



SEMINARS - ANCON CONFERENCE ROOM

The luncheon talk on June 30 will be given by ROBERT DUDLEY from the University of Cambridge. His title:

Kinematics, Aerodynamics and Energetics of Insects in Flight.

"A mechanical study of the forward flight of bumblebees and hoverflies is presented. Insects were filmed in controlled free flight over a range of forward air speeds. Kinematics of the wings and body were determined from a three-dimensional reconstruction of the two dimensional film image. A quasi-steady aerodynamic analysis was made to determine mean lift coefficients and mechanical power requirements. The latter were compared to measurements of the oxygen consumption of free-flying insects to determine the efficiency of the flight muscle."

NEXT WEEK:

There will be a special Monday seminar on July 6 at noon. DAVID DUFFY from the Universidad Nacional de Heredia, Costa Rica, will speak on:

3000 Kilometers of Chilean Coast

The luncheon talk on July 7 will be given by ROBERT WARNER from the University of California, Santa Barbara. His title:

The Roles of Mate Choice, Resource Assessment, and Traditionality in the Mating System of a Coral Reef Fish.

ARRIVALS & DEPARTURES

June 30 - Departing, JAMES KARR, for Washington, DC on official business for several days.

July 1 - Arriving, MARK ALFANO, from the University of Texas, on a short-term fellowship to study predation and the evolution of anuran advertisement calls. He will be on BCI until August 30.

July 1 - Arriving, MICHAEL RYAN, from the University of Texas, to study sound localization by the frog *Physalaemus pustulosus*. He will be at Gamboa until July 30.

July 1 - Arriving, KENTWOOD WELLS and THEODORE TAIGEN, from the University of Connecticut, to study the energetics of vocal behavior in frogs. They will be in Gamboa until July 31.

July 1 - Arriving, WALTER WILCZYNSKI, University of Texas, to investigate the ecological and physiological determinants of chorus organization in frogs. He will be at Gamboa until July 11.

July 1 - Arriving, MARY JANE WEST-EBERHARD and WILLIAM EBERHARD, for a month's visit. They will be accompanied by their children Jessica, Andres, and Ana.

CALENDAR

| JULY 1987 | | | | | | |
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July 1 - Ira Rubinoff, STRI director, leaves for Harvard University on sabbatical for one year. James Karr will be acting Director and Alan Smith acting Deputy Director during that time.

July 3 - Official STRI holiday.

July 4 - U.S. Independence Day.

ON LEAVE

Maria Morello, June 30 - July 6

LOCAL VOLUNTEER

JOSEPH GAROFALO, an assistant site manager and electronics technician, would like to volunteer full-time. If interested, please call 87-4148.

NEW BABY BOY

Congratulations to Katie and Alex Moss, who just had a healthy baby boy on June 12. Katie works for the oil spill project. The baby weighed 7 lbs. 11 ozs, and the baby pod was won by Katie herself.

EL NIÑO NEWS

Peter Glynn has informed us that we are experiencing a moderate El Niño, which began last December. Corals at Academy Bay, Galapagos, are bleaching. Similar bleaching has been reported at Cocos Island and 31° C water is occurring at 10 meters near Isla Cano in Costa Rica. It would be interesting to note if the Bay of Panama attracts refugee birds from the south, as it did in 1983.

ACUERDO CON LA COMARCA DE KUNA YALA/NEW AGREEMENT

El viernes pasado, 19 de junio, en ceremonia que se llevó a cabo en la oficina del Director del STRI, se firmó un acuerdo de cooperación entre el STRI y las autoridades máximas de la Comarca de Kuna Yala.

Este Acuerdo oficializa la presencia de STRI en la Comarca de Kuna Yala (San Blas), desde donde por más de diez años se le ha venido brindando apoyo a una serie de importantes estudios acerca de la biología marina.

Las autoridades Kunas se mostraron muy complacidas con este evento y durante las negociaciones que culminaron la semana pasada siempre demostraron un alto espíritu de cooperación y entendimiento por los programas y objetivos del STRI.

Por STRI firmaron los Doctores Ira Rubinoff, James Karr y Jeremy Jackson. Como máximos representantes del Congreso General Kuna firmaron el Cacique Leonidas Kantule Valdes, el Primer Cacique Kawigdi, el Cacique Enrique Guerrero y el Secretario General del Congreso, Ofilio Guerrero.

On last Friday, June 19, an important cooperative agreement was signed between STRI and the authorities of Kuna Yala. Ira Rubinoff, James Karr, and Jeremy Jackson signed for STRI. The Cacique Leonidas Kantule Valdes, Premier Cacique Kawigdi, Cacique Enrique Guerrero and Secretary General Ofilio Guerrero signed for the General Kuna Congress.

This agreement formalizes STRI's presence in Kuna Yala, where marine research has been conducted by STRI for the last ten years.

1987 MEETING OF THE ANIMAL BEHAVIOR SOCIETY WITH THE

AMERICAN SOCIETY OF ZOOLOGISTS, AMERICAN
MICROSCOPICAL SOCIETY, THE CRUSTACEAN SOCIETY,
INTERNATIONAL ASSOCIATION OF ASTACOLOGY, AND
SOCIETY OF SYSTEMATIC ZOOLOGY.

DECEMBER 27 - 30 HYATT REGENCY HOTEL, NEW
ORLEANS, LOUISIANA.

