

# No. 14

### SEMINARS - ANCON CONFERENCE ROOM

The noon talk scheduled for Tuesday, April 7, will be given by ISAAC SCHLOSSER from the University of North Dakota. His subject:

Environmental Variability, Trophic Interactions and the Dynamics of Stream Fish Communities.

Another noon talk will be given on Thursday, April 9, by DAVID MACDONALD from the University of Arizona. His subject:

Mate Networks in a Lekking Tropical Bird.

The following week there will also be two noon seminars. On Tuesday, April 14, DAVID ZEH from the University of Arizona will talk on "Sexual Dimorphism in Pseudoscorpions: Aggression, Density, Timing, and Genes". On Thursday, April 16, CHRISTIAN THOMAS from the University of Texas will give a talk; title still to be announced.

On the evening of April 16, at 7:00 pm, CHARLES HANDLEY and STORRS OLSON of the National Museum of Natural History will present an informal discussion on the results of their work on the vertebrates of the island of Bocas del Toro. All staff, visitors, and fellows are welcome.

### ARRIVALS & DEPARTURES

April 5 - Arriving, MARK JOHNSON, from Princeton University, to study the fluvial sediments of BCI and adjacent areas. He will be on BCI until April 14.

April 5 - Departing, IRA RUBINOFF, on official business to Boston and Washington, DC until April 12.

April 5 - Departing, JOHN CUBIT, for Baltimore to attend the oil spill conference being held there. He will be in Washington, DC on official business until April 20.

April 10 - Arriving, STEPHEN EMLEN, from Cornell University, to study the social behavior of wattled jacanas. He will be in Gamboa until June 15.

### ENVIRONMENTAL REPORT

STRI has received a copy of the two-volume environmental report prepared by the Panama Canal Commission for the Gaillard Cut Widening Feasibility Study. It is available in the Director's Office for anvone who is interested.

#### CALENDAR

<b>APRIL 1987</b>						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

April 3 - The groundbreaking ceremony for the Earl S. Tupper Research and Conference Center.

April 17 - Good Friday is a Panamanian holiday and an official STRI holiday. Businesses, government offices and banks will be closed.

April 21 - Scientific staff meeting at 9:30 a.m. in the Ancon Conference Room.

# BIOLOGICAL ASSISTANTS AVAILABLE

PHILIP MYERS (2902 Duncan St., Columbia, SC 29205) will graduate in May with a BS in marine science from the University of South Carolina, and is interested in working as a field assistant/lab technician. He is willing to pay his way to Panamá but requires room and board.

JOHN POLISAR (BS in wildlife biology and BA in zoology from the University of Montana) is interested in obtaining field experience in the tropics before going to graduate school. He has had experience with bird and mammal studies in the US, and is an able illustrator. His address is 213 West Beckwith, Missoula, Montana 59801.

KEVIN ROBBINS (90 Orchard Grove, Eastwood, Leigh-on-sea, Essex, SS9 5TR, England) is a student at the Bristol Polytechnic studying applied biological science. He is interested in working at STRI after July/August of this year.

(If you would like more information on these volunteers, please contact Argelis Román, STRI Education Office.)

# DEFORESTATION THREATENS CANAL

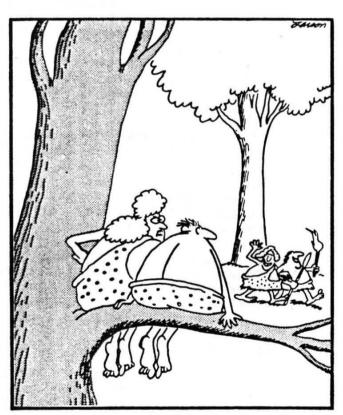
An article in Time magazine ("Trouble Ahead for the Canal?") dated March 2 refers to the fact that deforestation in Panama may bring on a water shortage in the operation of the canal. The author refers to a 375-page report by Stanley Heckadon, STRI Research Associate, on the Panama Canal watershed. He also quotes Don Windsor, STRI Scientist, on the decrease of rainfall due to deforestation.

