



Russians Join Fight Against Brucellosis in Yellowstone

WFED Helps Make It Happen

Early this year, WFED helped unite Russian and US researchers to begin fighting brucellosis in Yellowstone bison. The launch of this project represents a significant step towards finding a vaccine while furthering cooperative peaceful partnerships between the former Cold War adversaries.

American Background

Yellowstone National Park is home to the last—and only—wild free-roaming bison in the US. A century ago, America's largest land animal (and now symbol of US conservation work) was hunted to the point of extermination. The millions that once roamed North America were reduced to fewer than 50 animals that had found refuge at Yellowstone.

From those few remaining animals, the Yellowstone herd has now grown to several thousand. But the threat to America's historic wild bison is not over.

A few decades ago, Yellowstone's bison were identified as having a disease known as 'brucellosis.' This disease triggers abortions in infected animals and attacks many types of livestock including cattle. Since the 1930s, the US Government has spent more than \$3.5 billion to eradicate brucellosis from America's domestic animals. However, no effective vaccine has been developed to combat brucellosis in wild free-roaming bison—and brucellosis in these animals is seen by many as a threat to America's livestock industry.

In the winter of 1998-99, more than 1,500 Yellowstone bison were shot dead as they migrated from the national park towards their winter range across the border in Montana. The Yellowstone bison were killed because ranchers feared the disease would be transmitted from bison to cattle.

Many people felt the slaughter of Yellowstone's bison was not an acceptable risk-reduction approach and the ensuing battle over bison manage-

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L to R: Dr. Roman Borovick, Preston Scott, and Dr. Hamit Raviolov.



Dr. Roman Borovick observing the bison in Yellowstone National Park.



Photo courtesy of the National Park Service.

From Swords to Plowshares . . .

WFED's Pioneering Work in Russia Takes Root

In December 2000, with technical assistance from WFED and financial support from the US Department of Energy (DOE), the Center for Ecological Research and BioResources Development (CERBD) was created in Pushchino, Russia. The new Center serves as a hub for expanding cooperative projects between participating US and Russian research institutes. The goal of the projects is to develop valuable new non-military products from Russian expertise previously used for the development of bio-weapons in the former USSR.

Supported by agreements with DOE in Washington and the Idaho National Engineering Environmental Lab, four Russian institutes have joined CERBD and have begun work on the first phase of new projects in cooperation with the Diversa Corporation of San Diego. The member institutes are the Institute of Biochemistry and Physiology of Microorganisms, the State Research Center for Applied Microbiology, the Research Center of Toxicology and Hygienic Regulation of Biopreparations, and the All-Russian Research Institute of Phytopathology.

WFED was first approached by DOE in 1998 to explore ways to create new incentives that could help reduce the risk of biological weapons proliferation. Working with Dr. Jim Wolfram, Dr. Rob Rogers and others from DOE, WFED helped design the new project as well as stimulate interest among the Russians about the concept. WFED's Preston Scott explained, "This is all about applying the incentives generated by bioprospecting benefit-sharing agreements in a critical peace and security context. Nothing could be more challenging—or important."

Preston traveled to Russia in October 2000 to assist the Russian partners in their negotiations to create CERBD (see *Stewards' Watch*, Vol. 1, No. 2, Fall 2000). In November, the directors of the participating Russian institutes, along with CERBD Executive Director Vera Dmitrieva, visited Washington, DC to conclude a support agreement with

DOE's Initiatives for Proliferation Prevention program. In recognition of WFED's pivotal role in development and implementation of the project, CERBD asked Preston to serve as Special Advisor.

To help get the first projects launched, WFED's Preston Scott and Thom Minner traveled back to Russia in January 2001 with DOE officials to assist the Russians during their negotiations with Diversa. The four participating Russian institutes hosted some of Diversa's top scientists as they jointly explored development of valuable new research projects. The opportunity for Diversa to meet the Russian scientists face-to-face gave the group the ability to spot new opportunities for valuable non-military projects. This generated immediate new benefits for the Russians and bolstered the proliferation prevention aims of the project.

