

STRI news '98

Smithsonian Tropical Research Institute • P.O. Box 2072, Balboa, Panamá • Tel 227-6022 • Fax 232-5978

TUPPER CENTER SEMINAR

Tuesday, January 20, noon seminar speaker will be Sergey Piontkovski, Plymouth Marine Laboratory, U.K.

Multiscale Spatial Variability of Planktonic Communities of the Tropical Ocean

Abstract

The variability of zooplankton biomass on a scale of thousands, hundreds and tens of km was estimated from the data bank of over 40 expeditions to the Atlantic and Indian Oceans. The max. variability was observed on the thousands of km scale. The local peak of variability of zooplankton biomass in the range of hundreds of km is linked with a high packed field of synoptic eddies observed in the tropical zones of both oceans. Zooplankton variability in the tropical Atlantic exceeded that of the Indian Ocean probably, because the kinetic energy of the currents in the tropical Atlantic is higher than that of the Indian ocean. The spatial heterogeneity of zooplankton biomass distribution in the horizontal plane can be characterized by the frequency of occurrence of patches. On a log scale the frequency of occurrence of different size patches diminishes proportionally with linear size. Zooplankton biomass is distributed more heterogeneously, than that of phytoplankton (chlorophyll "a"). Synchronous measurements of the three-level system "phytoplankton-mesozooplankton-flying fishes" (where each component acts as a prey item for the next one) exhibits the same trend of spatial autocorrelation functions diminishing over the trophic levels on a scale from hundreds to tens of km. This means that relatively heterogeneous fields of predators exists on more uniformly distributed fields of their prey. The spatio-temporal variability of biomass of organisms increases with increasing size of organism at higher trophic level. It is concluded that the diminishing energy flow passing to the trophic levels is accompanied by increasing fluctuations in time and the space of the specific trophic levels.



Recently, Director Ira Rubinoff and Elena Lombardo, STRI and University of Panama Rector, Gustavo García de Paredes (right), presented Panamanian President Ernesto Pérez Balladares, with the Proceedings of 8th International Coral Reefs Symposium, at the Presidential Palace ••• Recientemente, Ira Rubinoff y Elena Lombardo, STRI, y Gustavo García de Paredes (der) hicieron entrega de las Memorias del Octavo Simposio Internacional de Arrecifes Corales al Presidente de la República, Ernesto Pérez Balladares, en el Palacio de las Garzas.

(Foto: Cortesía de la Presidencia)

SPECIAL PRESENTATION

The "Patronato" of the Interoceanic Canal Museum and STRI present photographer Art Wolfe: a slide-illustrated lecture, on Mon, Jan 19, 7pm. Admission \$10. Students \$5. STRI community: free (bring your I.D.)

Tribes: A Camera at Work

Art Wolfe was named photographer of the year in 1996 by *Photomedia Magazine*. His work has appeared in *Smithsonian*, *Life*, *Outside*, *National Geographic* and other international wildlife magazines.

BAMBI SEMINAR

Thu, Jan 22, Bambi seminar speaker will be Nélica Gómez, STRI
Let's Talk About Physiological Discharges of Chrysomelid Larvae!
Transportation and dinner reservations are essential. Call BCI at 272-2124.

NAOS LUNCHEON SEMINAR

Friday, January 23, Naos Marine Lab Luncheon seminar speaker will be Michael McCartney, Scripps Institute of Oceanography, California

Bindin: The True Story

For more information about the Naos Luncheon seminars please contact Bailey Keissing at Naos, ext. 3330 or consult the Web at http://160.111.136.12/Naos_Luncheon_Schedule.html.

THINGS YOU SHOULD KNOW

Scientific Staff Meeting

Please remember that the scientific staff meeting this month will take place on Tue, Jan 20 at 1pm, at the Exhibit Hall. Please note change in the time.

