

# STRI newsletter

AUGUST 17, 1990

SMITHSONIAN TROPICAL RESEARCH INSTITUTE, Apartado 2072, Balboa, Panamá

No. 33

## SEMINARS

### Tupper Center Auditorium

Tuesday, August 21, noon seminar speaker will be Norman Duke, STRI Oil Spill Project.

*The mangrove genus Avicennia: biogeographical insights and evolutionary inferences from analyses of morphology and allozymes.*

Abstract:

*Avicennia* is a common mangrove tree genus occurring around the world chiefly in tropical and subtropical estuarine habitats. It consists of no more than ten species. However, their descriptions were inadequate and unworkable in the field, making it impossible to assess the biogeography and evolution at anything less than the genus level. Recently, these problems were solved for the Indo-western Pacific region, using numerical analyses of morphological parameters. Such analyses reduced the number of apparent species and provided the basis for detailed distribution records. The findings were not conclusive for all taxa, however, so their systematic status was refined using allozyme electrophoresis. Consequently, one morphologically variable and widespread taxon was found to be a single species, *A. marina*, whose genes were concentrated in particular geographic areas. Based on these distributional patterns, there are several novel inferences to be made regarding the evolution of this genus. Thus a Gondwanan origin is proposed, with radiation of at least one species, facilitated via the tectonic dispersal of southern continents.

Tuesday evening, August 21, at 6:30 p.m., Nancy Knowlton, will give the staff evening seminar.

*Cryptic and sibling species.*

Abstract:

Mayr described sibling species as species so similar morphologically that it is difficult to distinguish between them using traditional criteria. This definition confounds two very different kinds of morphologically similar species: those which are very similar genetically, and those which are no more genetically similar than morphologically

distinct, congeneric taxa. Only the former are true siblings; the latter are better described as cryptic species. Moreover, the traditional definition ignores an equally interesting category of siblings, that of morphologically distinct species that are genetically very similar. Knowing where and how often these categories occur within various taxa is critical for understanding speciation and morphological stasis. A decent molecular clock is essential for distinguishing them in practice. In snapping shrimp, cryptic species complicate the study of transisthmian evolution. Symbiotic sibling species complexes suggest the importance of host-race speciation and founder events. Many genera of marine invertebrates are riddled with undescribed cryptic and sibling species.

### NEXT WEEK

Tuesday, August 28, no noon seminar speaker will be scheduled due to archaeology symposium.

## ANNOUNCEMENT

I regret to report the resignation of Dr. Eric Fischer from his position as Deputy Director of STRI, effective September 30, 1990. Dr. Fischer will assume the Senior Vice Presidency for Science and Sanctuaries of the National Audubon Society.

During the past two years Dr. Fischer has made important contributions to the rationalization of the budget preparation process both at STRI and in his participation with the Policy Advisory Group in Washington. His work in consolidating the diverse interests at STRI in Global Change research and as an advocate for this research has been particularly opportune and important.

We wish Eric and Nancy Fischer the best of luck in their move to New York and look forward to Eric's continued collaboration with STRI in his coral reef fish studies at the San Blas station.

Ira Rubinoff, Director

## PEOPLE

## Arrivals

- George Angehr, STRI Liaison Office, August 14, to discuss projects with STRI Director and Education Office personnel.
- Christian D'Orgeix, Virginia Tech, August 16 - November 16, to study multiple paternity of the frog *Agalychnis callidryas* in Gamboa.
- Pathiba Bose, Pondicherry University, August 18 - October 30, to work on distribution of ants (Hymenoptera: Formicidae) on different islands in Gatun Lake.
- Connie Koleman and Cyau-Cheng Lai, Organization for Tropical Studies students, August 19 - 26, to visit BCI to study possibility of future research projects.
- Darlyne Murawski, University of Georgia, August 20 - September 25, to work on causes of genetic structure in tropical tree populations on BCI.
- Noriaki Murakami, fellow of the Japan Society for the Promotion of Science working at the Missouri Botanical Garden, August 23 - 31, to conduct taxonomic studies of *Asplenium obtusifolium*.
- Dolores Piperno, STRI scientist, August 23 - 29, to participate in the Non-Imperial Politics Conference at the Tupper Center.