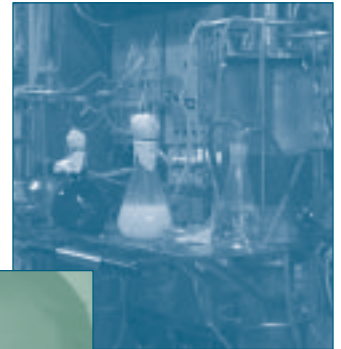
In March, Vera and Preston were invited to attend the 2001 Sam Nunn Bank of America Policy Forum in Atlanta. Former US Senator Sam Nunn of Georgia, together with Senator Richard Lugar of Indiana, have been important and thoughtful leaders in the development of proliferation prevention initiatives. Senator Nunn chaired the 2001 Forum, which focused on economic opportunities and challenges for Russian scientists previously engaged in weapons research and development. Scientists from all over Russia participated in discussions that explored new opportunities to strengthen cooperation between US and Russian scientific and business communities to reduce risks associated with proliferation of Russian military science

In May, CERBD cooperated with Diversa to organize and host a DNA extraction training

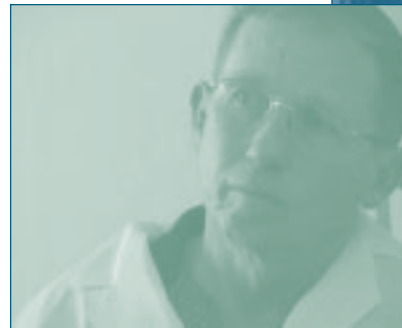
workshop in Pushchino. CERBD also negotiated the first biodiversity access and benefit-sharing agreement with the Prioksko-Terrasny Nature Reserve near Serpukhov—formalizing CERBD's first link with an important conservation area in Russia. In June, CERBD representatives participated in the first national forum on Russian biodiversity, held in Moscow. The focus of the forum was biodiversity management and conservation issues now facing Russia.

WFED continues to assist CERBD as it moves forward with the first phase of its new cooperative research projects with US partners. *

Inside the Institute of Biochemistry and Physiology of Microorganisms.



Dr. Jim Wolfram in a thoughtful moment at one of the participating institutes.



L to R: Vladimir Volkov, Roman Borovick, Thom Minner, Lev Kalakouskii, Rob Rogers, Vera Dmitrieva, Preston Scott, and Bill Toth outside the church and burial place of Catherine Dashkova, 1st president of the Russian Academy of Sciences, Troitskoye village, Russia.



On Watch...

An Interview with Vera Dmitrieva

In early April, Vera Dmitrieva (Executive Director of the new Center for Ecological Research and BioResources Development in Russia) met with Thom Minner (WFED's Director of Communications) to talk about her work . . .

WFED: What is the Center for Ecological Research and BioResources Development?

Vera Dmitrieva: The "Center" is a non-profit partnership created to facilitate participation and implementation of natural products discovery, research, and commercialization activities among various Russian scientific institutes of excellence. The aims of the Center also are to help facilitate pilot project activities consistent with the Convention on Biological Diversity in the Russian Federation.

WFED: Why was the Center created?

Vera Dmitrieva: This effort was part of the Initiatives for Proliferation Prevention program of the US Department of Energy. The Center, the first of its kind in Russia, works with former Soviet bioweapons scientists and US private industry partners on new non-weapons-related research projects that seek to develop and commercialize new products useful to society. The long-term goal of this cooperative project is to assist the Center in becoming a self-sustaining, fully functional Russian institution open to contracting with other leading research organizations and businesses consistent with the aims I described.

WFED: What do you do for the Center?

Vera Dmitrieva: The member Russian institutes gave me their confidence by appointing me Executive Director for which I am thankful to all and will try to do my best to come up to their

expectations and fulfill the Center goals. My main task at this early stage of Center development is to establish a "functioning mechanism" whose "gears" include firm, creative, confident, friendly relations between the first four Center member institutions, making the Center image attractive for other institutions and businesses in this country and abroad, and assuring that the Center's work conforms with Russian legislation (taking into account specifically the laws in the field of biodiversity).

WFED: Why is the Center important for Russia and the United States?

Vera Dmitrieva: For Russia, because it unites several different institutions to fulfill one goal—protection and sustainable use of Russian microbial diversity; it helps the institutes formerly involved in bioweapons research redirect their activities; it creates new working places for Russian scientists and opens new avenues for research and application of their high skills and abilities; it opens possibilities for attracting investments in Russian science from sources other than governmental funding; and it shows an example of a new type of cooperation. For the US, it is a convenient bridge for increasing the mutual understanding of the two countries, which is very important for the future of the peace and security of the whole planet.

WFED: How do you feel the Center has been accepted in Russia?

Vera Dmitrieva: In Russia, it is being accepted with constantly increasing attention. Even the name sounds attractive and different scientists from other institutes are asking about the possibility to join and to bring their projects.

WFED: With WFED's help, you've been able to recently attend several

important meetings in the US. How has this benefited you personally as well as the Center?

Vera Dmitrieva: It has been very important because it increased immensely my understanding of the psychology of Americans, which is of great importance when you start joint work and need mutual understanding; it also increased my knowledge of the American bureaucracy which is very important as well when you start doing international projects; and, of course, also important are new valuable contacts I've made. Everybody understands the fact that one can read many books and articles, but what gives you a real picture is when you speak to people and see everything with your own eyes.

