



July 22, 1988

**SEMINARS - ANCON CONFERENCE ROOM**

Tuesday, July 26, noon seminar speaker will be CHRISTOPHER PETERSEN, STRI postdoctoral fellow.

Social System Variation and Patterns of Reproductive Success in a Simultaneously Hermaphroditic Reef Fish.

**Abstract:** *Serranus fasciatus* exhibits 3 types of social systems: reciprocating pairs, harems, and harems within harems. Each type of mating group has different patterns of social interactions and individual reproductive success. These patterns are best explained by the differential ability of large, dominant individuals to monopolize male-role matings at different population densities.

**NEXT WEEK**

Tuesday, August 2, noon seminar speaker will be STANLEY HECKADON, CATIE.

Central America: A Socioeconomic and Environmental Profile.

That same evening, MARY JANE WEST-EBERHARD will give the scientific staff seminar.

**ARRIVALS**

July 21 - August 11, JANIE WULFF, Yale University, to continue her study of fish predation on sponges in San Blas and Naos.

**DEPARTURES**

July 24 - September 6, JOHN CUBIT, to Australia and New Guinea to attend the 6th International Coral Reef Symposium. Also, attending is ROSS ROBERTSON, who will be away from July 29-August 22.

**BCNM GAME WARDEN NEWS**

Cabo Carmelo Cedeño of the Policia Forestal and BCNM game warden Mario Santamaría captured two poachers with 13 crocodilians inside the BCNM on July 15. The crocodilians were released; a canoe and motor were confiscated.

Cabo Carmelo Cedeño, Policia Forestal, y Mario Santamaría, guardabosque del MNBC, capturaron dos cazadores furtivos con 13 cocodrilos el 15 de julio. Los animales fueron sueltos; se confiscó el cayuco y motor.

**FROM THE PERSONNEL OFFICE**

MARISSA VALDES is the new receptionist at Tivoli.

MERCEDES AROSEMENA, previously with Panama's Investment Council, is the new administrative assistant at Naos, beginning August 15.

CELIDETH DE MENDOZA, temporary clerk at Naos, will be the new clerical assistant in the Office of the Special Assistant to the Director, beginning August 1.

MARCEL EPAILLY has been hired to fill the position of messenger, beginning August 15.

Replacing Mr. Angulo who retired recently, JOSE SANCHEZ is the new custodial worker on BCI, beginning August 15.

**REMINDER TO ALL VISITORS**

In order to leave the country you will need paz y salvos and exit permits. Please remember you must begin the paperwork at least 2 weeks in advance of departure date. Consult your facility secretary or call Elena Lombardo / Gloria Maggiori at Tivoli.

**NEW PUBLICATIONS BY STRI STAFF, FELLOWS & RESEARCH ASSOCIATES**

Christy, J. 1988. Pillar function in the fiddler crab *Uca beebei* (I): effects on male spacing and aggression. *Ethology* 78, 53-71.

Freed, L. 1988. Forced fledging: an investigation of the lengthy nestling period of tropical house wrens. *National Geographic Research* 4(3): 395-407.

Tanaka, S., H. Wolda and D. L. Denlinger. 1988. Group size affects the metabolic rate of a tropical beetle. *Physiological Entomology* 13: 239-241.

**STRI MINI-BOOKSTORE**

For Sale / Se Vende  
Galapagos, Discovery on Darwin Islands by D. W. Steadman and S. Zousmer. \$ 20.00

**FOR RENT**

New house in Altos Santamaría, behind USMA in Panama City. 3 bedrooms, 2 baths, maid's room with bath, large kitchen, laundry room, 2-car garage. If interested, call 45-2227.

