

SEMINARS - ANCON CONFERENCE ROOM

The noon seminar on Tuesday, DECEMBER 15, will be given by ANDREW PULLIN from the University of Leeds. His subject:

Life History Strategies of Urtica dioica and its Associated Nymphalid Butterflies.

ABSTRACT: The stinging nettle, Urtica dioica has become a common, and often the most 'apparent', plant of disturbed grazing habitats in northern and western Europe. It is defended by stinging trichomes but otherwise is very nutritious and has a large and diverse insect fauna. The associated nymphalid butterflies exhibit a range of life history strategies and their evolution is considered in the light of changes in distribution and abundance of the host plant.

THAT EVENING at 7 p.m. the monthly scientific staff seminar will be given by HARIS LESSIOS, who will speak on "Mass Mortality and Subsequent Population Dynamics of Diadema antillarum". Snacks will be available as usual at 6:30 p.m.

NEXT WEEK

The noon seminar on Tuesday, December 22, will be given by MITCH AIDE from the University of Utah. He will speak on:

Leaf Productivity, Insect Herbivory, and Evolution of Plant Phenologies.

ARRIVALS & DEPARTURES

December 14 - Arriving, WILLIAM DAVIS, from the University of Texas at Austin, to continue his study on the evolution of sex roles and mating strategies in kingfishers. He will be at Portobelo until June.

December 14 - Arriving, DAVID ERHART, to work on BCI on Dr. A. Smith's project for 4 days.

December 16 - Arriving, KATIE SIEVING, from the University of Illinois, to continue her study on the effects of insularization in a tropical forest avifauna. She will be at BCI and Gamboa until August.

December 17 - Arriving, PAUL GARBER, from the University of Illinois, to work with D. Rasmussen on the feeding ecology of the Panamanian tamarin. He will be at Agua Clara, Gatun, until February.

December 18 - Arriving, DIANE DE STEVEN and MARGARET KUCHENREUTHER, from the University of Wisconsin, to study the dynamics of tropical tree seed production. They will be on BCI until January 15.

SEMINAR NEWS

Plans to change the time of the Tuesday noon seminar have been postponed indefinitely due to scheduling difficulties.

1987 PUBLICATIONS BY STRI STAFF, FELLOWS & RESEARCH ASSOCIATES

Brawn, J.D. 1987. Density effects on reproduction of cavity nesters in northern Arizona. *Auk* 104: 783-787.

Windsor, D.M. 1987. Natural history of a subsocial tortoise beetle, Acromis sparsa Boheman (Chrysomelidae, Cassidinae) in Panama. *Psyche* 94(1-2): 127-150.

Wright, S.J. and H.F. Howe. 1987. Pattern and mortality in Colorado desert vegetation. *Oecologia* 73(4): 543-552.

REMINDER

December 15, at 9:30 a.m., is the monthly scientific staff meeting.

FERS CONVERSION OPEN SEASON

You are reminded that the open season for conversion to the new Federal Retirement System (FERS) runs through December 31. Each eligible STRI employee should have received (1) a FERS transfer handbook, (2) an election of coverage form, and (3) a request form for Social Security earnings' history. If you think you are eligible and have not received these items, please call C. Sucre.

FROM THE OFFICE OF EDUCATION AND CONSERVATION

As part of the ongoing public education program of this office, Jorge Ventocilla will be giving two talks on STRI history and activities. On Monday, at 4 p.m. in the Ancon Conference Room, the talk will be given to members of A.N.C.O.N., Fundación PANAMA, IRHE and others. STRI personnel is invited to attend. On Tuesday, at 9 a.m. in the INRENARE offices, the talk will be presented to heads of departments and other invited guests.

FOR SALE

Toyota Starlet, 1981, \$1800 or best offer. If interested call B. Bock or M. Aide at 52-2142/2124.

LOST

White metal easel. If found call J. Ventocilla at 62-2014.

LIBRARY NEWS

New books:

- ANIMAL NUTRITION(Aron A. Bondi, 1987) Translation of: Hazanat baale-hayim) SF95.B615513 STRI
- BEGINNING OF THE AGE OF DINOSAURS: FAUNAL CHANGE ACROSS THE TRIASSIC-JURASSIC BOUNDARY(Kevin Padian, editor,1986) QE841.B39 STRI
- BIOLOGICAL CHEMISTRY OF MARINE COPEPODS(E.D.S. Corner and S.C.M. O'Hara, 1986) QL444.C7B56 STRI
- CELL DIVISION CYCLE IN PLANTS(J.A. Bryant, and D. Francis, editors, 1985) Society for Experimental Biology Seminar series;26 QK725.C377 STRICLAY MINERALS AND THE ORIGIN OF LIFE(A.G. Cairns-Smith and H. Hartman, 1986)QE389.625.C54 STRI
- DEVELOPMENTAL BIOLOGY OF PLANTS AND ANIMALS(C.F. Graham and P.F. Wareing, editors,1976)QH491.D43 STRI
- ECOLOGICAL REQUIREMENTS OF SIX SPECIES OF CARDINAL FISHES(genus APOGON) IN SMALL GEOGRAPHICAL AREAS OF HAWAII(E.H. Chave, 1971) Microform 1070
- ENCYCLOPEDIA OF CACTI(Willy Cullmann,E.Gotz and G. Groner,1986) translated by Keith M. Thomas SB438.C8513 STRIREF
- EVOLUTION AND ESCALATION: AN ECOLOGICAL HISTORY OF LIFE(Geerat J. Vermeij,1987) QH371.V5 STRI
- FUNGAL COMMUNITY: ITS ORGANIZATION AND ROLE IN THE ECOSYSTEM(D.T. Wicklow, and G.C. Carroll, editors,1981)QK604.F86STR I
- GEOLOGY OF CENTRAL AMERICA(R.Weyl,1980) 2nd rev. ed. QE210.W413 STRI
- GREEN MACHINES(N. Calder,1986) TP248.2.C35 STRI
- GROWTH OF A PREHISTORIC TIME SCALE: BASED ON ORGANIC EVOLUTION (W.B.N. Berry,1987) rev ed. QE508.B53 STRI
- INTERNATIONAL SYMPOSIUM ON TRICHOPTERA(5th:1986:Lyons,France) (M. Bournaud and Henri Tachet, editors,1987)QL516.I57 STRI
- INTRODUCTION TO PHOTOBIOLOGY: THE INFLUENCE OF LIGHT ON LIFE. (Y. Le Grand,1970) Translated by M. Peckham and L. Williamson,from the France) QP475.L47413STR I
- MATHEMATICS AND PLANT PHYSIOLOGY(D.A.Rose and D.A.Charles-Edwards,1981) Experimental Botany;v.17 QK10.2.M37 STRI
- MOLECULAR BIOLOGY: A COMPREHENSIVE INTRODUCTION TO PROKARYOTES AND EUKARYOTES(D.M. Freidfelder,1983)QH506.F73STR I
- PALYNOLOGY OF ARCHAEOLOGICAL SITES(G.W. Dimbleby,1985) CC79.5.P58D56STR I
- PHOTOPROCESSES,PHOTORECEPTORS,AND EVOLUTION(Jerome J. Wolken,1975) QH515.W64 STRI
- PHOTOSYNTHETIC PROKARYOTES: CELL DIFFERENTIATION AND FUNCTION,PROCEEDINGS OF THE SPECIAL FEBS MEETING...(G.C.Papageorgiou and Lester Packer, 1983) QK569.C96S64 STRI
- PHYLOGENETIC SYSTEM: THE SYSTEMATIZATION OF ORGANISMS ON THE BASIS OF THEIR PHYLOGENESIS(Peter Ax,1987)QH367.5.A913 STRI
- PHYSIOLOGY OF DEEP DORMANCY IN SEEDS(M.G. Nikolaeva,1969)QK661.N69E1969
- PLANT HORMONES AND THEIR ROLE IN PLANT GROWTH AND DEVELOPMENT(P.J. Davies, editor,1987)QK731.P595 STRI
- POSITIONAL CONTROLS IN PLANT DEVELOPMENT(P.W. Barlow and D.J. Carr, editors,1984)QK665.P67 STRI
- SEX IN PLANTS (L.I. Dzhaparidze,1967) QK827.D99 STRI
- STRUCTURE AND FUNCTION OF CHLOROPLASTS(Martin Gibbs, editor,1971) QK882.S92 STRI
- APPLICATIONS OF INFRARED,RAMAN, AND RESONANCE RAMAN SPECTROSCOPY IN BIOCHEMISTRY(Frank S. Parker,1983)QP519.9.S6P37STR I
- APPLIED AND FUNDAMENTAL ASPECTS OF PLANT CELL, TISSUE, AND ORGAN CULTURE (J. Reinert and Y.P.S. Bajaj, editors,1977)QK725.A66 STRI
- BEHAVIOR OF THE BULLFROG(RANA CATESBEIANA)WITH SPECIAL EMPHASIS ON VOCALIZATION(Richard Arthur Kolsop,1973) QL668.E27K82 STRI
- BIRD OF TIME: THE SCIENCE AND POLITICS OF NATURE CONSERVATION, A PERSONAL ACCOUNT(N.W. Moore,1987)QH75.M66STR I
- BIOLOGICAL MEMBRANES(Robert M. Dowben, et al,1969)QH601.D74STR I
- BIOLOGICAL RHYTHM RESEARCH(A. Sollberger,1965)Q527.S68 STRI
- BIOLOGY OF INORGANIC NITROGEN AND SULFUR(H. Bothe and A.Trebst, editors, 1981)QR92.N6B56STR I
- BIOLOGY OF SYMBIOTIC FUNGI(Roderic Cooke,1977) QK604.C63STR I
- BIOLOGY OF THE FUNGI,THEIR DEVELOPMENT,REGULATION, AND ASSOCIATIONS (Ian K. Ross,1979)QK603.R67 STRI
- BIOPHILOSOPHY:ANALYTIC AND HOLISTIC PERSPECTIVES(Rolf Sattler,1986) QH331.S255STR I
- CHALLENGING BIOLOGICAL PROBLEMS:DIRECTIONS TOWARDS THEIR SOLUTION. (John A. Behnke,editor,1972)QH333.B419STR I
- CHEMISTRY OF ALLELOPATHY:BIOCHEMICAL INTERACTIONS AMONG PLANTS. (Alonzo C. Thompson,editor,1985)QK898.A43C44STR I
- CYTOSKELETON IN PLANT GROWTH AND DEVELOPMENT(Clive W. Lloyd, editor, 1982)QK725.C97STR I
- DICTIONARY OF BIOCHEMISTRY(J.Stenesh,1975)QP512.S73STR I
- DRINKING WATER DETOXIFICATION(M.T. Gillies,editor,1978)TD430.D77STR I