WFED: Tell us a little about your background.

Vera Dmitrieva: Besides being the Center's Executive Director, I also lead the Division for International Programs of the Institute of Biochemistry and Physiology of Microorganisms of the Russian Academy of Sciences. I am a lecturer at Pushchino State University, have published more than 20 papers nationally and internationally, and am the author of the Russian-English Dictionary on Microbiology and the translator of several scientific books.

WFED: Any additional thoughts?

Vera Dmitrieva: WFED's help is highly valuable and necessary especially when dealing with international agreements and other legal and negotiation issues. I hope very much that WFED will continue its help in the further introduction of the Center to the international scientific and business community.

WFED: Thank you, Vera. *

Dr. Nikolai Staritsyn at Yellowstone in September 2001.



Russian Background

Ironically, during the Cold War, a great deal of research was done in the former USSR on brucellosis. The disease was identified as an important pathogen with potential use as a biological weapon. Soviet scientists were provided vast resources to study the disease—as well as vaccines to fight it.

WFED, as a result of its Yellowstone work and expanding Russian contacts, was asked to explore whether any past Russian brucellosis vaccine development research might provide a path for speedier—and more cost-effective—brucellosis vaccine development for Yellowstone bison.

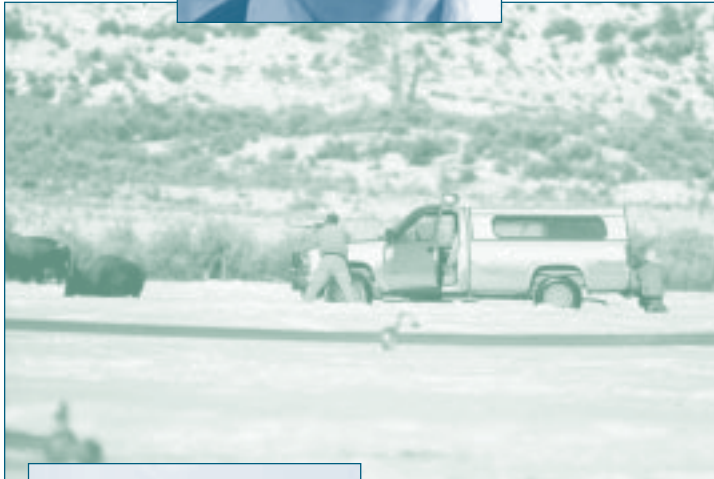
While visiting Russia in January 2001, WFED's Executive Director Preston Scott met with Dr. Roman Borovick (Director of the Research Center of Toxicology and Hygienic Regulation of Biopreparations) and was provided a summary of some of the Russian brucellosis research. His information suggested the existence of brucellosis vaccine strains previously unknown in the US. Dr. Borovick, whose institute is also part of the Center for Ecological Research and BioResources Development which WFED helped create (see related article on page 2), confirmed his willingness to explore the issue further.

The Project

This new information generated great interest at Yellowstone, and steps are being taken to establish a joint US-Russian bison brucellosis vaccine development project. WFED has encouraged the project to produce demonstrable benefits for bison management at Yellowstone. It will also strengthen US-Russian cooperation in connection with development of valuable non-military uses of former Soviet bioweapons science—a perspective applauded by all sides.

Cooperating with experts from the US Departments of Defense, Interior, Agriculture, and Energy, WFED helped convene the first set of cooperative scientific meetings in Washington and at various institutes in Russia to advance the project. In March 2001, the first group of Russian experts traveled to Washington to meet with experts from Yellowstone and other US Government agencies to discuss the status of Russian brucellosis vaccine development as well as to learn more about the Yellowstone brucellosis problem.

In April, WFED joined a US team led by Andy Weber and Jim Wolfram from the US Defense Threat Reduction Agency and traveled to Russia to meet with additional Russian experts (including experts from a former Soviet research institute not previously visited by any US officials). WFED participated in follow-up negotiations in Moscow in July with some of the top US brucellosis experts including Dr. Garry Adams, Texas A&M University; Dr.



Yellowstone bison being shot in Montana as they left the park in the winter of 1998–99. Photo courtesy of the National Park Service.



continued from page 1

ment at Yellowstone was the subject of bitter and costly feuds in federal court. In late 2000, a judicial settlement provided in part for development of a safe and effective brucellosis vaccine for Yellowstone's bison.

While experts agree development of a brucellosis vaccine for free-roaming bison should be possible, no vaccine yet developed in the US has proven effective—largely because there are relatively few wild bison left in the US and no vaccine research firm or government agency has been willing to make the investment required.



