

# COMPARATIVE NUTRITION SOCIETY EIGHTH BIENNIAL SYMPOSIUM

## *Tentative Program*

### **August 6, 2010**

1:00-6:00 PM Registration

6:00-8:00 PM Opening Reception

### **August 7, 2010**

#### **NUTRITIONAL ECOLOGY**

- 8:00 AM **PLENARY SPEAKER**  
ECOLOGICAL INFLUENCES ON TOTAL DAILY ENERGY EXPENDITURE IN NONHUMAN PRIMATES  
*David A. Raichlen\* and Herman Pontzer*
- 9:00 AM NUTRITIONAL BALANCING ACTS: PROTEIN, CARBOHYDRATES AND LIPIDS IN MOUNTAIN GORILLA DIETS  
*Jessica M. Rothman\*, David Raubenheimer and Colin A. Chapman*
- 9:30 AM THE RIGHT-ANGLED MIXTURE PLOT: A NEW TOOL FOR NUTRITIONAL ECOLOGY  
*David Raubenheimer*
- 10:00 AM *Break*
- 10:30 AM **Winner of Malcolm Ramsey Travel Award:**  
FEEDING ON PHYTOESTROGENS: IMPLICATIONS FOR UGANDAN RED COLOBUS MONKEY (*PROCOLOBUS RUFOMITRATUS TEPHROSCELES*) PHYSIOLOGICAL ECOLOGY  
*Michael Wasserman*
- 11:00 AM IMPORTANCE OF MATERNAL FAT RESERVES TO VARIATION IN THE TEMPORAL DISCONTINUITY BETWEEN ENERGY AND PROTEIN RESOURCES FOR POST CALVING CARIBOU  
*Robert G. White\*, Brad Griffith, Don E. Russell, Anne Gunn and Colin Daniel*
- 11:30 AM THE EFFECTS OF JUNIPER CONSUMPTION ON CATECHOL-O-METHYL TRANSFERASE (COMT) EXPRESSION AND ACTIVITY IN *NEOTOMA STEPHENSI* A JUNIPER SPECIALIST AND *NEOTOMA ALBIGULA* A SYMPATRIC GENERALIST  
*Michele M. Skopec\* and M. Denise Dearing*
- 12:00 PM *Lunch*

#### **NUTRITIONAL ECOLOGY, PART II**

- 1:30 PM FOOD RAMIFIES  
*Stuart Altmann*
- 2:00 PM FOOD PROCESSING IN MARINE HERBIVOROUS FISHES  
*Kendall Clements*
- 2:30 PM A LATITUDINAL COMPARISON OF THE NUTRITIONAL ECOLOGY OF A MARINE HERBIVOROUS FISH  
*Jethro Johnson\*, David Raubenheimer, J. Howard Choat and Kendall Clements*
- 3:00 PM *Break*
- 3:30 PM ADVANCES IN THE DEVELOPMENT OF MODELS OF NUTRITIONAL ECOLOGY AND LIFE HISTORY OF SEA TURTLES  
*Karen A. Bjorndal\*, Mariela Pajuelo and Hannah B. Vander Zanden, Kimberly J. Reich, Alan B. Bolten*

- 4:00 PM A TALE OF TWO CRITTERS: SHIFTING ENERGETIC PRIORITIES IN YOUNG NORTHERN FUR SEALS  
*David A. S. Rosen\* and Andrew W. Trites*
- 4:30 PM A COMPARISON OF THE OVER WINTER BIOMASS LOSS FROM HERRING STOCKS WITH ESTIMATES OF HUMPBACK WHALE CONSUMPTION  
*Ron Heintz\*, John Moran, Jan Straley and Johanna Vollenweider*
- Evening *OPTIONAL EXCURSION: ARIZONA-SONORA DESERT MUSEUM*

