

SEMINAR NEWS

Tuesday, November 21, noon seminar speaker will be Thomas Kursar, University of Utah.

Delayed greening in tropical leaves: an anti-herbivore defense?

Abstract

Many tropical species flush entire canopies of red, white or light green young leaves. In these species, there is a delay of the normal greening process until after leaves have fully expanded and have begun to toughen. Delayed greening involves a delay in the input of chlorophyll, rubisco, nitrogen and energy. Photosynthetic capacity is therefore lower than in species with normal greening. At full expansion, leaves begin to toughen quickly, and rates of herbivory drop by a factor of 4. We suggest that delayed greening has evolved as a mechanism for minimizing losses to herbivores by delaying input of valuable resources until after the leaf is fully expanded and better protected by toughness. These benefits outweigh the costs of forfeited photosynthesis in the shaded understory but not in the high light treefall gaps. This cost evaluation suggests that in the face of herbivory, it is advantageous to have delayed greening in the shade and normal development in the sun. Data from 175 of the most common tree species on Barro Colorado Island confirm that delayed greening is extremely common in shade-tolerant species and rare in gap specialists.

NEXT WEEK

Tuesday, November 28, seminar speaker is James Thomson, State University of New York at Stony Brook.

Determinants of male reproductive success in an insect-pollinated lily.

ARRIVALS

- November 18, Olga Linares, STRI scientist, returns from doing research in France and Africa.
- November 18 - December 18, Gerald Wellington, University of Houston, to study gene flow in populations of eastern Pacific damselfish at Naos.

⇒REQUEST FOR ASSISTANCE←

HELP! I have 4 live caecilians for Marvallee Wake at the University of California at Berkeley. The weather in the US at this time of the year is too unpredictable to trust them to the mail. Is there anyone going to the Bay area in the next month or so that would be willing to transport them for her? They will fit in a box about 4 x 6 x 8 inches (curled up). If you can help, or know of someone who might be persuaded, please contact me at 56-6235 or 62-2008. - Thanks, Stan Rand.

THE METROPOLITAN NATURAL PARK NEEDS YOUR HELP - EL PARQUE NATURAL METROPOLITANO NECESITA DE TU AYUDA

The Board of Directors of the Metropolitan Park has organized a get-together to help collect urgently needed funds for the park. An afternoon "tea" with a presentation on the park and Panamanian dances will be held on Friday, December 1, in the Guaymi Room of the Soloy Hotel, at 5 p.m. As member of the board of directors, we urge all STRI staff to collaborate. Tickets will be sold beginning next week. Contact Celideth Mendoza, tel. 62-1022.

El Patronato del Parque Natural Metropolitano ha organizado una reunión social para ayudar a recaudar fondos necesarios para el funcionamiento del parque hasta fin de año. Un té (con refrescos, presentación sobre el parque y bailes típicos) tendrá lugar el viernes, 1 de diciembre, en el Salón Guaymi del Hotel Soloy, a las 5 p.m. STRI es miembro del patronato, y se le urge a todos los empleados que colaboren. Los boletos estarán a la venta desde la próxima semana. Favor comunicarse con Celideth Mendoza, tel. 62-1022.

PROGRAMA PARA EMPLEADOS

Todavía hay muchos empleados que no han llenado el formulario para el programa *Lo Que Estamos Haciendo*. Favor devolver lo más pronto posible a la Oficina de Educación y Conservación para proseguir prontamente con la programación.

OPEN SEASON: Thrift Savings Plan

Open season for the Thrift Savings Plan (TSP) began November 15, 1989, and runs through January 31, 1990. A small supply of new open season booklets and TSP election forms will be available with each facility secretary. Employees are advised to read the new booklet, even if they already have a Thrift account and do not plan to make any changes this open season. For more information, call Carmen Sucre, Personnel Office, Tivoli.

FROM PROCUREMENT

- Second Request on Mailing Packages... We urge you to pack and wrap packages correctly. This should include instructions on insurance, and custom labels. Please consult with your facility's secretary; we are receiving too many boxes packed incorrectly.
- On Requisitions... All requisitions must pass through Accounting before a purchase order can be processed in Procurement. They must assign an obligation number to your requisition.
- News... Bethesda Research Lab has changed its name to GIBCO BRL TECHNOLOGIES, INC., P.O. Box 6009, Gaithersburg, Ma. 20877. Future requisitions should be addressed to GIBCO BRL. Thanks.

⇒HOLIDAY REMINDER⇐

Thursday, November 28, we celebrate Thanksgiving, a STRI holiday.

COMBINED FEDERAL CAMPAIGN (CFC)

We are nearing the close of the CFC season, and all employees are urged to participate. Contributions to CFC help support numerous U.S. and international voluntary health and social service organizations.

