



STRI NEWS

JUL 10, 2015

What does El Niño mean for Panama this year?

Full story: www.stri.si.edu/issuu.com/strinews/panama

Global El Niño events may produce severe drought conditions in Panama.

Eventos globales de El Niño producen condiciones de sequías severas en Panamá

SEMINARS

BEHAVIOR DISCUSSION GROUP MEETING

Tues., Jul. 14, 2pm
Alyssa Stark

University of Louisville

Tupper Large Meeting Room

Long-term memory of an associative learning task in the fringe-lipped bat

TUPPER SEMINAR

Tues., Jul. 14, 4pm
Juergen Brosius

Wilhelms-Universitaet Muenster

Tupper Auditorium

The pervasive role of RNA in the evolution of gen(om)es and cellular function

BAMBI SEMINAR

Thur., Jul. 16, 7:15pm
Claudio Monteza

STRI

Barro Colorado Island

Beyond the lens: a close encounter with mammals in the Panama Canal Watershed area

WHAT'S HAPPENING AT STRI?

FIELD COURSES and SPECIAL EVENTS

Hydroids Workshop

July 7 – 21

Contact person: Rachel Collin

Nudibranchs Workshop

July 22 – August 6

Contact person: Rachel Collin

Golden Frog Festival

August 14 - 30

Contact person: Jimena Pity

Children at a 2014 Golden Frog Festival event in El Valle / Niños en un evento del Festival de la Rana Dorada 2014 en el Valle





EL CONTRALOR LEOPOLDO LEÓN SE RETIRA DEL SMITHSONIAN

El personal del departamento de contabilidad organizó un desayuno el pasado viernes, 3 de julio para reconocer los logros de Leopoldo León en su último día como contralor.

“Leopoldo León ha sido un empleado clave en STRI durante los últimos 20 años”, comentó el científico Joe Wright. “Él tenía claro que las regulaciones eran destinadas a orientar y no a obstaculizar nuestro trabajo. Él siempre encontró la manera de hacer que las cosas resultaran. Ha sido un placer trabajar con Leopoldo. Voy a extrañar su actitud proactiva, su enfoque en darle solución a los problemas.” Dr. Klaus Winter secundó la opinión de Wright: “Leopoldo ha sido un verdadero aliado de los científicos en STRI. Cuando había un problema, Leopoldo siempre encontraba una solución.”

“Leopoldo compartió nuestra visión de edificar un instituto de investigación de clase mundial en el trópico”, comentó Ira Rubinoff, científico de STRI y director emérito. “Su trabajo contribuyó de manera significativa para que STRI se convirtiera en un líder innovador en áreas como la biología del dosel del bosque, la radio-telemetría, la paleontología, los estudios de la dinámica del bosque y muchas otras áreas de la ecología moderna y la evolución.”

Leopoldo trabajó con científicos individualmente y con los directores de los principales proyectos colaborativos, para asegurarse de que los fondos estaban disponibles para apoyar las actividades en Washington y en los países tropicales de todo el mundo donde los científicos de STRI realizan investigaciones. Entrenó personal de apoyo en todas nuestras instalaciones de investigación y de divulgación en Panamá. También supervisó todo el personal en las oficinas de contabilidad, compras y viajes, además de ser el supervisor de facto de todos los gestores de fondos.

“Aprendí mucho de él”, comentó Marla Díaz, quien ocupa el cargo que Leopoldo ocupó cuando ingresó a STRI en septiembre de 1989: el de analista de presupuesto. “Para él no había tarea demasiado pequeña, siempre y cuando fuese importante para la misión de STRI. Trataba a todos por igual y siempre ha sido muy sencillo y sincero.”

El Sr. León asistió al Instituto Politécnica Rensselaer en Troy, Nueva York, donde recibió una licenciatura en ciencias y luego completó su Maestría en Administración de Empresas en la Universidad de Tulane en Nueva Orleans. De 1973-1988, trabajó en Citibank.

