

# STRI newsletter

October 2, 1992

SMITHSONIAN TROPICAL RESEARCH INSTITUTE - Apartado 2072, Balboa, Panamá

No. 42

## TUPPER CENTER SEMINARS

No noon seminars scheduled for Oct 6 and Oct 13.

## PEOPLE

### Arrivals

- Marcia Wendeln, Wright State University, Oct 4-Dec 14, to work on biochemical analysis of nutrients and secondary compounds for herbivore plant resources on BCI.
- Thomas Kursar, Elizabeth Coley and A. Dickerson, University of Utah, Oct 5-Dec 22, to work on photosynthesis in shade tolerant species in relation to leaf lifetime.
- Gordon McPherson and Mick Richardson, Missouri Botanical Garden, Oct 7-Nov 5, to continue work on the flora of Mesoamerica.
- Giles Ewers, Short-term visitor, Michigan State University, Oct 9, to consult with A. Smith.
- Giles Seutin, University of Montreal, Oct 9-Mar 31, to work on evolutionary genetics of Caribbean landbirds.
- Meeting at STRI of the Professional Accomplishment Evaluation Committee (PAEC). Participating this year are: Larry Abile, Robert Caldwell, Robert Ricklefs, Beryl Simpson and Keith Waddington.

### On Budget 1993

STRI will be operating under a Continuing Resolution through October 5th, until the regular FY 1993 budget bills are approved. Under Continuing Resolution no new project or activity may be initiated.

### Sobre el Presupuesto de 1993

STRI seguirá operando bajo la ley de Resolución de Continuidad hasta el 5 de octubre, cuando los recibos del presupuesto regulares del Año Fiscal 1993 sean aprobados. Bajo la Resolución de Continuidad ningún proyecto nuevo ni actividad podrá iniciarse.



On Tuesday, Sep 22, a group of elderly citizens from Brisas del Mar (old Palo Seco) accompanied by sisters of the Mary Nol order, were the first visitors to see the exhibition "Wildflowers of Soberanía National Park" after its official inauguration. Adriana de De León and Beth King, volunteer docents, guided the group and showed them videos related to the exhibit ••• El día martes 22 de septiembre, un grupo de ciudadanos de la tercera edad de Brisas del Mar (antiguo Palo Seco), acompañados de hermanas de la orden de Mary Nol de Palo Seco visitaron la exhibición "Flores Silvestres del Parque Nacional Soberanía. Adriana de De León y Beth King, docentes voluntarias, guiaron el grupo les presentaron videos relacionados a la exhibición.

(Foto: A. Montaner)

## THINGS YOU SHOULD KNOW

### At Tupper Center

- |            |  |
|------------|--|
| Mon, Oct 5 | 8-11:30 am, Curso de Entrenamiento de Guardabosques, Small Meeting Room.   |
| Tue, Oct 6 | 9:30 am-12 noon. Administrative Staff Meeting, Large Meeting Room.   |
| Thu, Oct 8 | 8am-5pm PAEC Meeting, Large Meeting Room.  |
| Fri, Oct 9 | 8am-5pm PAEC Meeting, Large Meeting Room.<br>1-4pm, Evento de Clausura del Seminario de Guardabosques de INRENARE, Exhibit Hall. |

### Audubon Talk

Francisco Delgado, Panama representative of the International Council for Birds Presentation (ICBP) will be giving a talk on Panama's birds at the Panama Audubon Society on Thursday, Oct 8, 7:30 pm at the PCC Training Center. Everyone is welcome.

**Important Notice from Office of Personnel****Aviso Importante de la Oficina de Personal**

The Department of Epidemiology, Ministry of Health, is running AIDS tests for those interested. The testing center is located in Bldg. 265, diagonal to the Gorgas Hospital, and the cost of the test is \$7.50. The results are strictly confidential ••• *La Sección de Epidemiología del Ministerio de Salud, edificio #265, diagonal al Hospital Gorgas, hacen pruebas del SIDA. El costo del examen es de \$7.50. Los resultados son estrictamente confidenciales.*

**Condolences ••• Condolencias**

To Mr. Francisco Sanchez, on the death of his wife Hilaria Castro Martínez on September 17 ••• *La Sra. Hilaria Castro Martínez, esposa de Francisco Sánchez, ayudante de biología en los Laboratorios Marinos de Naos, falleció el 17 de septiembre. Nuestras más sentidas condolencias para sus deudos.*

