

# STRI newsletter

March 13, 1992

SMITHSONIAN TROPICAL RESEARCH INSTITUTE - Apartado 2072, Balboa, Panamá

No. 11

## TUPPER CENTER SEMINARS

No noon seminar scheduled for Tuesday March 17.

## PEOPLE

### Arrivals

- Rafael Rodriguez, Exxon fellow from the Universidad de Costa Rica, Mar 15-Jun 15 to work on the mating behavior of *Pseudoxychila tarsalis*.
- Joe Russo and James Fellen, OIRM, Mar 16-21, to evaluate the STRI scientific computing needs.
- Melvin Tyree, Mellon Fellow and Shudong Yang from the University of Vermont, Mar 17-Apr 15, to continue research in the evolution and structure of terrestrial ecosystems.
- Frank Ewers, short term visitor from Michigan State University, Mar 17-Apr 17 to consult with colleagues.
- Paula Jackson, University of Hawaii at Manoa, Mar 17-Apr 31, to work with Guillermo Goldstein on BCI.
- Stephan D. Flint, Mar 17-Apr 6, and Peter Searles, Mar 17-Jun 15, Utah State University, to work with Alan Smith and Klaus Winter on the effects of natural UV-B radiation on plants.

### Departures

- Alan P. Smith, Mar 15-23, on vacation to the U.S.
- Zuleika Pinzon, Oil Spill Project assistant, to Madras, India, Mar 16-May 22, to attend course at the Centre for Research on Sustainable Agricultural and Rural Development of the M.S. Swaminathan Research Foundation.

Published by the STRI Office of Education and Conservation

Supervisor: *Georgina de Alba*  
General Editor: *Argelis Román*  
Associate Editor: *Maria Luz Calderón*  
Editorial Assistant: *Marissa Crespo*  
Contributor: *Gretchen Sotomayor*



*The new Potain crane has arrived on the Isthmus and is being installed by Equipos de Construccion, S.A. in Parque Natural Metropolitano. The crane will stand 36m in height and have a 45m jib, giving researchers access to considerably more canopy area than the previously leased crane ••• La nueva grúa Potain llegó a Panamá y la está instalando Equipos de Construcción S.A. en el Parque Natural Metropolitano. La grúa tiene una altura de 36m y un brazo de 45m, lo que permitirá a los investigadores una área de acceso al dosel bastante mayor a la que brindaba la grúa anterior.*

*(Foto: M.A. Guerra)*

- Hector Guzman, Mar 17-30, to the University of Newcastle, England to continue with sclerochronology work and give a seminar.

## THINGS YOU SHOULD KNOW

### From the Office of External Affairs

If you plan to exit Panama using a MI license plate vehicle, you need authorization from the Ministry of Foreign Affairs and Customs Directorate. To do so, please follow these steps at least one month in advance. For official and private vehicles, a notification in writing should be submitted to the office of the assistant director for external affairs for processing. For official vehicles, the trip should also be authorized by STRI director.

### Deadline for Scholarly Studies Program

Applications for the Scholarly Studies Program funds should be at the STRI Director's office before March 16.

**At Tupper Center**

- Tue, Mar 17 Briefing for the Presidential Commission on the Reverted Lands, Exhibit Hall, 11:30am -2pm.  
Behavior Discussion Group, Large Meeting Room, 5-7pm.
- Wed, Mar 18 *Amigos de la Biblioteca* Meeting, Small Meeting Room, 9-11am.

**Discussion Group Meeting**

The Behavior Discussion Group will hold an extraordinary meeting on Tuesday, March 17, 1992 at 5:00pm in the Tupper Meeting Room. The topic of our discussion will be "Singing as Signaling". For information on "prior reading" material please call Ursula Schober at 28-4060 or Stanley Rand at 27-6022.

**Climbing Course**

There is a possibility that a short-course may be given in June at STRI on rope techniques for climbing trees. A professional instructor would run the course, which would be free. Rope techniques continue to be useful as an adjunct to tower crane and related canopy access techniques. Contact Alan Smith for more information. We need a minimum of 10 people to run the course.