En STRI, en noviembre de 1993, Leopoldo fue ascendido a oficial de Presupuesto y Contabilidad, y en diciembre de 1993, se convirtió en Contralor de STRI.

COMPTROLLER LEOPOLDO LEON LEAVES STRI

The accounting department staff organized a breakfast last Friday, July 3 to recognize the achievements of Leopoldo Leon on his last day as comptroller.

“Leopoldo Leon has been a key employee who made STRI work for the past 20 years,” said staff scientist Joe Wright. “He understood that regulations are intended to guide and not to hinder our work. He always found a way to make things happen. It has been a pleasure working with Leopoldo. I, for one, will miss his can-do, problem-solving approach.” Staff scientist, Klaus Winter seconded Wright’s opinion: “Leopoldo has been a truly supportive ally of the scientists at STRI. Whenever there was a problem, Leopoldo would find a solution.”

“Leopoldo shared our vision of building a world-class research institute in the tropics,” said Ira Rubinoff, STRI staff scientist and director emeritus. “His work contributed significantly to STRI becoming a leading innovator in areas such as canopy biology, radio telemetry, paleontology, the studies of forest dynamics and many other areas of modern ecology and evolution.”

Leopoldo worked with individual scientists and with managers of major, collaborative projects to make sure that funds were available to support activities in Washington and in tropical countries around the world where STRI scientists conduct research. He trained support staff at all of our research and outreach facilities in Panama. At one point he also supervised all of the staff in the accounting, procurement and travel offices as well as being the de facto supervisor of all of the fund managers.

“I learned so much from him,” said Marla Diaz, who holds the position that Leopoldo held when he first came to STRI in September, 1989: budget analyst. “He considered no task too small as long as it was important to STRI’s mission. He even did his own photocopying. He treated everyone equally and has always been very down-to-earth and sincere.”

Leon’s attended Rensselaer Polytechnic Institute in Troy, NY, where he received a bachelor of science degree and then completed his Masters in Business Administration at Tulane University in New Orleans. From 1973-1988, he worked at Citibank.



At STRI, in November 1993, Leopoldo was promoted to Budget and Accounting officer, and in December, 1993, he became STRI's Comptroller.

During his time at STRI, Leopoldo managed major changes instituted locally and by the Smithsonian Institution in Washington. He implemented FundWare and PeopleSoft accounting systems as well as establishing ProFuturo retirement funds for local employees.

"I don't think that people always recognize how smart and innovative Leopoldo is. He loves math," says STRI librarian, Vielka Chang Yau, who went to grade school with him at the I.P.A., the Instituto Panamericano. "The teacher would write math problems on the board and by the time she turned around, Leopoldo had already solved them in his head."

Not only is Leopoldo a meticulous accountant, he is also a meticulous gardener and could be found in his office tending to his tiny cactus gardens or his collection of violets on a special, fluorescent-lighted rack. His love for gardening extended to the arboretum, near the main entrance of the Tupper Center. "That piece of property would have been taken over long ago for other purposes, but Leopoldo insisted that it be kept as a garden," said Stanley Heckadon. "Leopoldo even created a pond with goldfish there at one point."

Leopoldo loves a good book. Not only can one always count on him to recommend a couple of new books spanning topics from business trends to evolution to gardening, he often makes recommendations to the STRI bookstore, which he supervised for many years.

At the farewell breakfast, Leopoldo announced that he is looking forward to spending more time with his wife and three sons and that he would become a grandfather in December. He promises to continue to attend Tuesday science seminars at the Tupper Center.

"I greatly appreciate the support and the insights that Leopoldo offered to me during my first year as STRI Director," said Matthew Larsen. "I look forward to seeing him as a regular participant at our Tuesday seminars"

Durante su tiempo en STRI, Leopoldo logró grandes cambios establecidos a nivel local y de la Institución Smithsonian en Washington. Puso en práctica los sistemas de contabilidad FundWare y PeopleSoft, así como el establecimiento de fondos de jubilación para los empleados locales con ProFuturo.