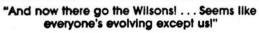
# NEW BABY:

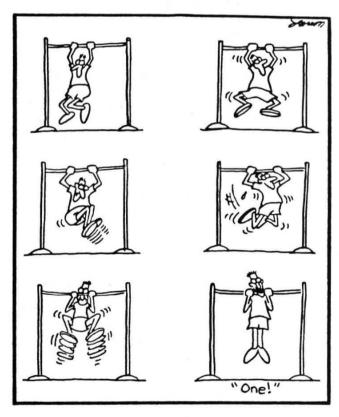
Born to Andrea Worthington and Bob Olberg, Logan Worthington Olberg, on 10 March 1987.











- BUILDING BODIES. videorecording (BBC, WQLN; produced in association with Warner Bros. (Life on earth series, a natural history by David Attenborough) STRI video 10 Available in STRI on Beta\*with: The Infinite variety.
- COMPULSIVE COMMUNICATORS. videorecording (BBC, WQLN; produced in association with Warner Bros. ( Life on earth series, a natural history by David Attenborough) program no. 13 STRI video 15 Available in STRI on Beta\*with: The Hunters and
- CONQUEST OF THE WATERS. videorecording (BBC, WQLN; produced in association with Warner Bros. (Life on earth series, a natural history by David Attenborough) program no. 5 STRI video 11 Available in STRI on Beta \* with: The first forest.
- THE FIRST FORESTS. videorecording (BBC, WQLN; produced in association with Warner Bros. (Life on earth series, a natural history by David Attenborough) program no. 3 STRI video 11 Available in STRI on Beta\* with: Conquest of the waters.
- THE HUNTERS AND HUNTED. videorecording (BBC, WQLN; produced in association with Warner Bros. (Life on earth series, a natural history by David Attenborough) program no. 11. STRI video 15 Available in STRI on Beta\* with: The Compulsive communicators.
- THE INFINITE VARIETY. videorecording (BBC, WQLN; produced in association with Warner Bros. (Life on earth series, a natural history by David Attenborough) program no. 1 STRl video 1 Available in STRI on Beta\* with: Building bodies.
- INVASION OF THE LAND. videorecording (BBC, WQLN; produced in association with Warner Bros. (Life on earth series, a natural history by David Attenborough)
- program no. 6 STRI video 6 Available in STRI on B-ta\* with: Victors of the Dry land LIFE IN THE TREES. videorecording (BBC, WOLN; produced in association with Warner Bros.
- program no. 12 STRI video 13 Available in STRI on Beta\*with: Lords of the air. THE LIVING PLANET. THE BAKING DESERTS (BBC-TV and Time-Life Films)
  STRI video 7 Available in STRI on Beta\*with: The living planet. THE sky above.
- . THE BUILDING OF THE EARTH . (BBC-TV and Time-Life Films)
  - STRI video 4 Available in STRI on Beta\*with: The Living planet. The frozen world.
  - JUNGLE (BBC-TV and Time-Life Films) STRI video 5 Available in STRI on Beta\* with: The Living planet. The northern
- . THE MARGINS OF THE LAND (BBC-TV and Time-Life Films)

  STRI video 8 Available in STRI on Beta\*with: The Living planet. Sweet Fresh Wate
- . NEW WORLDS.(BBC -TV and Time-Life Films)

  STRI video 9 Available in STRI on Beta\* with: The Living planet. The open ocean. THE NORTHERN FORESTS (BBC-TV and Time-Life Films)

  - SEAS OF GRASS (BBC-TV and Time-Life Films)

    STRI video 6 Available in STRI on Beta\*with:Jungle. Available in STRI on Beta\* with: Worlds apart.
    - .THE SKY ABOVE. (BBC-TV and Time-Life Films0
- STRI video 7 Available in STRI on Beta\* with: The baking deserts. SWEET FRESH WATER (BBC-TV and Time-Life Films)
- STRI video 8 Available in STRI on Beta\*with: The margins of WORLDS APART. (BBC-TV and Time-Life Films)
- STRI video 6 Available in STRI on Beta\* with: Seas of grass. LORDS OF THE AIR. videorecording (BBC, WQLN; produced in association with Warner Bros. (Life on earth series, a natural history by David Attenborough) program no. 8 STRI video 13 Available on Beta\*with: Life in the trees.