ECOLOGICAL AND BIOLOGICAL EFFECTS OF AIR POLLUTION.(G.M. Woodwell,
 et al, editors,1973) RA576.E25STRI
 ECOLOGY OF MICROBIAL COMMUNITIES(M.Fletcher,T.R.G.Gray and J.G. Jones,
 editors,1987)QR100.S63STRI
 ENCYCLOPEDIA OF MICROSCOPY AND MICROTECHNIQUE(Peter Gray,editor,1973)
 QH203.G8STRIREF
 ENZYME NOMENCLATURE (Commission on Biochemical Nomenclature,1973)
 QP601.C736 STRI
 ENZYMES OF BIOLOGICAL MEMBRANES(Anthony Martonosi,editor,1976)
 QH601.E58STRI
 FUNDAMENTALS OF THE FUNGI(Elizabeth Moore-Landecker,1982)QK603.M62 STRI
 GEL ELECTROPHORESIS OF NUCLEIC ACIDS; A PRACTICAL APPROACH(Rickwood
 and B.D. Hames, editors,1982)QP519.9.E434.G31 STRI
 GENE: ITS STRUCTURE,FUNCTION, AND EVOLUTION(Lawrence S Dillon,1987)QH430.D539
 GENETIC MECHANISM AND THE ORIGIN OF LIFE(L.S. Dillon,1978)QH430.D54STRI
 GIBBERELLINS AND PLANT GROWTH(H.N. Krishnamoorthy, editor,1975)
 QK898.G45G5STRI
 GUIDE TO LEHNINGER'S PRINCIPLES OF BIOCHEMISTRY;WITH SOLUTIONS TO PROBLEMS
 (Paul Van Eikerens,1984)QH345.V25 STRI
 GUIDE TO MARINE COASTAL PLANKTON AND MARINE INVERTEBRATE LARVAE(DeBoyd L.
 Smith,1977) QH91.8.P5S64 STRI
 HORMONES AND REPRODUCTION IN FISHES, AMPHIBIANS, AND REPTILES(D.O. Norris
 and R.E. Jones, editors,1987) QL639.2.H67STRI
 INTRODUCTION TO BIOLOGICAL RHYTHMS(John D. Palmer,1976)QH527.P34STRI
 INTRODUCTION TO BIOLOGICAL RHYTHMS(D.S. Saunders,1977)QH527.S24 STRI
 INTRODUCTION TO PLANT CELL DEVELOPMENT(J. Burgess,1985)QK725.B76STRI
 INTRODUCTION TO THE FINE STRUCTURE OF PLANT CELLS(M.C. Ledbetter and
 Keith R. Porter,1970)QK725.L47STRI
 LAKE AND RIVER POLLUTION:AN ANNOTATED BIBLIOGRAPHY(E.Sinha,1971)Z7173.W3S61
 LICHEN SYMBIOSIS(V. Ahmadjian,1967) QK581.A28STRI
 MARINE POLLUTION AND SEA LIFE(FAO Technical Conference on Marine Pollution,
 ...1970)QH541.5.S3F18STRI
 MARINE PHYTOPLANKTON(G. Drebes,1974)QK569.D54D73STRI
 METHODS IN AQUATIC MICROBIOLOGY(A.G. Rodina and M.S. Zambruski, editors,
 1972)QR105.R69E1972 STRI
 MICROBIAL CELL WALLS AND MEMBRANES(H.J.Rogers,H.R. Perkins and J.B. Ward,198
 QH601.R726STRI
 MICROBIAL ECOLOGY(M. Alexander,1971)QR100.A377STRI
 MOLECULAR BIOLOGY OF CELL MEMBRANES(P.J. Quinn,1976)QH601.Q56STRI