"No creo que la gente reconozca lo inteligente e innovador que Leopoldo es. Él ama las matemáticas", comentó la bibliotecaria de STRI, Vielka Chang Yau, quien fue compañera de clases en la escuela secundaria en el IPA, el Instituto Panamericano. "La maestra escribía los problemas de matemáticas en la pizarra y para cuando ella se volteaba, Leopoldo ya lo había resuelto en su cabeza."

No sólo Leopoldo es un contador meticuloso, él también es un jardinero meticuloso y se le encontraba en su oficina atendiendo a sus jardines de cactus pequeños o su colección de violetas en un estante especial, iluminado por luces fluorescentes. Su amor por la jardinería se extendió al arboreto, cerca de la entrada principal del Centro Tupper. "Ese pedazo de propiedad habría sido tomado hace mucho tiempo para otros fines, pero Leopoldo insistió en que se mantuviera como un jardín", comentó Stanley Heckadon. "Leopoldo incluso creó un estanque con carpas doradas."

Leopoldo ama los libros. Siempre se puede contar con él para recomendar un par de buenos libros que abarcan temas que van desde las tendencias en los negocios a la evolución o a la jardinería; a menudo hacía recomendaciones a la librería de STRI, la que supervisó durante muchos años.

Durante el desayuno de despedida, Leopoldo anunció que espera pasar más tiempo con su esposa y sus tres hijos y que en diciembre iba a ser abuelo. Prometió continuar asistiendo a los seminarios científicos que se celebran todos los martes en el Centro Tupper.

"Estoy muy agradecido por el apoyo y los conocimientos que Leopoldo me ofreció durante mi primer año como director de STRI," comentó Matthew Larsen. "Espero verlo como un participante regular en nuestros seminarios de los martes".



Dr. David Skorton, 13th Smithsonian Secretary / Dr. David Skorton, Secretario número 13 del Smithsonian.

SMITHSONIAN WELCOMES SECRETARY DAVID SKORTON

Dr. David J. Skorton began his tenure as Secretary of the Smithsonian Institution on Wednesday, July 1.

“I am eager to begin working with the scholars, curators, educators and staff who have made the Smithsonian a world leader in science, the arts, the social sciences and the humanities,” Skorton said.

Before joining the Smithsonian, Skorton served as president of Cornell University for nine years. Educated as a cardiologist, his research focus is congenital heart disease and cardiac imaging and image processing. He is the first medical doctor to lead the Smithsonian.

Skorton was president of the University of Iowa from 2003 to 2006 and a member of its faculty for 26 years. He earned his bachelor’s degree in psychology in 1970 and his M.D. in 1974, both from Northwestern University.

SMITHSONIAN DA LA BIENVENIDA AL SECRETARIO DAVID SKORTON

El miércoles 1 de julio el Dr. David J. Skorton inició su mandato como Secretario de la Institución Smithsonian.

“Estoy feliz de comenzar a trabajar con los académicos, curadores, educadores y el personal que han hecho del Smithsonian un líder mundial en la ciencia, las artes, las ciencias sociales y las humanidades”, comentó Skorton.

Antes de unirse al Smithsonian, Skorton se desempeñó como presidente de la Universidad de Cornell. Es cardiólogo y su enfoque es la cardiopatía congénita y la toma de imagen cardíaca y el procesamiento de dichas imágenes. Él es el primer médico encargado del Smithsonian.

Skorton fue presidente de la Universidad de Iowa del 2003 al 2006 y miembro de su facultad por 26 años. Obtuvo su licenciatura en psicología en 1970 y su doctorado en 1974, ambos de la Universidad Northwestern.



Photo by Jorge Alemán / Foto por Jorge Alemán

STRI ADVISORY BOARD AND FUNDACIÓN SMITHSONIAN MEET IN PANAMA

Staff scientist John Christy hosted members of the Advisory Board and the Fundación Smithsonian at his fiddler crab research site at Culebra Point Nature Center after the biannual board meeting at Naos Marine and Molecular Laboratories.