VIDEORECORDINGS (con't)

- RISE OF THE MAMMALS. videorecording (BBC, WQLN; produced in association with Warner Bros.)
- (Life on earth series, a natural history by David Attenborough)
  program no. 9 STRI video 14 Avail. on Beta\*with: Theme and variation.
  THEME AND VARIATION. videorecording (BBC, WQLN: produced in association with Warner Bros.) (Life on earth series, a natural history by David Attenborough) STRI video 14 Available onBeta\*with: Rise of the Mammals program no. 10
- VICTORS OF THE DRY LAND. videorecording. (BBC,WQIN; produced in association with Warner Bros.) (Life on earth series, a natural history by David Attenborough) program no. 7 STRI video 12 Avail. on Beta\*with: Invasion the the land.

ADVANCES IN INSECT PHYSIOLOGY VOL. 19 (J.W.L. Beament et al, 1986) QL495.A23XSTRI ADVANCES IN MARINE BIOLOGY VOL. 23 (F.S. Russell, editor. 1986)QH91.A1A24 STRI AMPHIBIANS (Zemmovodnye). TRanslated from Russian (Mikhailovich A. Nikolskii, 1962) QL658.R8N523 STRI

AMPHIBIAN SPECIES OF THE WORLD: a taxonomic and geographical reference (D.R. Frost, editor, 1985) QL645.F76 STRI ANALYSIS OF VARIANCE: the basic designs (C.E. Collyer, and James T.Enns, 1986)

BF39.C578 STRI

APPLIED LINEAR STATISTICAL MODELS: regression, analysis of variance, and experimental designs (J.Neter, W. Wasserman, and M.H. Kutner, 1985) 2nd edition. QA278.2N47 STRI LES ARACHNIDES DE L'AFRIQUE NOIRE FRANÇAISE. (Lucien Berland, 1955) QL457.6.B51 STRI BIOLOGICAL PROCESSES AND WASTES IN THE OCEAN (Judith M. Capuzzo, and D.R. Kester, 1987) OH545.W3B565 STRI

CATALOGUE OF THE NEOTROPICAL SQUAMATA(J.A. Peters, 1986) QL666.L19P48 STRI CHIMPANZEES OF GOMBE: patterns of behavior (J. Goodall, 1986) QL737.P96G585 STRI

COMMUNICATION IN THE ANIMAL WORK (W.F. Evans, 1968) QL776.E92 STRI
CORALS OF HONG KONG (P.J.B. Scott, 1984) QL377.C5S38 STRI
CURRENT ORNITHOLOGY VOL. 4. (Richard F. Johnston, editor, 1986) QL671.C976 STRI
ECOLOGICAL ASPECTS OF SOCIAL EVOLUTION: birds and mammals (D.I. Rubenstein and R.W. Wrangham, 1986) QL739.3.E24 STRI

ECOLOGY AND BIOLOGY OF MAMMAL-LIKE REPTILES (Nicholas Hotton 111 et al, editors, 1986) QE862.S8E25 STRI

EVOLUTION: selected papers (Sewall Wright; edited and with introductory materials by

William B. Provine, 1986) QH360.W75 STRI
EVOLUTIONARY ECOLOGY OF ANT-PLANT MUTUALISMS (A.J. Beattie, 1985) QL568.F7B36 STRI
FUNCTIONAL BIOLOGY OF MARINE GASTROPODS (R.N.Hughes, 1986) QL430.4.H89 STRI
GROWTH AND FORM OF MODULAR ORGANISMS:proceedings of a Royal Society discussions

meeting held on 27th and 28th June 1985 (J.L. Harper, B.R. Rosen and

J. White, 1986) qQH511.G878 STRI
HANDBOOK FOR THE IDENTIFICATION OF CEPHALOPOD BEAKS (M.R. Clarke, 1985) QL430.2.H36 STRI
HIERARCHICAL CONCEPT OF ECOSYSTEMS (R.V.O'Neill...et al, 1986) QH541.H525 STRI INSECTS, ALLERGY AND DISEASE: allergic and toxic responses to arthropods (C. L. Davis, 1979) QP941.A73D38 STRI