**Reminder About Recycling Paper****Para Recordar sobre el Papel Reciclado**

In our last batch of recycling paper, we found that color paper, paper clips, staples, paper towels, inter-department envelopes, boxes and general trash was sent for recycling. Please remember that only white paper, without clips or staples is accepted. Your cooperation is appreciated ••• *En nuestro último bulto de papel reciclado, se encontraron papeles de color, clips, papeles de toalla, sobres inter-departamentales, cajas y basura en general. Se agradecerá recordar que únicamente papel blanco, sin clips o ganchos son aceptados. Su cooperación es necesaria.*

**Immigration - ADEA Office**

All temporary visiting scientists (visitors, contracts, fellows, employees) holders of Immigration T. Card extensions or visas, must contact Celideth De León, for departure procedures when their period at STRI terminates. For more information, please read your Immigration Visitors Information Form or contact the ADEA Offices.

**ANNOUNCEMENTS****Columbus Day Special**

The Behavioral Discussion Group will hold an extraordinary meeting on Oct 12 at 5:30pm in the Tupper large meeting room. Cay Craig will host a discussion on *Spider foraging behavior: an evolutionary response to the "cognitive architecture" of their prey*. A brief synopsis and questions to be discussed are available upon request from Ursula Schober (28-4060). For background information, an article by L.A. *Real Science* 253: 980-986 (1991) is recommended. A copy of the paper is available on BCI (Lounge), Gamboa (Bldg 183), Tupper (Lounge) and Naos. If interested in a sub-sandwich to eat during the meeting should contact Ursula Schober by Oct 9.

**Development Officer**

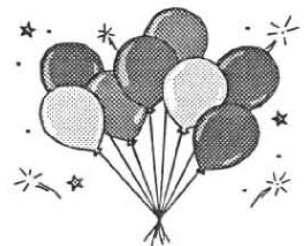
The Smithsonian Tropical Research Institute, a research bureau of the Smithsonian Institution located in the Republic of Panama, seeks an experienced creative Development Officer (Proposal Writer), IS-1001-11 (\$32,423-\$42,152) to work in its Washington, DC office. Incumbent will work with STRI's Director, development staff and scientist to develop proposals for corporate, foundation and individual prospect for STRI's global tropical research programs. Qualifications: Substantial experience in raising funds for environmental research or international programs. For full details please call (202)287-3102 (24-Hours Touchtone Activated Automated Request Center), press 9, and request Vacancy Announcement #92-3101N and a full application package. Applications must be received by Oct 26. The Smithsonian Institution is an Equal Opportunity Employer.

**Attention ••• Atención**

We want to remind all personnel who do not have the new STRI identification cards that the expiration date for old I.D.'s is Oct 31, 1992. For this reason, we have scheduled an intensive final effort to issue the new I.D.'s and photographs for the STRI personnel mural during this month of October. Your cooperation will be appreciated. For more information, please contact Antonio Montaner, Photo Department, Tupper Center ••• *Queremos recordarles a las personas que no han renovado sus carnets de identificación de STRI, que la fecha de vencimiento de los viejos carnets será el día 31 de octubre de 1992. Por esta razón, se ha programado una campaña intensiva final para confeccionar las identificaciones y las fotos para el mural de empleados de STRI durante el mes de octubre. Solicitamos su cooperación. Para mayor información, favor de comunicarse con Antonio Montaner, Departamento de Fotografía, Centro Tupper.*

**STRI October Birthdays**

Hector Guzman	2
David Roubik	3
Monica Alvarado	3
Celideth Mendoza	5
Jorge Ventocilla	12
Enrique Moreno	20
Fernando Oglivie	22
Daniel Millan	26
Richard Cooke	28

**From: 365 Ways to Save our Planet****• Page-a-Day Calendar •****Sources for living green**

- *Saving the Earth: a citizen's guide to environmental action*, by Will Steger and Jon Bowermaster (Knopf).
- *Earthright*, by Patricia Hynes (Prima).
- *Design for a livable planet: how you can help clean up the environment*, by Jon Naar (Harper and Row)