**Center for Tropical Forest Science Workshop**

Scientists interested in permanent plot research in tropical forests are welcome to participate in the Saturday, March 14, and Monday, March 16, sessions of the Center for Tropical Forest Science Workshop on BCI. There will be a late boat at 5pm on Saturday to bring visitors back. Please confirm with V. Liao or D. Millan on BCI.

**ANNOUNCEMENTS****1991-92 Women's Committee Award**

Alan Smith received \$14,000 for the construction of initial facilities at Mpala Research Center in Kenya.

**Sewing Machine ••• Máquina de Coser**

Bettina Engelbrecht, K. Winter's assistant, needs to borrow a sewing machine for a few days. If you can help call her at 62-7495 after work ••• Bettina Engelbrecht, asistente de K. Winter, necesita poder usar una máquina de coser por unos días; si la puede ayudar favor llamar al 62-7495 después de las 5pm.

**For Sale**

Wooden animals and baskets made by the Darien people living in Gamboa are available from Lizzy Leigh. Also, whole wheat flour from General Mills at 20 cents a pound.

**Bellairs Fellowship**

The Bellairs Research Institute, Barbados, established by McGill University has field, laboratory and library facilities to support research in marine related fields including biology, and ecology, behavioral and avian ecology, geography and geology. The Commander C. Bellairs Fellowships support graduate and postdoctoral study and research in residence at the Institute. The value of fellowships is \$20,000 per year for postdoctoral level and \$10,000 per year for graduate, plus travel expenses. For more information and application form visit the STRI Education Office.

**International Seminar**

Focusing on the multiple use land management concept in practice in the National Forests of the United States, the International Multiple Use Land Management Seminar will spend one week examining the management of the subtropical National Forests of Puerto Rico from April 27-May 8. Write John Witherspoon, University of Michigan, School of Natural Resources, Samuel Trask Dana Building, Ann Arbor, Michigan 48109-1115 for more information.

**COURSES ••• CURSOS****Curso en Manejo de Areas Silvestres**

Manejo de áreas silvestres y áreas protegidas, curso corto especial en la Universidad Estatal de Colorado del 17 de julio al 14 de agosto de 1992. Este es un curso en español para profesionales y técnicos interesados en mejorar el manejo de áreas protegidas, reservas naturales, cuencas hidrográficas protegidas, áreas y vida silvestres (incluyendo el manejo de ríos para recreación o protección ambiental). El curso está diseñado para y orientado a funcionarios de campo en América Latina o para estudiantes de habla hispana matriculados en este campo de estudio, quienes actualmente residen en los Estados Unidos. La cuota de inscripción del curso es de \$3,200 y el transporte aéreo es responsabilidad de los participantes o su institución.

Los participantes extranjeros deberán de aplicar inmediatamente a la agencia que lo patrocina y obtener la autorización de asistencia al curso. Las solicitudes de admisión deberán ser recibidas en Colorado State University antes del 1 de mayo de 1992. Favor dirigirse a: Dr. George N. Wallace, Rm. 238 Forestry Building, Colorado State University, Fort Collins, CO 80523. Tel: 303-491-5165, Fax: 303-491-2255.

Se sugiere que se comuniquen a oficinas de agencias internacionales y bilaterales en su país como las de la AID/EE.UU., la Agencia Canadiense para el Desarrollo Internacional (ACDI), OEA, FAO, PNUD, PNUMA, UNESCO (Programa de Patrimonio Mundial), y similares, para buscar financiamiento para el curso, en caso de tener interés y candidatos apropiados.

## STRI PROFILE

by Gretchen Sotomayor

**Ernst Mayr**

Ernst Mayr, whose scientific discoveries rival those of evolutionary biologist Darwin, wraps up a two-month visit at STRI next week. During his stay, Mayr lectured, consulted with scientists and worked on his upcoming paper and book. Mayr's ties with STRI date back 61 years when he first learned of Barro Colorado Island (BCI) while working at the American Museum of Natural History in New York City. He has visited STRI and BCI many times at the invitation of former students, including former STRI director Martin Moynihan and present director Ira Rubinoff. As a mentor, Mayr co-authored the first paper that Moynihan wrote as a student at Princeton University, and later helped him secure funds for a National Science Foundation grant.