Members of the Russian/US brucellosis vaccine development team. Photo by Caroline Saum.

Steve Olsen, US Department of Agriculture; Dr. Ted Hadfield, Walter Reed; Dr. Margaret Wild and Wayne Brewster, NPS; and Dr. David Hunter, Turner Enterprises.

In September, the Russian scientific delegation returned to the US to visit Yellowstone and observe America's wild bison in the field. This was the group's first visit to the national park and Dr. Borovick summed up the team's reaction by remembering, as a boy, he had been amazed to see "a large green spot on a US map." He added he could not imagine that in his lifetime he would ever visit such a natural wonder in the heart of America.

The Future

While the project goal is the control of brucellosis in Yellowstone bison, success is not guaranteed. Nonetheless, the immediate and broader benefits of redirecting former bioweapons science into valuable non-military uses is widely recognized and respected.

WFED is proud to have played a key catalytic part in this challenging and potentially historic scientific project, and will continue to seek ways to stimulate creative approaches to biological resource management that generate demonstrable new benefits for society. *

Walter Cronkite Teams with WFED for New Documentary

WFED and legendary journalist Walter Cronkite have launched plans to produce a new one-hour television documentary on efforts to prevent the spread of weapons of mass destruction around the world—with special focus on cooperative work between Russia and the United States. Filming began in September 2001 during a visit to Yellowstone National Park by an official delegation of Russian scientists who are cooperating with the United States on developing a vaccine to combat brucellosis in Yellowstone's bison (see related article on page 1). Plans are being made for follow-up filming in Russia.

The production will feature interviews by Mr. Cronkite with selected world leaders about the need for effective international action to prevent the spread of biological weapons. The documentary is planned for broadcast in 2002.

Early development funding for the project was provided by the Nuclear Threat Initiative in Washington, DC (co-chaired by Ted Turner and former-Senator

Sam Nunn). Mr. Cronkite also hosted WFED's 1999 award-winning video production, *YELLOWSTONE Revealed*, which was co-produced with Kurtis Productions and with music composed by Grammy Award-winner Chip Davis and performed by Mannheim Steamroller. *



Documentary filming begins at Yellowstone.

Yellowstone Bioprospecting Litigation Update

Appeal Ends Successfully/Environmental Assessment Begins

Opponents to Yellowstone's historic bioprospecting benefit-sharing agreement abandoned the case in the DC Circuit Court of Appeals in December 2000, making Judge Royce Lamberth's April 2000 decision that upheld Yellowstone's bioprospecting initiative the law of the land.

Rejecting the opponents' claims, Judge Lamberth ruled that the agreement is "proper" and "does not conflict with the conservation mandate." The opponents, who lost their substantive case in the federal trial court, dropped their own appeal shortly after the Department of Justice filed the National Park Service (NPS) brief supporting Judge Lamberth's decision to uphold Yellowstone's first

bioprospecting benefit-sharing agreement.

WFED assisted the Justice Department with the federal appellate brief, as well as during the final stages of the federal trial court proceedings. For background on the Yellowstone bioprospecting litigation and related appeal, see *Stewards' Watch*, Vol. 1, No. 1 (Spring 2000) ("Federal Court Approves Historic Yellowstone Bioprospecting Agreement") and *Stewards' Watch*, Vol. 1, No. 2 (Fall 2000) ("Yellowstone Litigation Update").

In accordance with Judge Lamberth's earlier decision, the NPS is conducting an environmental assessment to evaluate the impacts of bioprospecting benefit-sharing agreements in US national

parks. WFED believes that the review represents the first nationwide study of the environmental impacts of bioprospecting benefit-sharing activities ever undertaken by any country. The study is expected to be completed in 2002.

Representing national parks from across the country, NPS natural resource managers met in Washington in February 2001 to discuss the nationwide study. WFED's Preston Scott spoke to the group on bioprospecting and benefit-sharing in other federal agencies and countries.

For more information about the study, consult the NPS website at www.nature.gov/benefitssharing. *

WFED Travels to the Top of the World...

Promoting Biodiversity Conservation in the Kingdom of Bhutan

Situated high in the Himalayas and bordered only by India and China, the mountain Kingdom of Bhutan is home to some of the world's most rare and treasured species including snow leopards, blue poppies, and golden monkeys. The geography ranges from the world's highest snow-capped peaks to verdant subtropical jungles. In an area the size of Switzerland, Bhutan's diversity of landscapes and ecosystems harbors a dazzling array of plant and animal life. Bhutan, known as "The Land of Medicinal Plants," also houses an extraordinarily rich cultural tradition. The Royal Government has prioritized environmental and cultural preservation as key components of the nation's forward-looking strategies.

