

SEMINARS - ANCON CONFERENCE ROOM

Tuesday, June 28, noon seminar speaker will be GEORGE ANGEHR, STRI.

Wildlife Conservation in New Zealand: Applied Island Biogeography.

Abstract: The endemic fauna of New Zealand has been decimated by introduced predators, habitat modification, hunting, and disease. Many species have been extirpated from the mainland, and only survive on one or two small offshore islands. To insure against accidental loss of these species, the New Zealand Wildlife Service has introduced several of them to additional islands where they did not formerly occur. This seminar will describe the contrasting results of two of these introduction programs, for the Stitchbird (Meliphagidae) and the Saddleback (Callaeidae).

That evening at 7:00 p.m., GILBERTO OCANA will give the scientific staff seminar. All staff, fellows and visitors welcome.

The Need and Potential Basis for an Ecological Buffer Zone on the Southwest Side of the Barro Colorado Nature Monument.

NEXT WEEK

Tuesday, July 5, noon seminar speaker will be CAY CRAIG, Yale University. Title to be announced.

ARRIVALS

Arrived last week, GEORGE ANGEHR, from Washington, DC, to continue his work on the Tupper Building Exhibition.

Also arrived last week, ELIZABETH STOCKWELL, to work with Dr. James Karr for one year.

June 23 - July 8, MARK DIXON, to participate in Dr. Karr's bird study on Pipeline Road.

June 25, IRA RUBINOFF, after a sabbatical year at Harvard University. He will reassume his duties as director on July 1.

June 25 - August 19, MICHAEL BODRI, University of Georgia, to work with Don Windsor on a study of Cassidine beetles and their host plant effects.

June 28 - July 20, KATHARINE MILTON, University of California at Berkeley, to continue her work on the population dynamics of howler monkeys and spider monkeys on BCI.

June 29 - July 7, CARLOS PEREZ-SANTOS, Museo Nacional de Ciencias Naturales, Spain. He and his assistant, ANA MORENO, will be studying skeletochronology in anurans of the neotropical humid forest in Gamboa.

July 1 - August 22, ROBIN ANDREWS and assistant, LARRY POWELL, Virginia Polytechnic and State University, to work on the population dynamics of vertebrates of tropical forest undergrowth on BCI.

DEPARTURES

June 24 - July 3, STANLEY RAND, for Ann Arbor, Michigan, to attend the meetings of the American Society of Ichthyologists and Herpetologists, and then to Washington, D.C.

June 26 - July 3, LEONOR MOTTA and CARLOS URBINA, to Washington, D.C. on official business and to attend a Budget Training Course.

June 30, RICHARD COOKE, to the United Kingdom on leave and then to Amsterdam to attend the 46th International Congress of Americanists. Also attending the congress is ANTHONY RANERE.

TIVOLI NEWS

Beginning next week, MARIA LORENA OSSA, will only attend to receptionist duties in the morning, in the afternoons she will be working in the Accounting Department.

REMINDER

Retirement party for JESUS BUDRIA and DOMINGO ANGULO at Naos on Friday, July 1, 3:30 p.m.

**THE FOLLOWING ARE GENERAL RULES THAT APPLY TO PACKAGES SENT THROUGH THE MAIL {APO POST OFFICE}.**

**PLEASE REMEMBER THAT APO IS ONLY FOR OFFICIAL MAIL, PERSONAL ITEMS SHOULD BE SENT THROUGH OUR PANAMA APO ADDRESS. PACKAGES MUST BE PROPERLY WRAPPED BEFORE ARRIVING TO THE PROCUREMENT DEPARTMENT.**

**WRAPPING TIPS:**

YOUR PARCELS WILL ARRIVE AT DESTINATION IN GOOD CONDITION IF YOU PACK AND WRAP THEM CORRECTLY.

**INSIDE**

- A) SECURE ARTICLES TO PREVENT SHIFTING.
- B) CUSHION ARTICLES SEPARATELY.
- C) USE ABSORBENT MATERIALS WHEN SENDING MAILABLE LIQUIDS.
- D) TIE ALL PAPERS, PAMPHLETS AND OTHER LOOSE ARTICLES SECURELY BEFORE WRAPPING.

**OUTSIDE**

- A) USE STRONG CONTAINERS, BOXES.
- B) IF USING ADVERTISING BOXES {EXAMPLE: KELLOGS} WRAP THEM IN MANILA PAPER.

**TYPES OF TYING MATERIALS**

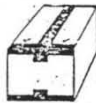
**A) TAPE:**

- 1) USE HEAVY CRAFT OR NYLON TAPE, FILAMENT TAPE.
- 2) USE SUFFICIENT TAPE
- 3) MAKE SURE TAPE STICKS PROPERLY TO CONTAINER OR BOX.
- 4) TAPE ALONG ALL FLAPS.
- 5) DO NOT USE MASKING OR OTHER LIGHTWEIGHT TAPE {E.G. MAGIC OR SCOTCH TAPE}.