Volleyball Season ••• *Temporada de Volleyball*

Beginning this Friday, January 16 at 5:00 p.m., the STRI community members will start the new volleyball season. The games will be held at the Tivoli parking lot. If you must stay after working hours, please move your vehicle before 5:00 pm to the Tupper parking lot. All official vehicles should also be parked at Tupper on Friday afternoons. These games will be held every Friday until April. Your cooperation is highly appreciated. If you have any questions please call Audrey Smith or Luis Turner ••• *A partir de este viernes, 16 de enero a las 5pm, los empleados de STRI comenzarán la nueva temporada de juegos de "Volleyball". Los juegos se llevarán a cabo en el estacionamiento de Tivoli. Todos aquellos que salgan pasadas las 5pm deberán mover su vehículo antes de las 5pm al estacionamiento del Tupper. Los vehículos oficiales también deberán moverse a Tupper. La temporada de juegos será todos los viernes hasta abril. Se le agradecerá su cooperación. Para mayor información favor ponerse en contacto con Audrey Smith o Luis Turner.*

Reminder ••• *Recordaris*

Monday, January 19, is the commemoration of Martin Luther King Jr. Day, and is a holiday for STRI. The Library will remain closed on Saturday, Jan 17 ••• *El lunes 19 de enero se conmemora el nacimiento de Martin Luther King Jr., en los Estados Unidos, y es día libre para STRI. La Biblioteca cerrará el día sábado, 17 de enero.*

PEOPLE

Arrivals

- Robert Percy, Mellon Senior fellow from the University of California, Jan 19 - March 10, to conduct integrative studies of photosynthesis and whole plant performance in the understory of BCI.
- Vera Thomas, University of Würzburg, Jan 20 - Jun 1, to work with Wolfram Hartung in a study of the control of gas exchange of epiphytic orchids by abscisic acid, on BCI.
- Michelle Waycott, Mellon postdoctoral fellow from the University of Western Australia, and spouse Ainsley Calladine, Jan 20 - Jun 19, to conduct an investigation of Caribbean seagrass population genetics, at Naos.
- Thomas Wood, University of Delaware, Jan 20 - Feb 15, to work with Reginald Cocroft, on the role of communication in social behavior signals and responses in group-living insects (Homoptera: Membridae), in Gamboa.
- Elizabeth Dougherty, Short-term fellow from the University of Pennsylvania, Jan 20 - Jun 1, to study the dynamics of modern conservation and community development practices in rural Panama. She will be in Gamboa.
- Jane McMillan-Brown, Montclair State University, Jan 21 - Feb 4, to conduct studies on the rainforest connection, at BCI.
- Frank Kauff, University of Kaiserslautern, Jan 22 - Feb 24, to study the systematic relationships between Gyalectales and Orbiliaceae, on mainland.
- Steffanie Rottenberger and Anja Schweikert, Julius-von-Sachs Institute, Jan 22 - Apr 15, to study the ecophysiological plasticity of tropical bryophytes and its role in altitudinal gradients of species abundance, on mainland.

STRI IN THE NEWS

"Hanging Out on a Limb", by Maryann Bird. *Time* Special Issue December, 1997 • January, 1998 35.

"Why We Need the Fig Wasp" by Andrew Dobson. *Time* Special Issue, November 1997: 56-57.