Due to the generosity of STRI donors, we were able to match a donation of \$1.2M from the Andrew Mellon Fund to support fellowships for the next generation of tropical researchers.

From left to right:

John Christy; STRI Gift officer, Carmen Mullins; Stephen Hoch (AB); Anna Lisa Porras (FS); development officer Lisa Barnett; director, Matthew Larsen; Gladys Gerbaud (FS); Max Harrari; Baty Eleta (FS); Pedro Heilbronn (FS); Tomás Herrera (FS); Thomas Tupper (AB); Program Coordinator, Nelly Florez; Jessica Schaefer, front right and Frances Farabaugh looking out behind Thomas Tupper.

JUNTA DIRECTIVA DE STRI Y LA FUNDACIÓN SMITHSONIAN SE REÚNEN EN PANAMÁ

El científico John Christy recibió a miembros de la Junta directiva y la Fundación Smithsonian en su sitio de investigación del cangrejo violinista en Centro Natural de Punta Culebra, luego de la reunión bianual de la junta en los laboratorios marinos moleculares en isla Naos.

Debido a la generosidad de los donantes de STRI, hemos sido capaces de igualar con una donación de \$1.2 Millones del Fondo Andrew Mellon para apoyar becas para la próxima generación de investigadores tropicales.

De izq. a der.:

John Christy; Carmen Mullins de la oficina de donaciones; Stephen Hoch (AB); Anna Lisa Porras (FS); Lisa Barnett de la oficina de desarrollo; el director de STRI, Matthew Larsen; Gladys Gerbaud (FS); Max Harrari; Baty Eleta (FS); Pedro Heilbronn (FS); Tomás Herrera (FS); Thomas Tupper (AB); Nelly Florez, coordinadora del programa; Jessica Schaefer, (en frente der.) y Frances Farabaugh (detrás de Thomas Tupper)

ARRIVALS

Steve Portugal
Royal Holloway University of
London
Breeding Biology of the Greater Ani
Barro Colorado Island

Mirjam Knoernschild
University of Ulm
Cultural transmission of social
vocalizations in greater sac-winged bats,
Saccopteryx bilineata
Barro Colorado Island

Wiktoria Adamowicz
University of Alberta
Ecosystem Services in the Panama Canal
Watershed
Agua Salud

Melissa Brady
Michigan State University
Exploratory visits
Agua Salud

Ian Cannon
University of Florida
PCP PIRE: Paleontology of the Canal of
Panama
Center for Tropical Paleoecology

Jessica Goodheart
University of Maryland
Phylogenomics of Cladobranchia
and the Evolution of Nematocyst
Sequestration
**Naos Marine Lab, Bocas del Toro and
Tupper**

Megan Connell
University of Texas at Austin
The impacts of density-dependence,
climate and; phenology on plant gene
flow
Panama

Anja Rebelein
University of Erlangen
Underwater light and visual ecology of
marine fishes isolated by the Isthmus of
Panama
Naos Marine Lab and Bocas del Toro,

Jeffrey Burchfield and Phillip Bitzer
University of Alabama in
Huntsville
Ecology of Lightning in Tropical Forests
Barro Colorado Island

Melissa Brady
Predator foraging behavior
Gamboa

Cesar Mares
Food for thought: Does “smart foraging”
explain how primates can afford big
brains?
Barro Colorado Island

stinews@si.edu

Questions/comments
Preguntas/comentarios



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DEPARTURES

Rachel Collin
To Montreal, Canada
For a PhD defense for a PhD student

Rachel Collin
To Bocas Del Toro
For the Bocas Taxonomy training

Ross Robertson
To Reno, Nevada
To attend and present a paper at the
American Society of Ichthyologists and
Herpetologist 2015 annual meeting

Owen McMillan
To Quito, Ecuador
To visit researchers at the Museo
de Ciencias Naturales and the
Universidad de San Francisco de Quito
and for meetings.

PUBLICATIONS

Kelehear, Crystal; Spratt, David M.; O'Meally, Denis O.;
Shine, Richard. 2015. Pentastomids of wild snakes in the
Australian tropics. *International Journal for Parasitology:
Parasites and Wildlife* 3:20-31.