At the invitation of the Royal Government, WFED organized and conducted a one-week seminar on the fundamentals of biodiversity prospecting negotiations in Bhutan in mid-May 2001. Approximately 40 Bhutanese natural resource managers attended the workshop sponsored by the National Biodiversity Center, the Nature Conservation Division, and the Policy and Planning

Division of the Ministry of Agriculture—all agencies of the Royal Government of Bhutan. This workshop grew out of requests originally made by the Bhutanese after a November 1998 WFED presentation in Lyon, France, at a global conference on 'biotrade' sponsored by the UN Conference on Trade and Development. While WFED has conducted similar workshops in North and South America, Europe, and throughout Africa, this was the first workshop WFED has conducted in Asia.

'Biodiversity prospecting' refers to the search for useful genetic and biochemical information found in nature, and has been identified as a priority conservation action item by the Royal Government.

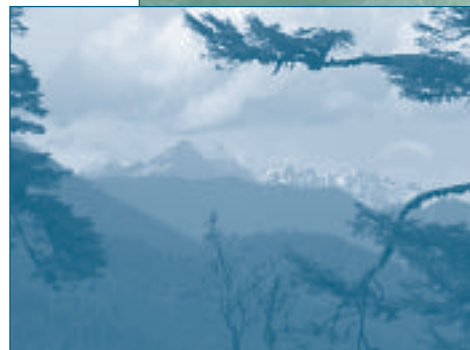
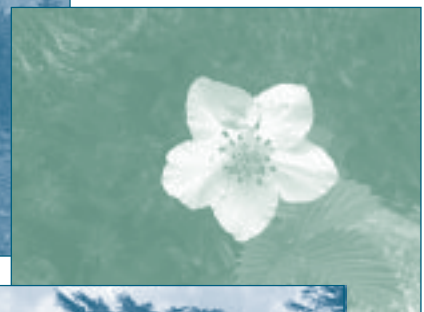
The goals of the one-week workshop were to improve the understanding of bioprospecting management issues, to analyze bioprospecting's role in Bhutan's

biodiversity management priorities, and to identify priority bioprospecting actions for possible implementation by the Kingdom of Bhutan.

Workshop participants reviewed Bhutan's Biodiversity Action Plan, examined selected global bioprospecting case studies, explored current issues relating to intellectual property rights and life sciences research, and discussed ways to design and implement access and benefit-sharing arrangements.

The team included WFED Executive Director Preston Scott; Dr. Lee Talbot (WFED Board Member and Professor of Environmental Science at George Mason University who also helped draft Bhutan's first Biodiversity Action Plan in 1998); John Varley (Chief Scientist and Director of the Yellowstone Center for Resources at Yellowstone National Park); Anita Varley (Director of Wilderness Operations at Yellowstone National Park); Dr. Erich Veitenheimer (intellectual property rights specialist with the law firm Morgan, Lewis & Bockius LLP); and Thom Minner (WFED Director of Communications).

The workshop was designed to help position Bhutan to protect and promote its own interests in the



L to R: John Varley, Sithar Dorji, Preston Scott, Anita Varley, Erich Veitenheimer, Lee Talbot and Thom Minner. *Photo by Jessica Beaghen.*

field of bioprospecting. Preston explained, "Bhutan's current ability to manage access to its biodiversity gives it a great advantage over other countries. We see WFED's role as sharing knowledge we have learned to assist Bhutan in assessing the best ways to protect the country's rights and interests even more effectively. With such assessment, Bhutan can strengthen the protection of its remarkable biological resources and rich traditional knowledge while also generating new benefits that can assist with Bhutan's special development priorities and plans."

Bhutan's National Biodiversity Center was established in 1998. The director, Dr. Ugyen Tshewang, states that the Center's long-term objectives are to identify and meet Bhutan's national needs through rational, sustainable, effective, and equitable approaches to conservation. These objectives extend to the careful use of bioresources in natural and agricultural ecosystems for the benefit of present and future generations and to sustain the environmental well being of the country.

Lyonpo (Dr.) Kinzang Dorji, Bhutan's Minister of Agriculture, stated after the workshop: "I hope we can work together

in the future in giving form and substance to our vision and policy on bioprospecting in Bhutan with an aim to conserve our rich biological resources and at the same time derive economic benefit by those involved in the conservation efforts."

A follow-up report with recommendations for implementation was prepared jointly by WFED and the National Biodiversity Center to aid policy-making and to serve as an update on components of Bhutan's Biodiversity Action Plan relevant to bioprospecting.