## FROM OTHER SOURCES

### Efforts at STRI Aim to Document Rise of Central American Isthmus

By William Schulz

Smithsonian Office of Public Affairs

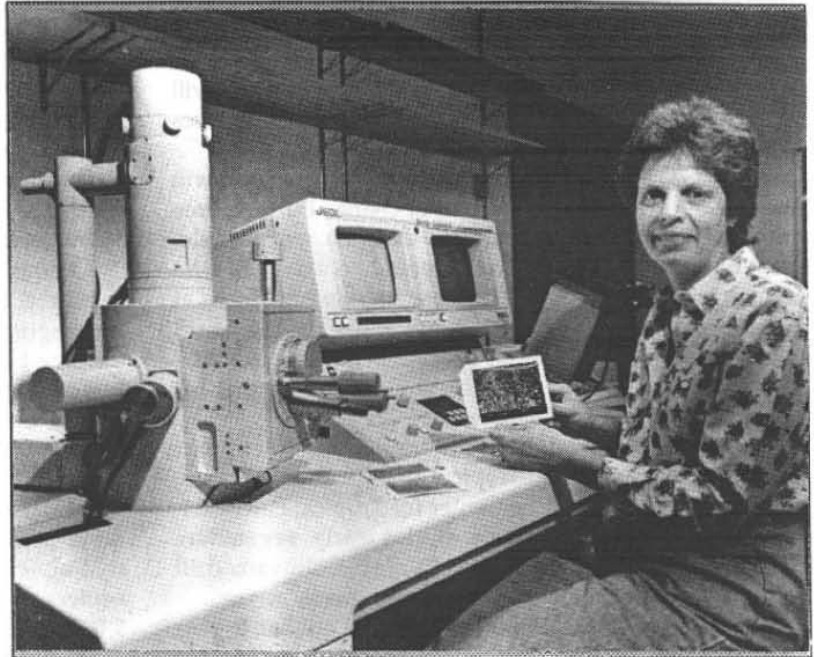
On a grand scale of change in Earth history, few events can match the rise of the Central American Isthmus some 2 1/2 to 3 million years ago. This land bridge connected the plant and animal life of two huge continents—North America and South America—and permanently divided a vast and continuous ocean.

According to experts, however, the big picture on the rise of the isthmus—roughly a region stretching from Costa Rica to Panama's border with Colombia—has begun a full-scale effort through its Center for Tropical Paleoecology to conduct the first comprehensive study of the region of the Central American land bridge since it began its rise from the ocean floor.

A multidisciplinary team of geologists, paleontologists, paleobiologists, archaeologists, anthropologists and others are carrying out intensive field work and laboratory analysis required to assemble a detailed portrait of the ancient past in the Neotropics and its history of human habitation.

"In various ways, we are all looking at the same sets of questions," Dr. Dolores Piperno, a STRI staff scientist, says. "We want to know how communities of plants and animals—marine and terrestrial—have changed over time and how ecosystems and human beings have evolved here, from the time of hunter/gatherer peoples to the rise of agricultural civilizations."

As far as they are understood, the many changes that began with the rise of the isthmus were enormous. The changes affected the biology, geology and climate of the entire planet. The emerging land bridge, for example, is thought to have triggered physical changes far beyond the immediate region, Dr. Anthony Coates,



*Dolores Piperno, STRI scientist, studies fossilized plant remains with the help of a scanning electron microscope ••• Dolores Piperno, del personal científico del STRI, estudia restos de plantas fosilizadas con la ayuda de un microscopio electrónico.*

Foto: M.A. Guerra

STRI deputy director and Center scientist, says.

In the Caribbean, for instance, Coates says, the Gulf stream was greatly strengthened in higher latitudes as the isthmus rose to separate the once-continuous ocean. This redirected current of warm water helped change the distribution of heat on the planet and fed moisture to growing polar ice caps—factors that probably contributed to the dawn of the Ice Age.

Closure of the isthmus also brought changes in the salinity and nutrient levels between what is now the Caribbean and the eastern Pacific Ocean, Coates adds. Major upwelling of nutrients began in the Pacific, for example, which accounts for its immense biological productivity today. Likewise, the rising isthmus spurred the formation in the Pacific of an ocean-warming cycle known as El Niño, which continues to profoundly affect world climate, especially in the tropics.