ADEQUATE CLOSURE    ~~INADEQUATE CLOSURE~~

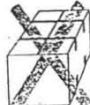
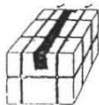
KRAFT PAPER TAPE (FOR REGISTERED MAIL)

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PRESSURE SENSITIVE FILAMENT TAPE

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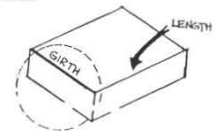


**MAILING PROCEDURES:**

- A) PROPER ADDRESS
- B) CUSTOMS DECLARATION
- C) PROPER PACKING
- D) CORRECT WEIGHT AND SIZE {SEE BELOW}
- E) INDICATE WHAT MODE OF MAILING YOU WANT FOR YOUR PARCELS.

**WEIGHT AND SIZE LIMITATIONS**

MODE:	WEIGHT LIMIT	SIZE LIMIT {LENGTH+GIRTH} COMBINATION
PRIORITY AIR MAIL	70 POUNDS	108"
SAM	70 POUNDS	100"
LIBRARY RATE	70 POUNDS	100"
SURFACE MAIL	70 POUNDS	100"
PAL	30 POUNDS	60"
SAM FROM U.S.A. TO APO	15 POUNDS	60"



**MODE DESCRIPTION**

- SAM: SPACE AVAILABLE MAIL, AIR MAIL FROM PANAMA TO MIAMI AND FROM MIAMI TO DESTINATION BY TRUCK.
- PAL: AIR MAIL NOT EXPENSIVE.
- SURFACE MAIL: BOAT OR TRUCK
- LIBRARY RATE: SPECIAL RATE TO INSTITUTIONS AND UNIVERSITIES, RESTRICTED TO MANUSCRIPTS, REPRINTS AND BOOKS.
- PRIORITY AIR MAIL: AIR MAIL TO DESTINATION.

**INDICIA MAIL:** {EAGLE} IS CONSIDERED THE HIGHEST PRIORITY. IT WILL GO AIR PRIORITY MAIL, ALWAYS. USE BY SCIENTIFIC AND ADMINISTRATIVE STAFF ONLY.

**MAILING RESTRICTIONS:** THE FOLLOWING ITEMS CANNOT BE MAILED.

- A) ALCOHOLIC BEVERAGES OF ANY TYPE.
- B) NARCOTICS AND POISONOUS DRUGS.
- C) CONCEALABLE FIREARMS, EXPLOSIVES.
- D) SWITCH BLADE KNIVES
- E) OBSCENE, LEWD MATERIALS TO INCLUDE PHOTOGRAPHS, BOOKS AND LETTERS CONTAINING OBSCENE LANGUAGE.

**INSURED MAIL:**

PACKAGES CAN BE INSURED UP TO \$500.00 VALUE. IF MORE THAN \$500.00, MUST GO VIA REGISTERED MAIL {SEE WRAPPING TIPS FOR REGISTERED MAIL}. ALSO, THE FOLLOWING ARE OTHER WAYS TO SEND CORRESPONDENCE THROUGH THE APO: CERTIFIED MAIL, SPECIAL DELIVERY, RETURN RECEIPT REQUESTED.

## Workshop on Pre-Columbian Stone Tool-making

On May 3rd, Dr. Ranere presented a workshop on stone tool manufacturing techniques used by precolumbian peoples of Panama. The Surfside archaeological laboratory has a supply of cobbles and boulders of jasper, chert, chalcedony, basalt and other rocks from Panama which were used as the raw material for fashioning stone tools. Fist-sized river cobbles were used as hammers to strike off "flakes" (lascas) from the nodules or cores (nucleos) of raw material.

Dr. Ranere demonstrated three different approaches to making stone tools which have been used by ancient craftsmen in Panama. The simplest technique, and one employed from about 5000 to 500 B.C., involves striking off flakes at random from a core, one after another, until the core is used up (exhausted). The craftsman then searches through his pile of flakes to find one with the edge and size most suitable for the job (thin and sharp for a knife, pointed and stout for a perforator). (In photo A Karl Kaufman is showing Tony Ranere the flake he just struck from the large core in Ranere's hand.)

A second approach, which became increasingly common in Panama after 500 B.C., involves preparing or shaping the nodule or core in such a way that flakes of a predetermined form can be removed. For example, once a conical core with a flat top and pointed bottom is prepared, a large number of similarly shaped thin pointed flakes can be removed one after the other. These flakes can then be fitted easily into a wooden handle and used as knives, perforators or other implements. These pointed flakes were often trimmed at their base by removing small flakes to form a stem to facilitate hafting.