WFED is honored to be working with Bhutan as the Royal Government explores these important issues affecting the conservation of its rich natural and cultural resources for the 21st century and beyond. *



Images of Bhutan's rich environmental and cultural heritage.

African Biodiversity Workshops Expand to Benin and Tanzania

WFED's Preston Scott traveled in May 2001 to Cotonou, Benin—and in July 2001 to Dar es Salaam, Tanzania—to continue providing WFED support for the Global Biodiversity Institute's (GBDI) Biodiversity, Biotechnology, and Law Training Courses throughout Africa. The Benin and Tanzanian courses were attended by approximately 100 participants from many sub-Saharan countries throughout East and West Africa. Preston joined Jorge Cabrera and Nicolas Mateo from Costa Rica, Beatrice Chater from FIELD in London, and John and Anita Varley from Yellowstone National Park for a series of presentations concerning the negotiation of bioprospecting benefit-sharing agreements. Other workshop topics were taught by fac-

ulty from the National Cancer Institute, the World Intellectual Property Organization, and other cooperating organizations.

WFED has been cooperating with GBDI's biodiversity management training workshops throughout Africa since 1999. The workshops have been sponsored by the US Agency for International Development and other important donors. Previous GBDI workshops were held in Kenya, Nigeria, and Botswana. In 2000, WFED also was invited to make similar presentations for the South African Agricultural Research Council in Cape Town. (see *Stewards' Watch*, Vol. 1, No. 1 (Spring 2000) ("African Bioprospecting Workshops Applaud WFED's Approach")).

Workshop participants from throughout Africa have praised WFED's practical approach to negotiation of bioprospecting benefit-sharing agreements. Preston explained during an interview on national radio in Benin that the workshops are designed to develop and

share the tools needed to promote effective problem-solving negotiations concerning access and use of biodiversity in Africa. Tanzania was particularly interested in WFED's focus on working with national parks and other conservation areas.

By the conclusion of the workshop in Dar es Salaam, GBDI courses engaged several hundred leaders from 30 African countries spanning the fields of academia, natural resource management, agricultural research, traditional medicine, as well as government and regional organizations (including the Organization for African Unity). While WFED supports continuation of workshops where meaningful negotiation training takes place, Preston has urged decision makers in Africa to explore development and implementation of pilot projects that provide important tangible economic and environmental benefits for more local participants. *



The participants and sights of the Benin workshop.



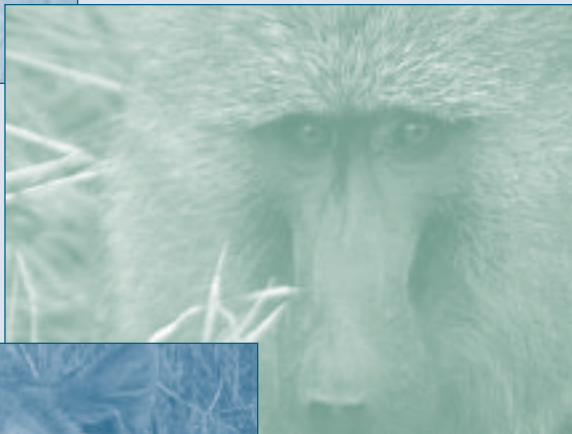
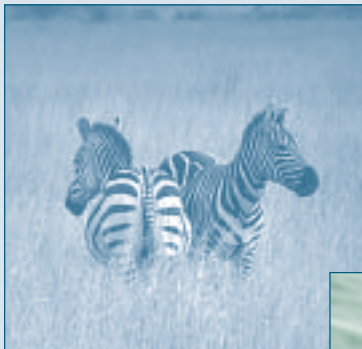


George Wright Society Hosts Forum on Bioprospecting in US National Parks

WFED's Executive Director Preston Scott was invited by the National Park Service (NPS) to speak at the George Wright Society Biennial Conference held in Denver in April 2001. The George Wright Society is the leading organization of conservation area professionals dedicated to the protection, preservation and management of cultural and natural parks and reserves in the United States.

Preston joined NPS Associate Director Michael Soukup, Lindsay McClelland from NPS Headquarters in Washington, Carla Mattix from the Interior Department's Office of the Solicitor, and John Varley and Ann Deutch from Yellowstone National Park for a two-hour presentation about bioprospecting in US national parks.

Speaking to an overflow audience, the panel presented updated information on current issues relating to bioprospecting in US national parks. Special emphasis was on the successful conclusion of the federal court review of the Yellowstone initiative and the status of the NPS' national study of the environmental impacts of bioprospecting benefit-sharing agreements under the National Environmental Policy Act (see related article on page 5). Copies of the conference proceedings are available from the George Wright Society. *



Scenes from Tanzania:
The wildlife of the Serengeti
and the culture of Dar es
Salaam and Zanzibar.