## August 8, 2010

### APPLIED NUTRITION

- 8:00 AM NUTRIENT COMPOSITION OF ANIMAL FEEDSTUFFS FED IN THE NATIONAL ZOOLOGICAL GARDENS OF SOUTH AFRICA: PRELIMINARY RESULTS  
*Mwimbi K. Ulrich, Siebrits FK and K. R Mbatha*
- 8:30 AM THE FORMULATION OF AN ARTIFICIAL DIET FOR CAPTIVE KIWI (*APTERYX MANTELLI*)  
*Charlotte J. Minson\*, Murray A. Potter, Don V. Thomas and Roger G. Lentle*
- 9:00 AM THE NUTRIENT PROFILE AND INTAKE OF BROWSE SILAGE BY BROWSING HERBIVORES  
*Kathleen Sullivan, Shannon Livingston, Charles Staples and Eduardo V. Valdes*
- 9:30 AM THE DEVELOPMENT OF OBESITY BEGINS AT AN EARLY AGE IN CAPTIVE COMMON MARMOSETS (*CALLITHRIX JACCHUS*)  
*Michael L. Power\*, Corrina N. Ross, Jay Schulkin and Suzette D. Tardif*
- 10:00 AM *Break*

### CARNIVORES

- 10:30 AM BODY CONDITION SCORING IN PANTHERA SPECIES: LONGITUDINAL AND COMPARATIVE OBSERVATIONS  
*Kibby Treiber\*, Ann Ward, and Kerry Mahan*
- 11:00 AM NUTRIENT DIGESTIBILITY EVALUATIONS OF FOUR RAW MEAT USING AVIANS, DOMESTIC CATS AND CAPTIVE EXOTIC FELIDS  
*Katherine R. Kerr\*, Alison N. Beloshapka, Cheryl L. Dikeman, Sarah L. Burke, Lee G. Simmons and Kelly S. Swanson*
- 11:30 AM DIGESTIBILITY TRIALS OF TWO CAPTIVE DASYURIDS: THE KULTARR (*ANTECHINOMYS LANIGER*) AND RED-TAILED PHASCOGALE (*PHASCOGALE CALURA*)  
*Hayley J. Stannard\* and Julie M. Old*
- 12:00 PM *Lunch*

### FASTING

- 1:30 PM SERUM STABLE ISOTOPES ( $d^{13}C$ ,  $d^{15}N$ ) CHANGE WITH FASTING IN SEALS AND SEA LIONS  
*Lorrie D. Rea\* and Keith A. Hobson*
- 2:00 PM FASTING-INDUCED FATTY LIVER IN THE AMERICAN MINK (*NEOVISON VISON*) — NEGLIGIBLE ROLE FOR HEPATIC *DE NOVO* LIPID SYNTHESIS  
*Kirsti Rouvinen-Watt\*, Sha Lei, Lora Harris, Morag Dick, Anne-Mari Mustonen and Petteri Nieminen*

2:30 PM **Winner of Susan Crissey Travel Award:**  
AMERICAN MINK (*NEOVISON VISON*) AS A MODEL FOR THE FIRST HIT IN THE DEVELOPMENT  
OF FATTY LIVER DISEASE: THE ROLE OF DIETARY N-3 PUFA, BODY FAT DEPOSITION, AND  
FASTING  
*Morag Dick\*, Jennifer Hurford, Sha Lei, Lora Harris, Jessica Mitchell, Anne-Mari Mustonen, Petteri  
Nieminen and Kirsti Rouvinen-Watt*

3:00 PM *Break*

## DESERT PRIMER

3:30 PM NUTRITIONAL ECOLOGY OF HERBIVORES IN THE DESERT SOUTHWEST: THE EXAMPLE OF THE  
DESERT TORTOISE (*GOPHERUS AGASSIZII*)  
*Olav Oftedal*

## POSTER SESSION

7:00-9:00 PM A NOVEL APPROACH FOR COLLECTING SAMPLES TO ASSESS STABLE ISOTOPE DIET-TISSUE  
FRACTIONATION IN CETACEAN SKIN  
*Nicole Browning, Graham A.J. Worthy\* and Christopher Dold*

PRELIMINARY NUTRITIONAL BASELINE DATA FOR LOGGERHEADS NESTING AT THE ARCHIE  
CARR NATIONAL WILDLIFE REFUGE (FL)  
*Simona A. Ceriani \*, Kathleen Sullivan, Llewellyn M. Ehrhart and Eduardo Valdes*

