samuel P. Taylor, and Tomales Bay State Parks, Point Reyes National Seashore, Golden Gate National Recreation Area, Marin Municipal Water District and the Gulf of Farallones National Marine Sanctuary. The restoration involves habitat inventorying and mapping of several critical watersheds. Once mapped, mitigation efforts will be conducted to systematically remove migration impediments and correct stream elements that may have a negative effect on the endangered coho. Additional studies of salmonid genetics and genetic diversity among four creeks will be conducted to direct any future reintroduction efforts. It is expected that interdisciplinary planning and the participation of additional agencies will be necessary for protection of Tomales bay.

Other discussion at the meeting focused of a web page for the biosphere reserve, creation of an interdisciplinary science council, publication of the proceedings from the Biodiversity Symposium sponsored by the GGBRA in 1995 and becoming a "sister" biosphere reserve to one in South Africa.

New MABNetAmericas Web Site

The MABNetAmericas web site has developed to now include lists of biosphere reserves, some with pictures, maps and fauna species lists. Try <http://www.mabnetamericas.org/>

At present the U.S. MAB home page is linked to the MABNetAmericas router home page at <http://www.mabnetamericas.org>. It is under construction and should have a more direct routing by next bulletin. Information on the U.S. MAB Program, Biosphere Reserves and international programs can be found on this site. Updates are being made on a daily basis. E-mail us at usmab@state.gov with suggestions.

Colorado Rockies Regional Cooperative

Very important to the work of The Colorado Rockies Regional Cooperative (CORRC) is the employment of a part time data manager for CORRC's GIS data cooperative. The CORRC Board held a workshop February 21, 1997 to discuss how to partner products from the CORRC GIS data cooperative with a collaborative decision framework developed by the Consortium for International Earth Science Information Network (CIESIN) and how to apply the information and framework to addressing problems associated with the urban-wildland interface or intermix. Use of the framework with the Forest Service's Urban Forestry Research program was also explored.

CORRC completed two publications in 1996, *Strategies for Effective Conservation Partnerships*, and *Neighborhood Environmental Planning Guidebook*.

The guidebook documents the final steps the neighborhood experienced in seeking approval from the county planning board to become part of the county land use plan. For further information on the guidebook please contact Howard Alden at E-mail: hald22234@aol.com.

The study of the biodiversity of Boulder open space grasslands at the suburban/agriculture interface is in its third year of support by CORRC.

The CORRC steering committee of 14 partners is under the leadership of Chairman James C. Crain and Partnership Coordinator Howard R. Alden.

(Continued from page 5 - MACE)

National Oceanic and Atmospheric Administration, Silver Spring, MD, USA. 80 pp.

Crosby, M.P. and J.E. Maragos. 1995. The United States Coral Reef Initiative. pp. 303-316. IN: Maragos, J.E., M.N.A. Peterson, L.G. Eldredge, J.E. Bardach, and H.F. Takeuchi (eds), *Marine and Coastal Biodiversity in the Tropical Island Pacific Region*. Vol I: *Species Systematics and Information Management Priorities*. East West Center, Honolulu, HA.

Eichbaum, W.M., M. P. Crosby, M.T. Agardy, and S.A. Laskin. 1996. The role of marine and coastal protected areas in the conservation and sustainable use of biological diversity. *Oceanography* 9: 60-70.

Maragos, J.E., M.P. Crosby, and J. McManus. 1996. Coral reefs and biodiversity: A critical and threatened relationship. *Oceanography* 9: 83-99.



Publications

To order publications from the U.S. MAB Secretariat, OES/ETC/MAB, SA-44C, Department of State, Washington, DC 20522-4401, please include self-addressed mailing labels.

NEW PUBLICATIONS

from U.S. MAB:

MABFlora version 2.0 PC disks, manual, and tutorial are available for the European, and Canadian/U.S. editions. *MABFlora* is a computer program which is designed to allow users to efficiently input, edit, retrieve and create checklists and reports of plant inventory data. Included in the software is the program *Observe* which permits the input of records of field observations into a computerized database for storage, manipulation and retrieval. Data which has been entered into *MABFlora* and *Observe* may be exported to a flat file for use in any dBaseIII+ compatible data management software. The European version uses a database version of *Flora Europaea* as a master list. The Canadian/U.S. version uses *PLANTS* database as a master list. The program and manual, *A Handbook for Users of the Man and the Biosphere Biological Inventory System*, and *Quick Start Tutorial* are currently available in English only. 1997. (3 disks, manual 51pp., tutorial 10pp.)

Working Together for Wetlands; a Celebration of 25 Years of the Ramsar Convention compiles the text of speeches and summaries of break out sessions presented at a conference held at the State Department in Washington, DC. April 25-26, 1996. Speakers were: Timothy B. Wirth, Undersecretary of State for Global Affairs; Donald L. Henley, Founder, Caddo Lake Institute; Delmar Blasco, Secretary General, Convention on Wetlands of International Importance; the late Mollie H. Beattie, Director, U.S. Fish and Wildlife Service; and Paul W. Johnson, Chief, Natural Resources Conservation Service. 1996. 28pp.

from others:

"Land Ownership and Land-Cover Change in the Southern Appalachian Highlands and the Olympic Peninsula," *Ecological Applications*, 6 (4), pp. 1150-1172 by Monica G. Turner, David N. Wear, and Richard O. Flamm discusses the variables involved in the change

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