Special Thanks (Again!) to SONY

WFED extends very special thanks to Sony Electronics Inc. and to Leslie G. Gaffney (Director of SONY's Community Affairs Office) for SONY's continuing contributions of advanced photographic and related electronic equipment. WFED's expanding work in many important but remote parts of the world generate numerous opportunities for capturing and sharing images of some of Earth's richest biological and cultural diversity. SONY's contributions of advanced digital photographic and projection equipment will help advance WFED's commitment to environmental education.

"We believe that the goals of the World Foundation for Environment and Development are quite worthy and we appreciate the opportunity to be able to participate in the donation of products," explained SONY's Ms. Gaffney. "We are proud to be involved with this organization through this contribution and support the vital role it plays in the community."

SONY has been a supporter of WFED since 1999, when the company helped sponsor production and distribution of *YELLOWSTONE Revealed*—WFED's award-winning video production narrated by Mr. Walter Cronkite.

Thank you Leslie and Sony Electronics for your continuing support! *

WFED Staff News

Thom Minner joined WFED as Director of Communications in January 2001. Thom comes to WFED from the Smithsonian Institution, where he developed innovative educational programs and public events in connection with Smithsonian activities in the United States and abroad. He is responsible for supervising development of all WFED publications, film projects, media relations, newsletters, and website updates. Thom also will coordinate and organize WFED's expanding international training workshops and public information seminars as well as travel opportunities for WFED's Stewards' Circle.

WFED also welcomed Jeb Gaybrick, Cason Carter, Ricardo Unikel, and Taylor Lankford as 2001 summer interns.

Jeb is a sophomore at the University of Pennsylvania, where he majors in economics and biology. Jeb assisted with communications and general project support while at WFED.

Cason is a second-year law student at Georgetown University Law Center. He graduated from Duke University, where he majored in economics and public policy studies.

Rick is a third-year law student at New York University School of Law, and split his summer at WFED and Morgan, Lewis & Bockius. He received a B.S. in Chemical Engineering with honors from the University of California at Berkeley. Both Cason and Rick provided research assistance in connection with a wide range of domestic and international legal issues relating to WFED projects.

Taylor Lankford is a senior at St. Stephen's & St. Agnes School in Alexandria, where he has been nominated for the school's prestigious Jefferson Scholarship. Taylor volunteered at WFED after completing summer studies at Oxford University in England.

Mansir Petrie joined WFED as Senior Program Associate in October 2001. Mansir comes to WFED from the National Parks Conservation Association, where he researched alternative funding for national parks. A graduate of Grinnell College, Mansir has carried out research in China, Costa Rica, Belize, and Kenya, and will be working on WFED projects in US national parks as well as in Russia and Bhutan. *



Thom Minner



Taylor Lankford

Rick Unikel



Mansir Petrie



Jeb Gaybrick



Cason Carter

New Book About Dan Janzen & Winnie Hallwachs

... and the Restoration of the Tropical Forests in Guanacaste

A few decades ago, many said the restoration of tropical forests couldn't be done. Dan Janzen and Winnie Hallwachs proved them wrong.

A new book (*Green Phoenix: Restoring the Tropical Forests of Guanacaste, Costa Rica* by William Allen) published by Oxford University Press chronicles the inspiring story of Dan and Winnie's lifetime commitment to tropical forest restoration in Guanacaste Province in northwest Costa Rica—detailing how these two remarkable scientists together with their team of Costa Rican partners turned vision into reality against all odds.

The Guanacaste Conservation Area, which now embraces virtually every type of ecosystem found in tropical America from sandy seashore to cloud forests on high volcanic peaks (and everything in between) was recently designated a World Heritage Site by UNESCO. The ecological *heritage* of the *site* has been restored for the whole world largely as a result of the tireless commitment of Dan and Winnie and the many others they influenced and taught who are now working in tropical ecology and forest restoration.

The story is a history of the possible—and a challenge to prophets of doom and the naively optimistic alike. But the work is not over.

The need to acquire additional lands to ensure that the restored ecosystem remains protected for all time is now especially urgent. For more information, visit Dr. Janzen's website (<http://janzen.sas.upenn.edu>) and click on Rincon Rainforest Campaign. If you would like to contribute to the continued restoration of tropical forests in Guanacaste, please contact Dr. Janzen (who also serves on WFED's Board of Directors) at djanzen@sas.upenn.edu.

And in the meantime, read the book! *



Michael Clayton Joins WFED Board

WFED welcomes Michael Clayton—a partner and manager of the Intellectual Property Practice at the law firm of Morgan, Lewis & Bockius LLP—to the Board of Directors.