NEAR-INFRARED REFLECTANCE SPECTROSCOPY TO PREDICT THE NUTRITIONAL  
COMPOSITION OF CROP SAMPLES FROM FREE-LIVING PARROTS  
*J. Cornejo\*, R. Taylor, T. Sliffe, C.A. Bailey and D.J. Brightsmith*

SPACE UTILIZATION BY ANIMALS IN THE SOUTH AFRICA EXHIBIT AT THE SAN DIEGO ZOO'S  
WILD ANIMAL PARK  
*Edith Gonzalez and Michael Schlegel\**

LOCOMOTOR STRESS AND MINERAL MOBILIZATION FROM THE MATERNAL SKELETON  
*Wendy R. Hood*

A COMPARISON OF LIVER TRACE MINERALS AND VITAMINS IN WILD-CAUGHT VERSUS CAPTIVE  
BLUESTRIPED GRUNTS  
*Lisa A. Hoopes\*, Francesco Origgi Debabrata Mahapatra, Scott Terrell and Eduardo V. Valdes*

CASE STUDY – HAND REARING OF A WILD BORN KEY LARGO WOOD RAT (*NEOTOMA  
FLORIDIANA SMALLI*)  
*Shannon Livingston\*, Andre J. Daneault and Eduardo V. Valdes*

EVALUATING THE QIAAMP DNA STOOL KIT FOR METAGENOMIC STUDIES IN *ARCTICTIS  
BINTURONG*  
*Erin A. McKenney\*, Audrey O'Nan, Vivek Fellner and Melissa Ashwell*

NUTRITIONAL CONDITION DURING MOLT IN THE RELATIONSHIP BETWEEN SEX, COLORATION,  
AND REPRODUCTIVE SUCCESS OF THE EASTERN BLUEBIRD  
*Austin N. Mercadante and Geoffrey E. Hill\**

NUTRITIONAL COMPOSITION OF ACTUAL AND POTENTIAL INSECT PREY FOR THE KASAKELA  
CHIMPANZEES OF GOMBE STREAM NATIONAL PARK, TANZANIA  
*Robert C. O'Malley, Michael L. Power\* and Craig B. Stanford*

DISTURBANCE EFFECTS ON BAMBOO AS A FORAGE SOURCE: RECRUITMENT, MORTALITY,  
AND SUSTAINABLE RATES OF HARVEST  
*Jennifer L. Parsons\*, Brian S. Baldwin, Heidi A. Bissell, John R. Ouellette and Brian J. Rude*

INFLUENCE OF NUTRITION ON FITNESS AND REPRODUCTION IN MALE BLACK-FOOTED FERRETS

*Rachel .M. Santymire Shana R. Lavin\* Paul Marinari and Julie Kreeger*

NUTRITIONAL ROLES OF COPROPHAGY AND CECUM IN RAT-LIKE HAMSTERS, *TSCHERSKIA TRITON*

*Hiroki Shichijo\*, Yuji Kondo, Toshihiro Takahashi and Tetsuo Morita*

TEMPORAL AND INTER-INDIVIDUAL VARIATION IN MILK COMPOSITION IN A FREE-RANGING, HIBERNATING RODENT

*Amy Skibiell\* and Wendy R. Hood*

MONITORING IRON PARAMETERS IN BLACK RHINO (*DICEROS BICORNIS*) AT DISNEY'S ANIMAL KINGDOM

*Kathleen Sullivan\* Greg Fleming Natalie Mylniczenko and Eduardo V. Valdes*

**August 9, 2010**

8:00 AM *Morning off*

**MINERALS**

**PLENARY SPEAKER**

2:00 PM COMPARATIVE IRON NUTRITION OF BLOOD FEEDING INSECTS  
*Joy Winzerling\**

3:00 PM *Break*

3:30 PM MINERAL INTAKE IN AFRICAN GREY PARROTS (*PSITTACUS ERITHACUS*) FED A SEED MIXTURE OR EXTRUDED PELLETS *AD LIBITUM*, AND ITS EFFECTS ON EXCRETA CHARACTERISTICS  
*Isabelle D. Kalmar\*, Guy Werquin and Geert P.J. Janssens*