SYMPOSIA SPONSORED BY ABS/DAB

KIN RECOGNITION IN ANIMALS: EMPIRICAL EVIDENCE AND CONCEPTUAL ISSUES (organized by Andrew R. Blaustein and Richard H. Porter). All day December 29. Tentative program includes:

- BEAUCHAMP, G., The Role of the Major Histocompatibility Complex in Olfactory Discrimination.
- BEECHER, M., Types of Kin Recognition in Birds.
- BERNSTEIN, I., The Influence of Kinship on the Social Behavior of Non-Human Primates.
- BLAUSTEIN, A., Kin Recognition Behavior in Anuran Amphibian Larvae: Correlations with Ecology and Life History.
- BREED, M. D., The Honey Bee: Kin Recognition in Multiple Contexts.
- DEWSBURY, D., Kin Recognition and Reproductive Behavior.
- FLETCHER, D., Mechanisms of Kin Recognition: A Critical Review.
- GAMBOA, G., Recognition of Nestmate and Non-Nestmate Kin in Social Wasps (*Polistes fuscatus*).
- GREENBERG, L., A Review of Kin Recognition in Sweat Bees.
- LENINGTON, S., The Effect of the T-Complex on Behavior in Wild House Mice.
- PORTER, R., The Ontogeny of Sibling Recognition in rodents: Superfamily Muroidea.
- SCHWAGMEYER, P., Ground Squirrel Kin Recognition Abilities: Social and Life History Correlates.

ADAPTIVE SEX RATIOS AND SEX RATIO THEORIES (organized by Nancy Burley and Patricia A. Gowaty). All day December 30. Tentative program includes:

- BULL, J., Environmental Sex Determination in Reptiles.
- BURLEY, N., Sex Ratios and the Evolution of Mating Systems.
- CONDON, M., Facultative Variation in Plants.
- GOWATY, P. A., Facultative Sex Ratio Variation in Birds--Rare or Rarely Observed?
- HRDY, S. B. and M. SMALL, Factors Affecting the Production and Survival of Sons and Daughters Among Macaques and Other Primates.
- MICHENER, G. R., Female-Biased Adult Sex Ratios in Ground-Dwelling Squirrels.
- SCHULTZ, J. R., Seasonal Sex Ratios--Adaptations or Artifacts.
- TAYLOR, P. D., Inclusive Fitness Models of Sex Allocation.
- TRIVERS, R. L., Sex-Ratio Theory and Female Heterogamy.
- WERREN, J. H., Genetic Conflict and Sex Ratio Evolution.

SYMPOSIUM SPONSORED BY DIVISION OF COMPARATIVE PHYSIOLOGY AND BIOCHEMISTRY (ASZ),
AND CO-SPONSORED BY ABS/DAB

BEHAVIORAL NEUROMODULATORS: CELLULAR COMPARATIVE AND EVOLUTIONARY PATTERNS (organized by Charles M. Lent and Winsor Watson, III). All day December 27. Tentative topics include:

- CALABRESE, R., Peptides and Leeches.
- GILLETTE, R., Feeding Modulation by Predatory Nudibranchs.
- LENT, C., Amines and Leech Feeding.
- HARRIS-WARRICK, R., Amines in Lobster.
- MAYERI, E., Egg Laying Hormone in *Aplysia*.
- MICHAELIS, S., Protists and Peptide Pheromones.
- O'SHEA, M., Insect Amines and Peptides.
- PRIOR, D., Snail Feeding and Peptides.
- SPENCER, A. W., Amines in Coelenterates.
- SOMBATI, S., Octopamine and Insect Motor Programs.
- WATSON, W. J., III, Peptides in *Limulus* and Nudibranchs.
- WEEKS, J., Hormones and Insect Behaviors.

SYMPOSIUM SPONSORED BY DIVISION OF INVERTEBRATE ZOOLOGY (ASZ),
AND CO-SPONSORED BY ABS/DAB

ADAPTIVE COLORATION IN INVERTEBRATES (organized by Mary K. Wicksten). All day December 28. Tentative topics include:

- WICKSTEN, M., Introduction.
- BEHRENS, D., Adaptive Coloration in Opisthobranch Mollusks.
- BYRON, E., Photoprotection by Pigmentation in Zooplankton.
- CHAI, P., The Relationships Between Visual Characteristics of Butterflies, and the Responses of a Specialized Avian Predator.
- GROBER, M., Brittle-star Bioluminescence Functions as an Aposematic Signal to Deter Crustacean Predators.
- HANLON, R., Morphological, Neural, Behavioral and Ecological Considerations in Adaptive Coloration of Cephalopods.
- KINGSOLVER, J., Evolution of Wing Pigment Patterns in Pierine Butterflies: When Are Correlations Among Characters Adaptive?
- SCHMIDT, J., Predators, Environment, and Color: Adaptive Strategies of Exposed, Slow-moving, Edible Caterpillars.
- THURMAN, C., Changes in the Physiological Coloration of Texas Fiddler Crabs (*Uca*).
- WATT, W., The Evolution of Animal Coloration--Adaptive Aspects from Bioenergetics to Demography.
- ZMARZLY, D., Host Mimicry Among Pontonine Shrimp.

Animal Behavior Division sponsored contributed oral papers are scheduled for all day on December 28. Posters may be viewed the morning of December 27.

Abstract and Transmittal Forms and instructions are now available. Deadline for submission is August 10. Abstracts will be published in the American Zoologist 27(4).