Because the rise of the isthmus did trigger such widespread global change, Coates and Dr. Jeremy Jackson, a STRI staff scientist who is also scientist-in-charge of the Center, want to develop a highly detailed picture of the event at each stage of its occurrence. Toward that goal, they have begun the first paleobiologic survey of the entire region. Fossil evidence is being used to reconstruct the sequence of events during closure and document the effect of closure on the marine environment.

"We want to go back in time and scale and ask, 'What is the setting in

tropical America for the beginning of the Ice Age?" Coates says.

The survey aims to nail down the timing of the closure of the isthmus, Coates says. The detailed progression will be based on the evolutionary and ecologic responses evident in the fossils of marine organisms collected.

A well-dated history of fossil groups in the region will provide the only data on patterns of change through time for these organisms. In addition, the data will complement ongoing work by several investigators at STRI who are studying the evolution of these marine organisms at the molecular level. "This is the only project in the world where scientists can look at speciation in a 3.5 million-year-old experiment and see the physical barrier that led to speciation events," Coates says.

The ancient vegetation of the tropics and the impact of human habitation on tropical forests are also being studied by scientists at the Center for Tropical Paleocology. To find fossil evidence of this early vegetation, STRI staff scientists Piperno and Dr. Paul Colinvaux drill core samples in the bottom of ancient lakes.

The technique, Colinvaux explains, is similar to sea-floor drilling. In this case, however, the scientists are looking for plant material such as fossilized pollen. Pollen and other plant material can reveal ecological conditions in ancient forests, the composition and distribution of plant communities, and changes that occurred in those communities over time. Colinvaux's goal, as he describes it, "is to reconstruct the (vegetation of the) Ice Age Amazon."

To date, Colinvaux has drilled core samples from several ancient lakes along the equator in the Amazon and in Panama. Results from two lakes in central Panama—La Yeguada and El Valle—have been encouraging. He and Piperno, for example, extracted a complete, transglacial sequence of core samples from the lake at El Valle, the floor of an extinct volcano.

Colinvaux will also study Panama's Darien Province, a region of once dense tropical forest stretching to the border of Colombia. The Darien is especially interesting for paleoecological work, he says, because of the number and diversity of species in the rainforest.

Piperno's specialty is phytoliths-silica bodies that form in the cells of some living plants. These, she says, cast light on the evolution of plants from wild to domestic forms. For example, the phytoliths of maize, a Mexican plant, differ from those of its wild ancestor, teosinte, and also from race to race. Plotting when the phytoliths of particular domesticated species occur in lake and archaeological soils provides information about the evolution of farming systems in the tropics.

Through a number of studies, Piperno's work addresses basic questions of human habitation in the region: When did human adaptation to tropical climates begin? When did people begin living in the forest? How did people adopt agricultural systems?

Studies so far suggest that human habitation in Panama began about 11,000 years ago, Piperno says. Evidence suggests that crop cultivation began about 9,000 years ago.

About 7,000 years ago, Piperno says, the first evidence, fossilized charcoal and remains of maize, for slash-and-burn agriculture appeared. Evidence for large-scale forest clearing began about 3,600 years ago and correlates with higher population densities in the tropics.

As for the isthmus of Panama, she adds, people think of it as a place through which people simply moved. "But we find evidence of early forest occupation here and the development of agriculture." Contrary to other scenarios, Piperno says, fossil evidence suggests that agriculture developed in Panama as early as in the centers of high civilization in the New World - about 9,000 years ago.

Archeologist Richard Cooke, another of the Center's researchers, has spent the last 10 years studying how human groups adapted their way of life to the changing environmental and social conditions of a single watershed in central Panama, whose first known inhabitants had a culture similar to that of the North American Clovis peoples. He uses traditional archaeological data recovered on walking surveys and in excavations to complement lake-core information about human impacts on local forests and their fauna.

Currently, Dr. Cooke is particularly interested in "what humans do with animals." Recently, he has devoted a great deal of attention to fishing in tropical rivers and estuaries. Fishing, a productive method of acquiring food, exerted considerable influence on the way pre-Columbian peoples subsisted and located their settlements.

Twenty to 30 years ago, Cooke says, archaeologists underestimated the importance of fishing because they used defective techniques to recover animal remains. They were not aware of how important it is to make accurate identifications of bones. Tropical organisms, he explains, are very diverse, and different species behave in quite different ways from their relatives.