MATHEMATICAL FOUNDATIONS OF POPULATION DYNAMICS (G.L. Curry and R.M. Feldman, 1987) SB931.C94 STRI

MOLECULAR BASIS OF SEX AND DIFFERENTIATION: a comparative study of evolution, mechanism, and control in microorganisms (M.H. Saier and G.R. Jacobson, 1984) QR84.S326 STRI

MONOGRAPH ON POLYCLAD TURBELLARIA (S.Prudhoe, 1985) QL391.P7P97 STRI MORPHOLOGY, PHYSIOLOGY, AND BEHAVIORAL BIOLOGY OF TICKS (J.R. Sauer, and J.A. Hair, editors, 1986) QL458.M67 STRI

OKINAWA SENJO KAIBON OYOBI ... Fishes of the Okinawa trough and the adjacent waters. I. : the intensive research of unexploited fishery resources on continental slopes. (O.Okamura and T. Kitajima, editors, 1984) SH109.065 STRI ORNITHOLOGICAL GAZETTEER OF ECUADOR (R.A. Paynter and M.A. Traylor, 1977) QL689.E2P39 STRIREF

ORNITHOLOGICAL GAZETTEER OF PARAQUAY (R.A. Paynter and M.G.Caperton, 1977)QL689.P2P39 STRIREF

PATH ANALYSIS: a primer (Ching Chun Li, 1975) QA278.2.L5 STRI

PETROLEUM SPILLS IN THE MARINE ENVIRONMENT: the chemistry and formation of waterin-oil emulsions and tar balls (James R. Payne and Charles R. Phillips, 1985) GC1085.P33 STRI

PHYSIOLOGY OF SEED DETERIORATION: proceedings of a symposium... (M.B.McDOnald, Jr. and C.J. Nelson, editors, 1986) SB118.38.P49 STRI
POPULATION BIOLOGY AND EVOLUTION OF CLONAL ORGANISMS (JeremyB.C. Jackson, Leo W. Buss,

and Robert E. Cook, editors, 1985) QH371.P66 STRI

PRE-COLUMBIAN MAN IN COSTA RICA(Doris Stone, 1977) F1434,S87 STRI

RANDOM DATA: analysis and measurement procedures (J.S. Bendat, 1986) 2nd ed. rev. and expanded, TA340.D43 STRI

THE SAVANNAS: biogeography and geobotany (Monica M. Cole, 1986) QH541.5.P7C68 STRI THE SEAS: our knowledge of life in the sea and how it is gained (F.S.Russell and C.M. Yonge, 1936) 2nd ed. QH91.R96 STRI

THE SNAKES (Ray E. Ashton and P.S.Ashton, 1981) QL666.06A829 STRI SNAKES OF THE WORLD: a natural history of snakes (C. Mattison, 1986)QL666.06M34 STRI

THE SOCIAL BEHAVIOR OF ANIMALS (S.J. Diamond, 1970) QL775.D54 STRI
THE TAILLESS BATRACHIANS OF THE JAPANESE EMPIRE (Y.Okada, 1931) qQL661.036Z STRI
THREATENED BIRDS OF AFRICA AND RELATED ISLANDS (N.J. Collar and S.N.Stuart, 1985) 3rd ed. QL676.7.C69 STRIREF

THREATENED SWALLOWIAIL BUTTERFLIES OF THE WORLD; the IUCN red data book. (Mark N. Collin

, 1985) QL561.P2C712 STRIREF VECETATION OF THE EARTH AND ECOLOGICAL SYSTEMS OF THE GEO-BIOSPHERE (H.Walter, 1985) 3rd rev. ed. QK901.W2613 STRI

## addenda

FAUNA PARAGUAYA: catalogos sistematicos de los vertebrados del Paraguay: peces, batracios, reptiles, aves, y mamiferos conocidos hasta 1913 (A. de Winkelried Bertoni, 1914) QL247.B39 STRI

FRENCH POLYNESIAN CORAL REEFS: proceedings of the Fifth International Coral Reef Congress...( International Coral Reef Symp. (5th: 1985: Tahiti, 1985) qQH541.5.C7161 STRI