 NUTRITIONAL ECOLOGY OF INSECTS,MITES,SPIDERS, AND RELATED INVERTEBRATES
 (F.Slansky,Jr. and J.G. Rodriguez, editors,1987)QL463.N87STRI
 ORIGINS OF PREBIOLOGICAL SYSTEMS AND OF THEIR MOLECULAR MATRICES...
 (S.Fox editor,1965)QH325.F79STRI
 PALEOECOLOGY OF VOLCANIC SOILS IN THE COLOMBIAN CENTRAL CORDILLERA
 (PARQUE NACIONAL NATURAL DE LOS NEVADOS)(J.B. Salomons,1986)
 S592.17.V65S17STRI
 PATH OF CARBON IN PHOTOSYNTHESIS(J.A. Bassham and M. Calvin,1957)
 QK882.B3STRI
 PHAGE AND THE ORIGINS OF MOLECULAR BIOLOGY(John Cairns,G.S.Stent and
 James D. Watson, editors,1966)QR185.B4C68STRI
 PHEROMONE BIOCHEMISTRY(G.D.Prestwich, and Gary J. Blomquist, editors,
 1987)QL495.P48 STRI
 PHEROMONES OF SOCIAL BEES(John B. Free,1987)QL569.4.F74STRI
 PHOTOSYNTHESIS OF CARBON COMPOUNDS(M.Calvin and J.A.Bassham,1962)
 QK882.C16STRI
 PHYSIOLOGICAL GENETICS(J.G.Scandalios, editor,1979)QH430.P49STRI
 PLANT GROWTH SUBSTANCES,1982...(Internation Conference on Plant Growth
 Substances, edited by P.F. Wareing,1982)QK745.I61STRI
 PLANT IMPROVEMENT AND SOMATIC CELL GENETICS(I.K.Vasil,W.R.Scowcroft and
 K.J. Frey,editors,1982)SB123.P563STRI
 PLANT STRUCTURE AND DEVELOPMENT: A PICTORIAL AND PHYSIOLOGICAL APPROACH
 (T.P. O'Brien and M.E. McCully,1969)QK725.O13 STRI
 PLANT TISSUE CULTURE(D.N.Butcher, and D.S.Ingram,1976)QK725.B77STRI
 PRACTICAL METHODS IN MOLECULAR BIOLOGY(R.F.Schleif and P.C. Wensink,
 1981)QH506.S34STRI
 RECOMBINANT DNA METHODOLOGY(Jo-Anne R. Dillon,A.Nasim and E.R. Nest-
 mann, editors,1985)QH442.R3827STRI
 RECOMBINANT DNA TECHNIQUES: AN INTRODUCTION(R.L. Rodriguez and Robert
 C. Tait,1983)QH442.R6STRI
 SEX IN MICROORGANISMS: A SYMPOSIUM...(I.F. Lewis and J.R. Raper, editors,
 1954)QR84.A512 STRI
 STANDARD VALUES IN NUTRITION AND METABOLISM...(E.C.Albritton,1954)
 UG633.A3776 STRI
 SUN,WEATHER, AND CLIMATE(J.R. Herman and R.A. Goldberg,1978)
 QC883.2.S6H47 STRI
 SURVIVAL STRATEGIES OF THE ALGAE(Greta A. Fryxell,editor,1983)QK565.S87STRI
 ULTRASTRUCTURAL PLANT CYTOLOGY,WITH AN INTRODUCTION TO MOLECULAR BIOLOGY
 (A.Frey-Wyssling and K.Muhlethaler,1965)QK725.F89STRI
 ULTRASTRUCTURE AND THE BIOLOGY OF PLANT CELLS(B.E.S.Gunning and M.W.
 Steer,1975)qQK725.G97 STRI