A third approach, which was used in Panama between 9500 and 5000 B.C., is conceptually quite different from core and flake technologies described above. In this approach, a block of raw material (a cobble or very large flake) is "thinned" by removing a series of flakes from opposite sides or "faces" of the block. This is the so-called bifacial thinning technique which was used for making arrowheads and spearpoints in North America and temperate South America well into historic times. In this technique, the narrow edge of the piece (or "biface") being worked is struck with a hammer of stone, antler or hard wood, and flakes are driven off towards the center. Oftentimes the edges of the biface were heavily ground so that they would be strong enough to withstand the sharp blows needed to remove large thinning flakes. (In photo B Tony Ranere is using the side of his hammerstone to grind down the edges of the specimen being worked so that he can continue thinning it by striking off large flakes.)

A number of the people who attended the workshop tried their hand at tool making, and all proved to be reasonably skilled, at least judged by the 5000 to 500 B.C. standards.



## LIBRARY NEWS

### New Books :

LAS AVENTURAS DE LOS GEODESTAS FRANCESES DEL SIGLO XVIII EN LA REGION AMAZONICA(M. Villacres and J.W. Jorge, 1986)  
F2546.V71 STRI

BEAUTY,HEALTH, AND PERMANENCE:ENVIRONMENTAL POLITICS IN THE UNITED STATES, 1955-1985 (S. P. Hayes in collaboration with B.D. Hayes, 1987)  
HCl10.E5H39 STRI

BIOLOGY OF SPIDERS(R.F. Foelix,1982) Transl. of :Biologie der Spinnen.  
QL458.4.F6313 STRI

BIOTECHNOLOGY AND ECOLOGY OF POLLEN:PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON THE BIOTECHNOLOGY AND ECOLOGY OF POLLEN,9-11 JULY1985...(D.L.Mulcahy, G.B. Mulcahy and E.Ottaviano, editors, 1986).  
QK658.B575 STRI

CLIMATE AND PLANT DISTRIBUTION(F.I. Woodward,1987).  
QK754.5.W66 STRI

COLOMBIA:CORALES Y ARRECIFES CORALINOS(Henry von Prael and Harry Erhardt,1985).  
QL377.C5P89 STRI

DRG:DIRECTORY OF RESEARCH GRANTS(W.K.Wilson and B.L. Wilson,editors,1988).  
LB2338.D598 STRIREF

DEPOSITIONAL SEDIMENTARY ENVIRONMENTS, WITH REFERENCE TO TERRIGENOUS CLASTICS(H.E.Reineck and I.B.Singh,1980) 2nd rev. ed.  
QE471.R36STR1

DEVELOPMENTAL BIOLOGY:A COMPREHENSIVE SYNTHESIS(Leon W. Browder, editor,1986)volume 2: The cellular basis of morphogenesis.  
QH491.D426 STRI

ECOLOGY OF MANGROVES(P.A. Hutchings and P.Saenger,1987)  
QH197.H87 STRI

EFFECTS OF LOW TEMPERATURES ON BIOLOGICAL SYSTEMS(.B.W.W. Grout and G.J.Morris,editors,1987)  
QH324.9.C7E27 STRI

EVOLUTIONARY BIOLOGY(T.Dobzhansky editor,1988) volume 22.  
QH366.A1E93 STRI

EXCAVATIONS AT SANTO DOMINGO TOMALTEPEC:EVOLUTION OF A FORMATIVE COMMUNITY IN THE VALLEY OF OAXACA,MEXICO(Michael E. Whalen,1981.GN4.M624 STRI

GALAPAGOS:DISCOVERY ON DARWIN'S ISLANDS(David W. Steadman and Steven Zousmer,1988)  
QH198.G3S72 STRI

GAVAGAI! OR THE FUTURE HISTORY OF THE ANIMAL LANGUAGE CONTROVERSY(David Premack,1986).  
QL776.P73 STRI

GENETIC CONSTRAINTS ON ADAPTIVE EVOLUTION(Volker Loeschche, editor,1987).  
QH371.G454 STRI

GRASS SYSTEMATICS AND EVOLUTION:AN INTERNATIONAL SYMPOSIUM HELD AT THE SMITHSONIAN INSTITUTION,WASHINGTON,D.C.,JULY 27-31,1986(Thomas R. Soderstrom...et al,editors,1987).  
QK495.G74G735 STRI

GUIDE TO REFERENCE BOOKS(Eugene P. Sheehy et al,editors,1986)  
Z1035.1.S43 STRI REF

HERBIVORE NUTRITION IN THE SUBTROPICS AND TROPICS(F.M.C.Gilchrist and R.I.Mackie,1984).  
SF95.I685 STRI

THE HUMAN IMPACT ON THE NATURAL ENVIRONMENT(A. Goudie,1986).2nd ed.  
GF75.G68 STRI

COEVOLUTION AND SYSTEMATICS(A.R. Stone and D.L. Hawksworth, editors,1986) Systematics Association special volume no. 32.  
QH372.I58 STRI