Cooke hopes the Center will provide a stimulus to researchers from other tropical areas to apply multidisciplinary approaches to the study of past environments.

"The more specialists that are involved," he says, "the more accurate the picture becomes."

## From the Office of Human Resources ••• De la Oficina de Recursos Humanos

How often we forget the little words of thanks, of praise, or encouragement. When we look back at our own life we remember not the gifts we have been given, but the smile, the kiss, the praise that has helped and enriched us. We must pray not to forget to give freely these "little things" to everyone we meet today.

—Barbara Cartland

### The Art of Living

Great art is not restricted to painting, writing, sculpture, or music. There's another art at which we all can excel. It is what Henry Thoreau called the highest of arts—the art of living.

People who practice it are not artists in the usual sense. They are people who, through the nobility of their lives, have affected what Thoreau called *the quality of the day*.

St. Francis of Assisi, Gandhi, and Florence Nightingale come to mind. But years ago, Myles Connolly, the playwright, wrote a piece about what Thoreau was talking about, and Connolly pointed out that there are countless obscure people who practice this art—good people who quietly affect the lives of those about them without even being aware they are doing it, winning no commendation and expecting none.

"Everybody at one time or another has known such people, strangers, relatives, or friends," said Connolly, "who have changed the quality of the day for others. They come into a room in a dark hour—a sickroom, say, or a death room, a room without hope, or merely in an hour when we are lonely or discouraged. They may say little, if anything. But the shining quality of goodness radiates from them, from their mere presence, and where there was dark there is light, where there was cowardice there is courage, and where there was listlessness there is love of life.

"These friends and relatives—or wonderful strangers met at a picnic or a hospital waiting room—all these, humble and unaware, carry with them the kindness and generosity of their lives. These are the greatest artists," say the playwright. "They practice the highest of arts—the art of living, the art of life itself."

### Sense of Humor

As a young Frenchman pushed his son's carriage down the street, the youngster howled with rage. "Please Bernard, control yourself," the father said quietly. "Easy there, Bernard, keep calm!" "Congratulations, Monsieur," said a woman who had been watching. "You know just how to speak to infants—calmly and gently." Then she said, "So the little fellow's named Bernard?" "No, madame," corrected the father. "He's named Andre. I'm Bernard."

Hasta la proxima!

*Carmen Pucce*

Con cuanta frecuencia nos olvidamos de las pequeñas palabras de agradecimiento, de elogio, de aliento. Cuando hacemos memoria de nuestras propias vidas, no recordamos los regalos recibidos sino la sonrisa, el beso, el cumplido que nos animó y nos enriqueció. Debemos orar para no olvidarnos de obsequiar generosamente esas "pequeñas cosas" a todos con quienes nos encontremos. en el día de hoy.

—Barbara Cartland

### El arte de Vivir

El buen arte no está restringido a la pintura, la escritura, la escultura, o la música. Hay otra clase de arte en la cual todos podemos destacar. Es lo que Henry Thoreau llamó el más grande de las artes—el arte de vivir.

Las personas que lo practican no son artistas en el sentido usual de la palabra. Son personas quienes, por la nobleza de sus vidas, han afectado lo que Thoreau denominó *la calidad del día*.

San Francisco de Asís, Gandhi, y Florence Nightingale vienen a la memoria. Pero hace algunos años, el dramaturgo Myles Connolly escribió una pieza sobre el tema tocado por Thoreau, y Connolly señaló que existen innumerables personas obscuras quienes practican este arte—buenas personas quienes calladamente afectan las vidas de los que tienen a su alrededor sin siquiera darse cuenta de que lo hacen, sin recibir elogios y sin esperarlos.

"Todos, en algún momento, hemos conocido a estas personas, extraños, parientes, o amigos," dijo Connolly, "quienes han cambiado la calidad del día para otros. Llegan a una habitación en un momento sombrío—un cuarto de enfermo, o al cuarto de un moribundo, a un cuarto sin esperanza, o simplemente en un momento cuando nos sentimos solos o desalentados. Posiblemente digan poco, o casi nada. Pero su sola presencia irradia una luminosa cualidad de bondad, y donde había obscuridad llega la luz, y donde había cobardía llega el coraje, y donde había apatía llega el amor a la vida.