## Departures

- ◆ August 19 - September 10, Hendrik Wolda, STRI scientist, to Yokohama, Japan, to attend the V International Congress of Ecology.
- ◆ August 19 - August 25, Ira Rubinoff, Robin Foster, Don Windsor, STRI scientists, and Elena Lombardo, Special Assistant to the Director, to Venezuela, to visit the Instituto de Zoología Tropical and consult with various people regarding possible cooperative programs.

## THINGS YOU SHOULD KNOW

## Reminder

Deadline for obligation of FY 90 travel funds is August 31. If you plan any travel, please inform Gloria Maggiori before August 24 so that travel orders can be made and obligated before this deadline.

### Symposium on Non-imperial Politics in the Lands Visited by Christopher Columbus on his Four Voyages to the New World

Dates: August 27th - 31st, 1990

Place: Tupper Conference Center, STRI

Coordinator: Richard Cooke, STRI archaeologist

Experts from the U.S., England, Costa Rica, Colombia, Venezuela, Panama, Canada, Honduras, Nicaragua, Dominican Republic, and Puerto Rico will participate. The symposium is organized around four main topics:

- the natural and physical environment on the eve of colonization,
- endogenous vs exogenous development,
- tribes or chiefdoms,
- differential impacts of European contact and colonization on native peoples.

All scientists, visitors, students and administrative personnel are invited to attend. Presentations will be in Spanish and English. The program will be distributed next week.

#### Internal Guidelines for Use of Tupper Conference Center and Meeting Rooms

- 1) All requests must be channeled in writing through Vielka Vergel or Ana Maria Ford at least **3 working days** before the meeting/event, to allow sufficient time for internal coordination of activities.
  - 2) Reservations will be confirmed upon completion and processing of application form (application forms available from Ana Maria Ford).
  - 3) A responsible person must be appointed for the event in question. The responsible person must arrive early enough to verify that the assigned room and the requested services are ready. This person is also responsible for remaining at the closing of the meeting/event and verifying that the electricity is turned off and the facilities are properly closed and secured. Material such as food and drinks must be secured in the refrigerator and/or locked, as appropriate.
  - 4) In the event that food is to be served, these arrangements should be made directly by the responsible person, obtaining the approval of funding for costs well in advance of the event.
- We recognize that occasional, last minute requests are inevitable, but hope that these can be minimized.

## ANNOUNCEMENTS

## Speciation Seminar

There will be a meeting on Tuesday, August 21, in the larger Meeting Room of the Tupper Center to discuss "speciation" seminar plans for the coming year.

## STRI LIBRARY NEW BOOK LIST

Aquatic chemistry : an introduction emphasizing chemical equilibria in natural waters (W. Stumm & JJ Morgan, 1970) **GB697.S78 STRI.**

Arid Australia (HG Cogger & EE Cameron, eds., 1984) **QH197.A59 1984X STRI.**

Cell culture and somatic genetics of plants (IK Vasil, ed., 1984) **QK725.C37 1984X v.6 STRI.**

Collagen (ME Nimni, ed., 1988) **QP552.C6C66 1988X v.6 STRI.**

Ecological and demographic consequences of a nuclear war (YM Svirezhev, 1987) **QH545.N83S96 1987 STRI.**

Estado actual del conocimiento sobre la totoaba : (Cynoscion macdonaldi), Gilbert 1890 (FR Juárez & E. Ramírez González, 1987) **QL638.S34J912 1987 STRI.**

Magnetostratigraphy (EA Hailwood, 1989) **QE501.4.P35H35 1989X STRI.**

Magnets and magnetic fields (LR Holdridge, 1979) **QC809.M25H72 1979 STRI.**

Management of the forests of tropical America : prospects and technologies : proceedings of a conference / sponsored by United States Agency for International Development and United States Department of Agriculture Forest Service and Office of International Cooperation and Development in San Juan, Puerto Rico September 22-27, 1986 ; Julio C. Figuero Colón (editor), Frank W. Wadsworth (associate editor), Susan Branham (associate editor) (Management of the Forests of Tropical America Conference (San Juan, P.R. : 1986), 1987) **SD153.M25 1986 STRI.**

The Manual of underwater photography (H. De Couet & A. Green, 1989) **TR800.D296 1989 STRI.**

Medio ambiente y asentamientos humanos prehispánicos en el Calima medio (H. Salgado L., 1989) **F2269.S16 1989 STRI.**

Nepal's forest birds (C. Inskipp, 1989) **QL691.N4159 1989 STRI.**

PCR protocols : a guide to methods and applications (MA Innis ... (et al.), 1990) **QP606.D46P36 1990X STRI.**