Michael graduated from the University of Virginia School of Law where he also was an Elizabeth D. and Richard A. Merrill Lecturer in Law. He currently serves as an adjunct lecturer at U.Va's law school, and was the first to teach "Principles and Practice: Regulation of the Competitive Process (Intellectual Property)." Michael is a leading trademark attorney, and has been a long-time supporter of WFED.

Thank you, Michael, for your expanded commitment! *

WFED's Stewards' Program

Individual private support has been valuable in furthering WFED's mission and work over the years. For example, initial support from individuals has enabled WFED to:

- Develop historic biological weapons proliferation prevention programs in Russia.
- Explore exciting new bioprospecting ventures in Bhutan.
- Produce *YELLOWSTONE Revealed*, our award-winning documentary narrated by Walter Cronkite that is now shown daily in Yellowstone's visitor's center.

WFED's work on a global scale presents ongoing financial challenges. Donations help support our efforts at resolving environmental conflicts peacefully and building innovative and sustainable conservation projects worldwide.

WFED's Stewards' Program allows individuals to contribute to WFED directly. To find out more, please contact us to discuss ways that your gift can support WFED's important work.

Or, use the enclosed pre-addressed envelope to mail your contribution today! WFED is a non-profit 501(c)(3) organization and contributions are tax deductible! *

Your support is greatly appreciated!! Thank you!!

Watchwords . . .

In January 2002, WFED celebrates its tenth anniversary. The decision to create WFED came at the end of a noonday walk in Washington. Standing on Pennsylvania Avenue, I asked my good friend and colleague (and WFED's first president) Dr. Jon Martin Trolldalen of Oslo, "If not us, *who?* And if not now, *when?*"

The answers to those simple questions changed more than a few things.

Since then, a little organization with a big name has taken the lead to address many cutting-edge issues facing the world community—and often long before many others even recognized a problem (or, opportunity).

- With the 1992 publication of *International Environmental Conflict Resolution: The Role of the United Nations*, WFED raised international awareness about the transboundary nature of many vexing environment-development issues—noting the need for meaningful new modes of cooperation and new types of leadership if they are to be satisfactorily addressed.
- We were in Jerusalem at the invitation of the United Nations to meet with some of the first Palestinian delegates to what later became the "peace process" to discuss ways of problem-solving involving shared water resources that did not involve a gun—more than six months before the first Norwegian-brokered diplomatic breakthrough between Israel and the Palestinians was announced at the White House.
- We helped the UN Environment Programme launch the first international consensus-building initiative to explore creative ways to address the complex causes of climate change—recognizing the need to balance both the responsibilities and rights of people from so-called developed as well as developing countries.
- At the prompting of colleagues in Costa Rica, WFED took the initiative to get the presidents of both countries to encourage new partnerships between national parks throughout the Mesoamerican region to achieve expanded environmental and economic benefits for an increasingly interdependent regional community finally free from decades of civil war—announced in Braulio Carrillo National Park near San Jose during President Clinton's visit to Central America in 1997.
- We have worked to explore new ways to elevate public appreciation for the value of national parks and other conservation areas in the United States and around the world—from the high Himalayas to the four corners of Africa and throughout the Americas—and created an award-winning internationally acclaimed film about Yellowstone with Walter Cronkite along the way.
- And years before most people had ever heard the word "anthrax" or thought about the terrors of biowarfare except in science fiction, WFED was working with both US and Russian authorities to find creative ways to prevent the spread of bioweapons from the former Soviet Union—a task that has taken on a poignant sense of urgency.

The events of September 11, 2001, have caused people everywhere to question what it takes to keep a free society moving forward. But more than that, those events have triggered a rededication to some of the building blocks of civilized life everywhere—a recognition of strength in diversity, inspiring courage, and boundless creativity coupled with energy to take on the most difficult tasks.

Dag Hammarskjold, while UN Secretary-General, once remarked: "Easy successes with the public are possible for a juggler, but lasting results are achieved only by the patient builder." As we look beyond WFED's tenth anniversary and reflect on the types of challenges that must be satisfactorily addressed in this increasingly interdependent world, we are especially grateful for the contributions of so many people who have been inspired by WFED to re-think the way they see the world around them and support constructive change. If the past is in fact prologue to future, many exciting and challenging days certainly lay ahead.

But perhaps now—more than ever—two of the most critical questions remain unchanged: "If not us, *who?* And if not now, *when?*"

**"Hope is an orientation of the spirit,
an orientation of the heart.
It is not the conviction that
something will turn out well,
but the certainty that something makes sense,
regardless of how it turns out."**

—Vaclav Havel

—Preston Scott