German born and educated, Mayr earned his Ph.D. in 1926 at the University of Berlin. In the late 1920s, he led three expeditions to study birds in New Guinea and the Solomon Islands, and in 1932, emigrated to the United States where he worked as curator of birds at the American Museum of Natural History until 1953. He then moved to Harvard University as Alexander Agassiz Professor of Zoology at the Museum of Comparative Zoology, where he served as director from 1961-70 and now as professor emeritus.

Recipient of numerous prestigious awards and appointments, Mayr received the Balzan Prize in zoology, the highest honor in his field, in 1983.

Though Mayr has written countless articles and more than a dozen books on the subject of evolution, he published the first of three landmark books, *Systematics and the Origin of Species*, in 1942. That was followed by the development in 1951 of his theory of peripatric speciation, or how species come into existence, from his taxonomic research at the American Museum. This theory disputed geneticist Richard Goldschmidt's theory of "systemic mutation," who believed that new species resulted from a genetic mutation within one generation and in a single individual. But from his South Seas studies, Mayr saw that species evolved by variation and selection. He proposed that new species evolve from small populations that are geographically isolated from their ancestors.

Peripatric speciation was the central theme of his 1963 book, *Animal Species and Evolution*. In 1982, Mayr published *The Growth of Biological Thought*, a thorough survey of the history of evolutionary biology, and more recently completed a revision of his book, *Principles of Systematic Zoology*, which is available in the STRI bookshop.

At first glance, the man in the blue-and-white flowered Hawaiian-style shirt looks like someone's grandfather on vacation. His face is kind and his relaxed hands balance a plastic shopping bag on his lap as he talks about growing up in Southern Germany.

But a peek into this shopping bag reveals that this is no

ordinary grandfather. It contains letters and manuscripts of scientists eager to bounce their theories off of the world's greatest living evolutionary biologist. And at 87, Dr. Ernst Mayr still faithfully answers each inquiry with a dose of his "detailed criticism," which has been feared and lauded for decades.

"He was a most formidable character. He was not tactful and not afraid to get into fights. He may look meek now, but he was definitely a Richard Nixon when I knew him—lean and with a 5 o'clock shadow," said STRI scientist Dr. Neal Smith.

Smith first met Mayr while working as volunteer at the American Museum of Natural History in New York City. The young Smith, who was assigned to enter data into a specimen catalog, was 13 and very interested in watching birds. As a former employee of the museum, Mayr returned often to conduct research and was one of the scientists who took time to answer questions and offer challenges, Smith recalled. And a few years later, the two had a conversation that the younger scientist still remembers clearly.

At the time, Smith, as an undergraduate senior, was waiting to find out what schools would accept him as a graduate student in ornithology. One day, while working at the American Museum, Mayr asked to see him.

"The curator came in and said 'Dr. Mayr is downstairs and he will see you now,'" Smith recalled. "It was like saying 'God has arrived and he will see you now,' Smith said, rolling his eyes.

Nervous and expectant, Smith went downstairs and passed through large, imposing doors into the room where Mayr was waiting. The great scientist had his back facing Smith when he whirled around with two birds in his hands and said, "What do you think, are they the same or different?" Mayr asked.

"I was thinking, here's my whole career at risk," Smith said, with a slight smile. "I said, 'Well, they look pretty much the same to me.' And Mayr said, 'That's what I think too.'"

Mayr then asked what subject Smith was planning to study in graduate school, to which he replied "the gulls," a topic Mayr discussed in his 1963 book.

"He said, 'ah, yes,'" as though satisfied that someone was planning to study the gull problem, Smith said. "That conversation was a turning point in my career."

In his sweeping and powerful wake, the man who carries himself like a "raised saber," as one writer once put it, has altered history, converted younger biologists through his writings and redirected the course of many careers and lives. His potential to retain knowledge appears unlimited and he is one of the few biologists who can converse easily across disciplines, linking science to history to philosophy. Others



applaud his clarity in expression.

"He kept discussions lively and could anticipate people's arguments five steps ahead of them," said Dr. Mary Jane West-Eberhard, who spent two years at Harvard University as a post-doctoral fellow.

STRI scientist West-Eberhard says that Mayr's 1963 book changed her life. She was in a small group of graduate students who spent a year studying the work, line by line, at the University of Michigan. A thick compendium resulted from their efforts.