## LIBRARY NEWS

### New Books:

- AGRICULTURAL TROPICAL:EL DESARROLLO DE LA PRODUCCION(Gordon Wrigley, 1962)  
S604.37.W94 S1962 STRI
- ARTE PRECOLOMBINO DE MEXICO Y DE LA AMERICA CENTRAL. 3RD EDITION (Salvador Toscano, 1970)  
F1219.3.A776 STRI
- ATLAS DE ZOOLOGIA(Umberto Parenti,1973)  
QL46.P22 STRI REF
- BASIC CONCEPTS IN POPULATION,QUANTITATIVE, AND EVOLUTIONARY GENETICS (James F Crow, 1986)  
QH455.C76 STRI
- BIOLOGY OF THE HONEY BEE(Mark L. Winston,1987)  
QL568.A6W56 STRI
- BIOLOGY OF THE LAND CRABS(Warren W. Burggren and Brian R. McMahon, editors, 1988)  
QL444.M33B564 STRI
- BIOTIC CRISES IN ECOLOGICAL AND EVOLUTIONARY TIME(Matthew H. Nitecki, editor,1981) Spring Systematics Symposium(3rd:1980: Field Museum of Natural History).  
QH545.N3965 STRI
- BIRDS OF NEW MEXICO(F.A.Bailey, 1928).  
QL684.N6B3 STRI
- BOTANICA. 4TH EDITION(Carl L. Wilson,1968).  
QK47.W747 S1968.
- CLASSIFICATION,EVOLUTION, AND DISPERSAL OF THE WINTER STONEFLY GENUS ALLOCAPNIA(Herbert Holdsworth Ross,1971).  
Illinois biological monographs,45.  
QL513.P4R824 STRI
- CONTRIBUCION AL CONOCIMIENTO DE LA BIOLOGIA Y ECOLOGIA DE CTENOSAURA PECTINATA E IGUANA IGUANA:(REPTILIA: IGIANIDAE EN LA COSTA DE JALISCO(Guadalupe Valenzuela Lopez,1981).  
QL666.L25V16 STRI
- CONTRIBUTIONS TO THE BOTANY IN THE ANDES(Makoto Nishida, editor, 1984- ). Library has vol. 2.  
QE942.A55C76 STRI
- ECOLOGICAL STUDIES OF THE ALGA, ACANTHOPHORA SPICIFERA(VAHL) BRG. (RHODOPHYTA,CERAMIALES)...(John A. Kilar, 1984)  
mfcc 1003 STRI.
- ECOLOGY OF THE ASIAN ELEPHANT(ELEPHAS MAXIMUS) AND ITS INTERACTION WITH MAN IN SOUTH INDIA(R. Sukumar, 1985).  
QL737.P98S94 STRI
- EVOLUTIONARY BEHAVIOR GENETICS IN ACTIVE SPECIATION AND ADAPTATION OF FOSSORIAL MOLE RATS (Eviatar Nevo, 1986).  
QH380.N52 STRI
- FIRST THE SEED: THE POLITICAL ECONOMY OF PLANT BIOTECHNOLOGY 1492-2000(Jack Ralph Kloppenburg, 1988).  
SB117.3.K57 STRI
- FISHES OF THE NORTH-EASTERN ATLANTIC AND THE MEDITERRANEAN...(P.J.P. Whitehead... (et al.),1984--)  
3 volumes.  
QL621.3.F53 STRI
- GUIDE TO MICROFORMS IN PRINT(Microform Review, 1988)  
Z1033.M5694 STRI
- HANDBOOK OF VETERINARY PROCEDURES AND EMERGENCY TREATMENT. 4TH EDITION (Robert Warren Kirk,1985).  
SF748.K57 STRI REF
- INFORME SOBRE EL MANEJO, MOVIMIENTO Y REGISTRO DE LOS DERRAMES Y LA CONTAMINACION POR HIDROCARBUROS DISUELtos EN LA BAHIA DE PANAMA(Ministerio de Planificacion y politica economica commision Nacional del medio ambiente,1987)  
GB719.P2143 STRI
- INFORME SOBRE LA INVESTIGACION, "ANALISIS GEOQUIMICO Y MINERALOGICO DE SEDIMENTOS SUPERFICIALES DEL LAGO GATUN" ( David Delvalle, 1986)  
qTD231.P3D38 STRI
- LIFE SCIENCE ORGANIZATIONS AND AGENCIES DIRECTORY(Brigitte T. Darnay and Margaret Labash Young, editors, 1988).  
QH321.L54 STRI REF
- LIGHT REACTIONS(J. Barber, editor,1987)  
Topics in photosynthesis; v. 8  
QK802.L485 STRI
- LOCUSTS AND GRASSHOPPERS. A HANDBOOK FOR THEIR STUDY AND CONTROL (B.P. Uvarov,1928)  
QL508.A2U8 STRI
- MONOGRAPHIC REVISION OF THE GENUS Huntington Hubbell, 1936)  
QL508.G6H87 STRI
- MEMOIRS OF THE COLEOPTERA(Thomas L. Casey,1924)  
QL572.C3x STRI
- NERVOUS SYSTEMS IN INVERTEBRATES(M.A. Ali, editor,1987)NATO ASI Series A. Life Sciences; v. 141.  
QL364.N38 STRI
- NATURAL RESOURCES AND ECONOMIC DEVELOPMENT IN CENTRAL AMERICA: A REGIONAL ENVIRONMENTAL PROFILE( H. Jeffrey Leonard,1987).  
HC141.L44 STRI
- ON EVOLUTION AND FOSSIL MAMMALS(Bjorn Kurten,1988).  
QE881.K796 STRI
- PHYTOGEOGRAPHY(J.A. Howard, and C.W. Mitchell,1985).  
QK901.H69 STRI
- Poisonous and venomous marine animals of the world. 2ND EDITION.(Bruce W. Halstead,1988).  
RA1255.H35 STRI REF
- POPULATION GENETICS AND FISHERY MANAGEMENT(Nils Ryman and Fred Utter, editors, 1987).  
SH328.P67 STRI
- REPRODUCTION OF MARINE INVERTEBRATES. VOLUME IX. GENERAL ASPECTS: SEEKING UNITY IN DIVERSITY.(Arthur Charles Giese, and John S. Pearse, editors,1988).  
QP251.6437 STRI
- SOCIAL LIFE OF ANIMALS(Warder Clyde Allee,1976).  
QL775.A46 STRI
- STUDIES IN THE AMERICAN BUPRESTIDAE(Thomas L. Casey,1989).  
QL596.BBC3 STRI
- STUDYING INSECTS: A PRACTICAL GUIDE...(R.L.E. Ford,1973).  
QL465.F711 STRI
- SYNOPSIS OF THE NORTH AMERICAN SYRPHID(Samuel W. Williston...,1886) Bulletin of the U.S. National Museum.no.31.  
QL537.S8W73 STRI
- TAXONOMY OF PORIFERA, FROM THE N.E. ATLANTIC AND MEDITERRANEAN SEA(Jean Vacelet and Nicole Boury-Esnault, editors,1987).  
NATO ASI series, Series 6,Ecological sciences;vol.13.  
QL372.4.M47N38 STRI
- TIGERS OF THE WORLD: THE BIOLOGY,BIOPOLITICS,MANAGEMENT, AND CONSERVATION OF AN ENDANGERED SPECIES(Ronald L. Tilson, and Ulysses S. Seal, editors, 1987).  
QL737.C23T475 STRI
- TOBACCO AND SHAMINISM IN SOUTH AMERICA(Johannes Wilbert,1987).  
F2230.1.T63W55 STRI
- TROPICAL LEAF MOTHS: A MONOGRAPH OF THE SUBFAMILY STRIGLININAE(LEPIDOPTERA:THYRIDIDAE). (Paul E.S. Whalley,1976).  
QL561.T48W47 STRI