Graham, S.P.; Kelehear, Crystal. 2014. *Spea bombifrons*
(Plains spadefoot). Geographic distribution
Herpetological Review 45:656.

Kelehear, Crystal. 2014. *Liotyphlops albirostris* (White-
nosed blind snake). Predation.
Herpetological Review 45:339.

Graham, S.P.; Kelehear, Crystal. 2015. *Sistrurus tergeminus*
edwardsii (Desert massasauga). Geographic Distribution.
Herpetological Review 46:221.

Kelehear, Crystal; Graham, S.P. 2015. *Thamnophis sirtalis*
(Common garter snake). Diet.
Herpetological Review 46: 277-278.

Graham, S.P.; Kelehear, Crystal. 2015. *Coluber flagellum*
(=Masticophis flagellum) (Coachwhip). Diet.
Herpetological Review 46:67.

Graham, S.P.; Kelehear, Crystal. 2015. *Sistrurus tergeminus*
edwardsii (Desert massasauga). Diet.
Herpetological Review 46:107.

Farneda, Fabio; Rocha, Ricardo; Lopez-Baucells, Adria;
Groenenberg, Milou; Silva, Ines; Palmeirim, Jorge M.;
Bobrowiec, Paulo E.D.; Meyer, Christoph F.J. 2015. Trait-
related responses to habitat fragmentation in Amazonian
bats. *Journal of Applied Ecology*.
DOI: 10.1111/1365-2664.12490

Castillo-Cardenas, Maria Fernanda; Sanjurjo, Oris;
Toro-Perea, Nelson. 2015. Differences in sculpture
and size of pollen grains: new morphological evidence
of diversification in *Pelliciera rhizophorae*, an ancient
Neotropical mangrove species. *Palynology*.
DOI:10.1080/01916122.2015.1045050



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The pervasive role of RNA in the evolution of gen(om)es and cellular function

Juergen Brosius, **Wilhelms-Universitaet Muenster**

TUESDAY, JULY

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4PM

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RNA was one of the first, if not the primordial macromolecule to solidly establish what we define as "life" on this planet. Interestingly, many evolutionary principles observable in extant cells, must already have existed in a cell that relied solely on RNA as its carrier of hereditary material, as well as constituting the major catalytical componentry. After several transitions from the RNA world to the RNP world or extant cells, RNA functions were gradually replaced by proteins and DNA respectively. Nevertheless, the role of RNA as functional entities of the cell and as contributor to genomic plasticity is much more pervasive than ever anticipated. Conversion of RNA to DNA as the new hereditary material has been drawn out for billions of years. The underlying process (termed retroposition) is one avenue to duplicate genes and to match them (by integration into different chromosomal environments) with novel regulatory regions. Also, this process contributes to novel protein coding domains or regulatory regions for existing genes in numerous ways. Within 100-200 million years, retroposition changes the face of genomes of multicellular organisms (with exception of conserved modules). Recruitment of novel genetic moduls out of this continuously changing mass is an important evolutionary force. As an aside, highly abundant classes of retroposed elements can be used as virtually homoplasy-free phylogenetic markers.

Furthermore, RNAs with important cellular functions did not become obsolete or marginalized as messenger RNA. Instead, novel molecules continue to evolve. For example, over the past few years, many non-protein coding RNAs were discovered and their functions elucidated. Cytoplasmic BC1 RNA or small nucleolar RNA Snord116/HBII-85, for example, arose in a common ancestor of a mammalian order or the taxa of placental mammals, respectively. Their deletion in mouse models leads to distinct phenotypes, that can serve as animal models for genetic disease, such as the neurodevelopmental disease Prader-Willi-Syndrome (PWS) in case of Snord116.