4:00 PM CALCIUM AS CURRENCY FOR ASSESSING PHYSIOLOGICAL COSTS OF REPRODUCTION IN WHITE-FOOTED MICE  
*Christina Schmidt\* and Wendy R. Hood*

4:30 PM CANNIBALISM OF OFFSPRING PROTECTS THE INTEGRITY OF THE MATERNAL SKELETON  
*Wendy R. Hood\**

7:00 PM BUSINESS MEETING

**August 10, 2010**

**PLENARY SPEAKER**

8:00 AM RISK AND RESILIENCE IN WILDLIFE NUTRITION  
*Perry Barboza*

**BIRDS**

9:00 AM ENTERAL BACTERIAL COMMUNITIES DIFFER IN CAPTIVE AND WILD BIRDS: IMPLICATIONS FOR CAPTIVE MANAGEMENT AS A CONSERVATION TOOL  
*Charlotte J. Minson\*, Roger G. Lentle and Murray A. Potter*

9:30 AM USE OF A HYDRATED NUTRITIONAL SUPPLEMENT DEVELOPED FOR NEONATAL POULTRY IN OTHER SPECIES: OSTRICH, DUCK, CRICKET  
*Ellen Dierenfeld\*, Roselina Angel and Julia Dibner*

10:00 AM *Break*

10:30 AM SCARLET MACAW DIETS: STUDYING WILD PARROTS TO IMPROVE CAPTIVE BIRD NUTRITION  
*D. J. Brightsmith and J. Cornejo\**

11:00 AM DIETARY POLYUNSATURATED FATTY ACID MODIFICATION OF LIPID AND LIPOPROTEIN  
METABOLISM IN MONK PARROT (*MYIOPSITTA MONACHUS*)  
*Christina Petzinger\*, J. Jill Heatley and John E. Bauer*

11:30 AM RATE OF PASSAGE AND POLLEN DIGESTIBILITY IN RAINBOW LORIKEETS  
*Elizabeth Koutsos\* and Roselina Angel*

12:00 PM *Lunch*

#### **CARBOHYDRATES**

1:30 PM A FETAL SHEEP MODEL FOR DIABETES DURING PREGNANCY: HYPERGLYCEMIA IMPAIRS  
FETAL INSULIN SECRETION  
*Alice S. Green\*, Xiaochuan Chen, Antoni R. Macko, Miranda J. Anderson and Sean W. Limesand*

2:00 PM PRELIMINARY FINDINGS ON THE EFFECTS OF CARBOHYDRATE TYPE ON SELECTED  
PHYSIOLOGICAL AND NUTRITIONAL PARAMETERS IN THE GREEN IGUANA (*IGUANA IGUANA*)  
*Cathrine D. Sauer, Mads F. Bertelsen and Jan Elnif*

2:30 PM EFFECT OF VARYING DIETARY STARCH AND FIBER LEVELS AND INOCULUM SOURCE (MULE  
DEER VS. DAIRY COW) ON SIMULATED RUMEN FERMENTATION CHARACTERISTICS  
*M. A. Brooks\*, R. M. Harvey, N. F. Johnson, E. A. Koutsos and M. S. Kerley*

3:00 PM *Break*

#### **PROTEIN**

3:30 PM PROTEIN CONSUMPTION HAS DELETERIOUS EFFECTS FOR LIFESPAN IN THE QUEENSLAND  
FRUIT FLY (*BACTROCERA TRYONI*)  
*Benjamin G Fanson\* and Phillip W Taylor*

4:00 PM THE IMPACT OF TANNINS ON PROTEIN AND DRY MATTER DIGESTION IN MOOSE  
*D.E. Spalinger\*, W.B. Collins and T.A. Hanley*

4:30 PM FROM SEALS TO CATS: A NEW HYPOTHESIS FOR PROTEIN METABOLISM IN  
HYPERCARNIVORES  
*Regina Eisert*