The Palm-tree of life : biology, utilization, and conservation : proceedings of a symposium at the 1986 Annual Meeting of the Society for Economic Botany held at the New York Botanical Garden, Bronx, New York, 13-14 June 1986 (Society

for Economic Botany (US). Meeting (1986 : New York Botanical Garden), 1988) **SB317.P3S65 1986X STRI.**

Photosynthesis : metabolism, control, and physiology (DW Lawlor, 1987) **QK882.L36 1987X STRI.**

Phylogenetic systematics as the basis of comparative biology (VA Funk & DR Brooks, 1990) **QH367.5.F98 1990 STRI.**

Plant fibers (HF Linskens & JF Jackson, eds., 1989) **QK725.P7125 1989 STRI.**

The Predaceous midges of the world (WW Wirth & WL Grogan, Jr., 1988) **QL537.C37W575 1988X STRI.**

Protein targetting: proceedings of the eighth John Innes Symposium, Norwich, 1988 (KF Chater ... (et al.), 1989) **QP551.J65 1988 STRI.**

Regeneración natural de selvas en la Amazonía peruana, 2 v. (R. Kalliolla et al., 1987-1988) **SD172.A4K35 1987 STRI.**

A Review of the Blennioid fishes in the waters around Taiwan & its adjacent islands (S. Shen et al., 1986) **QL638.B6S44 1986X STRI.**

A Revision of the American papilios (W. Rothschild & K. Jordan, 1906) **QL1.N943 v.13, no.3 STRI.**

The Scid mouse : characterization and potential uses : EMBO Workshop held at the Basel Institute for Immunology, Basel, Switzerland, February 20-22, 1989 (EMBO Workshop (1989 : Basel Institute for Immunology), 1989) **QL737.R6E106 1989 STRI.**

Some aspects of the life history and spawning of the moi (Polydactylus sexfilis (NE Lowell, 1971) **QL628.H3L69 1971 STRI.**

Structure of the magic-number nuclei (LR Holdridge, 1977) **QC793.3.S8H727 1977 STRI.**

Survey of marine communities in Panama and experiments with oil (C. Birkeland et al., 1976) **QH91.8.B4B619 STRI.**

Swidden-fallow agroforestry in the Peruvian Amazon (WM Denevan & C. Padoch, eds., 1988) **F2270.2.B6S95 1988X STRI.**

Techniques for shipboard surveys of marine birds (PJ Gould & DJ Forsell, 1989) **QL677.5.G697 1989 STRI.**

Tertiary and Pleistocene Mollusca from the Galapagos Islands. Landshells of the Galapagos Islands (WH Dall & WH Ochsner, 1928) **QE801.D35 1928 STRI.**

To square with Genesis : causal statements and shamanic ideas in Wayapi (AT Campbell, 1989) **F2460.1.O9C187 1989 STRI.**

Whales, dolphins, and porpoises of the Western North Atlantic : a guide to their identification (S. Leatherwood et al., 1976) **QL737.C4L43 STRI.**

Wonders of the Great Barrier reef (TC Roughley, 1966) **QE566.G7R68 1966 STRI.**

## New Journal

ASFA Aquaculture Abstracts, v.7 (1), 1990- (Ref 5970.A108 STRI).

Journal of Aquatic Animal Health, v.1 (1), 1989- (Serials section).

### Exxon Fellowship and Internship Program

One of the general objectives of the training programs handled through the STRI Office of Education and Conservation is to support the scientific development of students at the university level in areas of STRI research, by providing opportunities for independent research (fellowships) and hands-on training in research methodology (internships).

Through the Exxon Program support is provided for undergraduate students and recent graduates from the Republic of Panama and other developing nations to enable them to carry out projects with the supervision of STRI staff members (fellowships), or to participate as an intern in an on-going project (internships).

In 1989, the Education Office initiated an *Extension Program* to broaden the training experience interns and Exxon fellows receive while at STRI. The program consists of visits to the different STRI facilities, and mini-workshops where current research activities and specific research techniques are presented by STRI scientists and others.

This year the Extension Program has included a visit to the Galeta Marine Lab and visits to other STRI study areas such as the Chagres River. In March a workshop on the *Basics of Scientific Photography* was also presented by Marcos Guerra, from the STRI Photo Lab.

Coordination of this program is possible only through the willing and continued cooperation of scientists, library staff and all administrative staff involved.