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PANAMA

The Neogene History of Tropical American Cone Snails

Jonathan Hendricks, San Jose State University

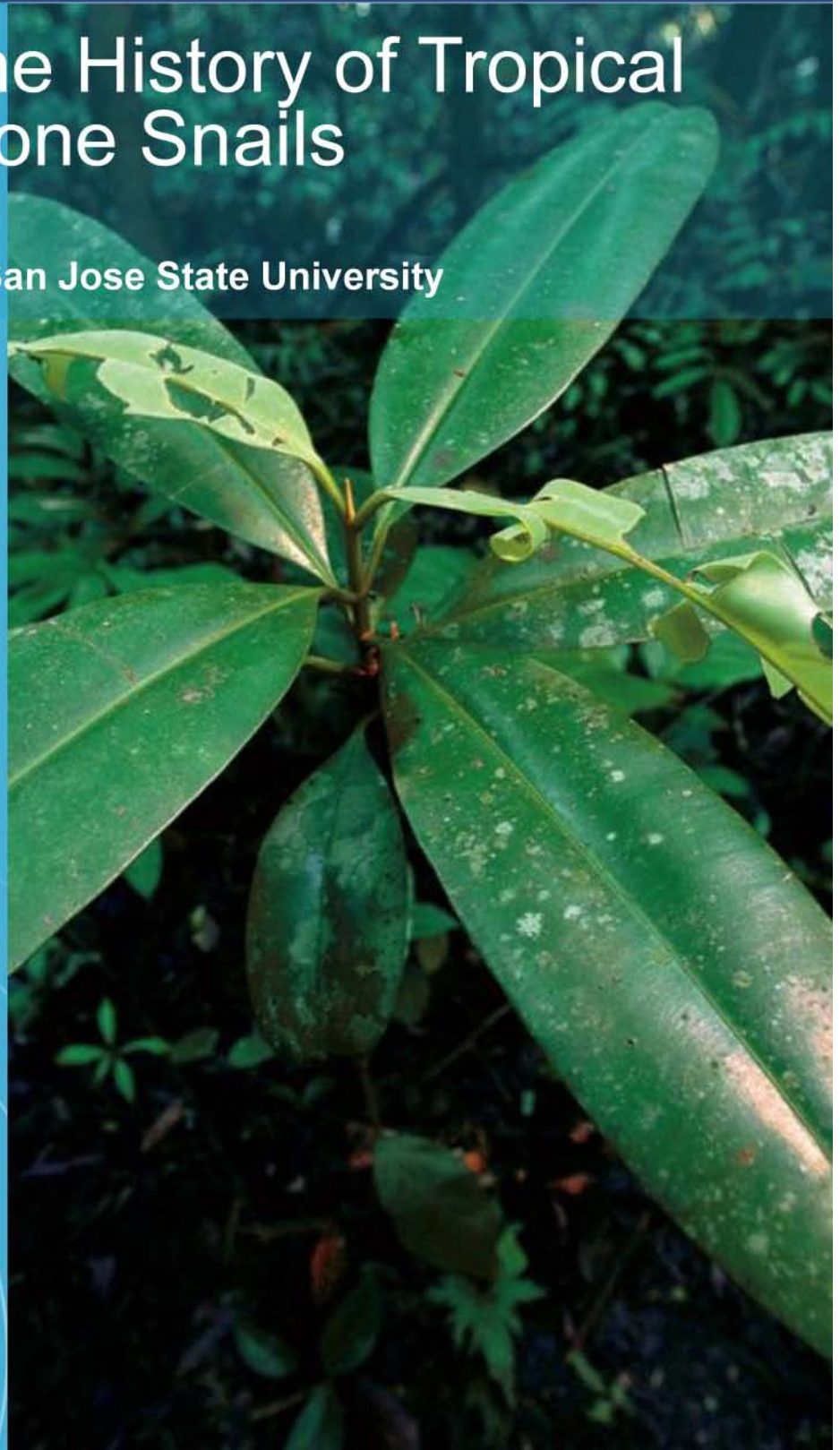
TUESDAY, JULY

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PANAMA

Fossil lianas and the Miocene rainforests of Panama

Nathan Jud, University of Florida

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