"Esos amigos y parientes—o esos maravillosos extraños que conocimos en un picnic o en la sala de espera de un hospital—todos ellos, humildes y no concientes de ello, llevan consigo la bondad y generosidad de sus vidas. Estos son los grandes artistas," dice el dramaturgo. "Ellos practican el más grande de todas las artes—el arte de vivir, el arte de la vida misma."

### Sentido del humor

Un joven francés paseaba por la calle a su hijito en un coche; el niño lloraba desesperadamente. "Por favor Bernard, contrólate," decía el papá suavemente. "Calma, calma, Bernard!" "Lo felicito, señor," dijo una señora que había estado observando. "Ud. sí sabe cómo hablarle a los bebés—con calma y suavidad." Luego dijo: "Así es que el pequeñín se llama Bernard?" "No, señora," corrigió el papá. "Se llama Andre. Yo soy Bernard."

## What is an Ombudsman? ••• ¿Qué es un Ombudsman

The Ombudsman is a neutral party to whom employees can bring any work-related problem, concern or complaint that cannot be resolved through normal channels. The Smithsonian Institution considers its employees one of its most valuable resources and created this position in 1977 to provide a vehicle by which any employee could feel free to bring any work-related problem or concern with the expectation of a fair hearing. The Ombudsman will respect confidentiality when requested, will listen to the problem and discuss steps to take to help you reach a fair solution.

The Smithsonian Institution is committed to providing employees a good working environment, and part of this commitment involves making sure that each employee's concerns are heard.

At present, the Smithsonian Institution Ombudsman is Chyandra P. Heilman, who has been in this position since 1983, and with the Institution since 1978. She has a background in counseling and personnel work. She graduated Phi Beta Kappa from the University of Hawaii with a B.A. in sociology, and pursued graduate studies at the University of Wisconsin in counseling and guidance.

### The Ombudsman can help you...

- as a mediator
- as a sounding board
- as a neutral voice
- as an impartial ear
- as a confidential advisor
- as a resource for assistance

### To Talk with the Ombudsman...

Please call, write or make an appointment. The Ombudsman can be reached at (202) 357-3261 (this number is serviced by an answering machine 24 hours a day when the Ombudsman is not available in person) or at:

Room 2101 A & I Building  
MRC 425, Washington D.C. 20560

*This information was provided by the Office of Human Resources; if you would like to have more information, please call Carmen Sucre, Tivoli Building.*

El Ombudsman es un funcionario neutral a quien los empleados pueden presentar problemas, asuntos o quejas relacionadas con el trabajo que no se hayan podido resolver por las vías normales. El Smithsonian considera que sus empleados representan uno de sus recursos más valiosos y creó esta posición en 1977 como vehículo para que cualquier empleado se sintiera libre de presentar problemas o asuntos relacionados con el trabajo, con la expectativa de recibir un trato imparcial. El Ombudsman respetará la confidencialidad cuando así se le solicite, escuchará los problemas y presentará alternativas a seguir para asistir a las personas a llegar a una solución satisfactoria.

El Smithsonian tiene el compromiso de proporcionar a los empleados un buen ambiente de trabajo, y parte de este compromiso consiste en asegurarse de que los asuntos de los empleados sean escuchados.

Actualmente, el Ombudsman del Smithsonian Institution es Chandra P. Heilman, quien ha estado en este puesto desde 1983 y con la institución desde 1978. Ella tiene experiencia en el área de consejería y de personal. Se graduó con honores en la Universidad de Hawaii, obteniendo el título de B.A. en sociología, y posteriormente un post-grado en la Universidad de Wisconsin en consejería y orientación.

### El Ombudsman puede ayudarte...

- como mediador
- como alivio de tensiones
- como una voz neutral
- como un oído imparcial
- como un consejero confidencial
- como una fuente de asistencia

### Para Comunicarse con el Ombudsman...

Favor de llamar, escribir o hacer una cita. El Ombudsman puede ser localizada en el (202)357-3261 (Este número tiene una máquina contestadora 24 horas al día cuando el Ombudsman no está disponible en persona) o en:

Room 2101 A & I Building  
MRC 425, Washington D.C. 20560

*Esta información fue suministrada por la Oficina de Recursos Humanos; si desea mayores detalles, póngase en contacto con la Sra. Carmen Sucre, en Tivoli.*