SE NECESITAN ENVASES

Yira Ventocilla necesita envases plásticos (de helado) de cualquier tamaño, para muestras. Favor enviarlos a Naos Lab.

FOR SALE - STRI Mini-Bookstore



Landmark Calendars (Shells, Tropical Fish, Birds, Nature, Islands) \$ 8.00
Engagement Calendar \$ 10.00

STRI LIBRARY - New Books List

Amazonia; bibliografía, 1614-1962 (Instituto Brasileiro de Bibliografía e Documentação, 1963). Ref Z1671.B73a STRI.

Applications of remote sensing to agrometeorology: proceedings of a course held at the joint research centre of the commission of the European Communities in the framework of the Ispra courses, Ispra, Varese, Italy, 6-10 April 1987 (1989). S600.7.R46A67 1989X STRI.

Basement correlation across the north Atlantic (JP Lefort, 1989). QE652.55.N67L44 E1989X STRI.

The challenge of global warming (D. Abrahamson, editor, 1989). QC981.8.G56C42 1989X STRI.

Chemoreception in fishes (TJ Hara, editor, 1982). QL639.1.C48X STRI.

Chromosome maps of *Drosophila* (V. Sorsa, 1988). QH470.D7S67 1988X STRI.

Comparative socioecology (V. Standen & RA Foley, editors, 1989). QL775.C65 1989X STRI.

Derrumbes de las margenes del Canal de Panama: periodo 1909 a 1986 (JO Noriega, 1987). QE599.P2N84 1987 STRI.

A directory of natural resource management organizations in Latin America and the Caribbean (J. Buckley-Ess, editor, 1988). Ref S920.D598 1988 STRI.

Disease diagnosis and control in North American marine aquaculture (CJ Sindermann & DV Lightner, editors, 1988). SH179.S5D57 1988X STRI.

Ecotoxicology: problems and approaches (SA Levin et al., editors, 1989). QH545.A1E293 1989X STRI.

Flowers for all seasons. Spring (J. Packer, 1989). SB449.P223 1989X STRI.

A forest map of southern Africa with the aid of landsat imagery (DW van del Zel, 1988). SD242.A356V217 1988 STRI.

Gap junctions: proceedings of the international conference on gap junctions held at Pacific Grove, California, July 6-10, 1987 (International Conference on Gap Junctions, 1988). QH603.C4I61 1988 STRI.

Gases in plant and microbial cells (HF Linskens & JF Jackson, editors, 1989). QK875.G38 1989X STRI.

Human population biology: a transdisciplinary science (MA Little & JD Haas, editors, 1989). GN62.8.H86 1989X STRI.

A hundred years of anthropology (TK Penniman, 1970). GN17.P41 1970 STRI.

Indexed bibliography on the flowering plants of Hawaii (SW Mill et al., compilers, 1988). Z5358.U5H34 1989X STRI.

Larval fish and shellfish transport through inlets (MP Weinstein, editor, 1988). QL639.25.L33 1985 STRI.

Macrophage plasma membrane receptors: structure and function: proceedings of a meeting in Oxford, March 1987 (S. Gordon, editor, 1988). QR185.8.M3M32 1987 STRI.

Manual of the leafy hepaticae of Latin America (MH Fulford). QK557.4.A1F96 1963 STRI.

Medicinal plants of China (JA Duke & ES Ayensu, 1985). QK99.C448D85 1985X STRI.

Molecular and cellular basis of social behavior in vertebrates (J. Balthazart, editor, 1989). QL775.M65 1989X STRI.

Numerical modeling of water waves (CL Mader, 1988). QA927.M29 1988X STRI.

Panama en cifras (Dirección de Estadística y Censo). Ref HA851.N83X STRI.

Parasitic fauna of reservoir fishes of the USSR and its evolution (NA Izyumova, 1987). SH175.I9313 1987X STRI.

Peregrine falcon populations: their management and recovery (TJ Cade et al., editors, 1988). QL696.F34P43 1988 STRI.

The physiology of the compound eyes of insects and crustaceans: a study (S. Exner, 1989). QL495.E9613 1989X STRI.

Plant cell biotechnology (Pais, MSS et al., editors, 1988). TP248.27.P55N37 1987X STRI.

Remote sensing in the marine environment: a description of facilities, applications, needs and opportunities in South Africa (LV Shannon & LY Shackleton, 1988). QH195.S6S52 1988 STRI.

Research needs in the Transkei and Ciskei coastal report zone: report on a workshop held at Mpekwani, Ciskei on 3 March 1988 (GM Branch & LY Shackleton, editors, 1988). QH541.5.C65R43 1988 STRI.