"The point is, there aren't very many books that nine people can spend a year picking apart," West-Eberhard said. "Several students from that seminar went on to make important contributions to evolutionary biology."

West-Eberhard, whose research focuses on the evolution of social behavior and phenotypic plasticity, was one of many scientists who participated in a hearty debate with Mayr earlier this month at STRI. Though many issues weren't resolved, such exchanges enhance the sometimes lengthy formulation of ideas. Questions raised by Mayr's book in 1963 surfaced 20 years later, when West-Eberhard's work on social behavior led to thoughts about sexual selection and speciation.

"Even if you may still argue with him about whether the answers were right, the questions were certainly right," West-Eberhard said. "It's been a privilege having him here at STRI."

Dr. Nancy Knowlton's first experience with scientific debate was as an undergraduate in a Harvard University graduate seminar taught by Mayr and Dr. Stephen Jay Gould.

"It really had a profound effect on my career," said the STRI scientist. The course itself was "a combination of terrifying and enlightening," Knowlton said, "and the enlightening part won out."

Each week one student submitted a paper on some controversial topic, and the following week the student had to defend his or her position in questions from other students and the professors.

"I remember the experience vividly, particularly the vigorous argument between Gould and Mayr that occurred on my topic, which was the cause of the Pleistocene extinctions of large mammals," Knowlton recalled. "I confess to being relieved at the time—their argument took so much time that I emerged relatively unscathed."

In a recent conversation, Knowlton and Mayr smiled over the recollection, including the realization that 20 years of subsequent research have supported the position taken by Mayr and Knowlton in the debate. Knowlton said she also enjoyed enormously recent discussions with Mayr about her current interests in sibling species, a topic defined for evolutionary biologists by Mayr beginning in the 1940s.

When Dr. Harris Lessios was searching for a thesis topic, he was drawn to Mayr's 1954 article on speciation.

After reading and re-reading the article, Lessios realized that he wanted to study sea urchin species that were separated 3.5 million years ago when the Isthmus of Panama formed. He came to Panama in 1976 to study sea urchins and is now a STRI staff scientist.

"If it weren't for that article, I don't know where I'd be now," he said, adding that he has greatly benefitted from Mayr's ability to express complex ideas clearly.

"I don't always agree with what he says, but I always understand why he says what he says," Lessios said.

Mayr says he began building his breadth of knowledge with an insatiable curiosity for "everything" and a classical education in Germany.

Born July 5, 1904, in Kempten, Germany, Mayr was the son of a judge who encouraged his son to pursue broad interests, which included nine years of Latin, seven years of Greek and reading books voraciously, sometimes one a day. His father was interested in philosophy and the family house had a large library.

"I just have this tremendous curiosity," Mayr said. "I want to know everything."

By the age of 21, Mayr had earned his Ph.D. from the University of Berlin, choosing to concentrate on taxonomy despite dismissals by professors that the area was dull and obsolete. He still strongly disagrees with that reasoning and regrets that students today might choose other fields over taxonomy because of such misnomers. Mayr, who believes the study of taxonomy provides scientists with a strong, factual basis for further scientific pursuits, chose the field because of his interest in the diversity of animal life and a belief that there were unsolved problems.

After his return from three expeditions in the South Seas, it was a twist of fate that landed Mayr in the United States. In the late 1920s, it was intended that Mayr would replace the retiring ornithologist Ernst Hartert in maintaining 2d baron Lionel Walter Rothschild's collection of mammals and birds in Tring, England, one of the largest single collections in Europe at that time. But when Lord Rothschild encountered unexpected financial problems, he was forced to sell the collection and it was purchased by the American Museum of Natural History. The museum convinced Mayr to come to the U.S. to maintain the collection and after much contemplation—he stayed. In 1935, he married Margarete Simon and together they raised two daughters.

In an excerpt from an article published in 1985, Mayr explains how he views challenges.

"You see, when I'm being 'creative,' I find a statement somebody makes and from the basis of my own intellectual world, from my conceptual framework, from my knowledge, I find that what this person said just simply isn't true or is incomplete. And at that point my brain beings to produce ideas. Maybe you call it intuition. I have called myself a counter-boxer"✱