NEW STRI PUBLICATIONS

- Backwell, Patricia R.Y., Jennions, M.D. Passmore, N.I. and Christy, John C. 1998. "Synchronized Courtship in Fiddler Crabs." *Nature* 391: 31.
- Harms, Kyle E. and Dalling, Dames W. 1997. "Damage and Herbivory Tolerance Through Resprouting as an Advantage of Large Seed Size in Tropical Trees and Lianas." *Journal of Tropical Ecology* 13: 617-621.
- Hillis, Llewellyn. 1997. "Coralgal Reefs from a Calcareous Green Alga Perspective, and a First Carbonate Budget." In: *Proceedings of the 8th International Coral Reef Symposium, Panama, June 24-29, 1996*: 1: 761-766, edited by H.A. Lessios and Ian G. Macintyre. Panamá, Smithsonian Tropical Research Institute.
- Glynn, Peter W. and Maté, Juan L. 1997. "Field Guide to the Pacific Reefs of Panamá." In: *Proceedings of the 8th International Coral Reef Symposium, Panama, June 24-29, 1996*: 1: 145-166, edited by H.A. Lessios and Ian G. Macintyre. Panamá, STRI.
- Hladik, Annette, Leigh, Jr., Egbert Giles and Bourlière. 1996. "Disponibilités des Ressources Alimentaires dans les Forêt Tropicales: Contexte et Données Récentes." In: *L'Alimentation en Forêt Tropicale: Interactions Bioculturelles et Perspectives de Développement*: 219-242, edited by C.M. Hladik, A. Hladik, H. Pagezy, O. F. Linares, G.J.A. Koppertoppert and A. Froment. Paris: UNESCO.
- Wirth, R., Beyschlag, W., Ryel, R.J. and Holldobler, B. 1997. "Annual Foraging of the Leaf-Cutting Ant *Atta colombica* in a Semideciduous Rain Forest in Panama." *Journal of Tropical Ecology* 13(Part 5): 741-757.
- Miércoles, 29 de abril. Jim Dalling y Julie Velásquez Runk: *La Tagua o Marfil Vegetal y las Comunidades Emberá y Waunán de Darién*
 - Miércoles, 27 de mayo. Gabriel Jácome: *La Pesca en los Arrecifes de Corales en Panamá y Centroamérica*
 - Miércoles, 24 de junio. Roberto Ibáñez: *Los Anfibios de la Cuenca del Canal de Panamá*
 - Miércoles, 29 de julio. Salomón García: *Los Bosques de la Cuenca del Canal de Panamá*
 - Miércoles, 26 de agosto. Tomás García: *El Desarrollo Económico y la Calidad de las Aguas de la Cuenca del Canal de Panamá*
 - Miércoles, 30 de septiembre. Todd Capson: *Las Plantas Medicinales de Panamá*
 - Miércoles, 28 de octubre. Jorge Ventocilla: *La Cacería entre los Kuna de San Blas*
 - Miércoles, 25 de noviembre. Tom Kursar: *El cativo: uso y abuso de un árbol de las selvas panameñas*

RAINS IN BCI AND THE CANAL AREA

Yearly Precipitation ••• Precipitación Anual

by Steve Paton

The total rainfall for BCI in 1997 was 1702.7 beating the previous record low of 1818 set in 1976. The figures in page 4 compare the rainfall for 1997 on BCI with previous years.

The Panama Canal Commission reports that Dry Season began on Dec 9. They also report that total rainfall for the Canal Area last year was 35% below the long-term average. Furthermore, the total inflow into Lake Gatun (which they consider their most important hydrological measure) was lower than in any previous year (previous record was set in 1976) ••• *La precipitación total en la Isla de Barro Colorado en 1997 fue de 1,702.7 mm, rompiendo el récord de sequía de 1976 de 1,818 mm. Las ilustraciones en página 4 comparan las lluvias en la Isla de Barro Colorado en 1997 con los años anteriores desde los años '20.*

La Comisión del Canal de Panamá reportó que la Estación Seca empezó el 9 de diciembre. También reportaron que la precipitación lluviosa en el Area del Canal durante 1997 estuvo 35% más baja que la mediana de años anteriores en mucho tiempo. Más aún, el agua que fluyó al Lago Gatún (el cual es considerado como la medida hidrológica más importante) fue más baja que en años anteriores. El registro más bajo anteriormente fue el año de 1976.

CHARLAS SMITHSONIAN DEL MES '98

Las Charlas Smithsonian del Mes son patrocinadas por el Patronato del Parque Natural Metropolitano y STRI. Se llevan a cabo el último miércoles de cada mes, en el Centro de Visitantes del Parque, Vía Juan Pablo II, 7:30pm. El siguiente es el programa para 1998. Para cualquier consulta favor comunicarse con Stanley Heckadon Moreno, coordinador y presentador de las Charlas.

- Miércoles, 28 de enero. Eldredge Bermingham: *Los Teces de Agua Dulce de Panamá*
- Miércoles, 25 de febrero. Joseph Wright: *La Corriente del Niño y los Bosques de Panamá*
- Miércoles, 25 de marzo. Mireya Correa: *La Botánica de Panamá*

