Program of the Twenty-third Annual Meeting

Of

The American Society of Primatologists

Hosted by the University of Colorado Health Sciences Center
Department of Psychiatry, the UCHSC Center for Laboratory
Animal Care, Primate Research Facility, and the Denver
Zoological Gardens

June 21 – June 24, 2000

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Peggy O’Neill-Wagner

ASP gratefully acknowledges the University of Colorado Health Sciences Center
Department of Psychiatry, The UCHSC Center for Laboratory Animal Care,
Primate Research Facility, and The Denver Zoological Gardens for their support of
the 2000 Meeting.
Local Arrangements Committee

Mark Laudenslager, Chair
Ron Banks
Sandra DeBlois
Allie Dewey
Linda Greco-Sanders
Richard Reading
Rebecca Richardson
Annie Weaver

Program Committee Members

Tammie Bettinger  Sarah Williams-Blangero
Maria Boccia       David Lee-Parritz
J. Dee Higley      Leanne Nash
Bill Hopkins       Deborah Overdorff

The Program Committee thanks Karen Rader (Zoo Atlanta) for assistance with the compilation of the 2000 Program.

MEETING ROOMS

All sessions will be in the Regal Harvest House, Boulder, Colorado. Plenary sessions will be held in the Flagstaff Room. Oral presentation sessions, workshops, roundtable discussions, and a film session will be held concurrently in the Flagstaff Room, the Canyon Room and the Sugarloaf Room. The two evening poster sessions will be held in the Century Room (first floor).

REGISTRATION

Tables for registration and information (questions, help, messages, etc.) will be located in the Sunshine Room (second floor). The registration area will open at 12:00 NOON on Wednesday, June 21 and remain open until 7:00PM. It will also be open 8:00AM to 4:30PM on Thursday and Friday, June 22 and 23.

EXHIBITS, VENDORS, AND CONSERVATION SILENT AUCTION

Exhibits, vendors, and items donated for the Conservation Committee’s Silent Auction will be displayed in the Millennium Room. Exhibits can be set up beginning at 6:00PM on Wednesday June 21. Please visit and support the exhibitors and sponsors.
SLIDE PREVIEW ROOM

Speakers may preview their slides in the Sunshine Room (second floor).

POSTER SET-UP

Individuals presenting posters can set up their poster presentations in the Century Room between 10:00AM and 5:00PM on the day of their poster session. Authors are encouraged to set up posters early and leave them up for the entire day. Poster sessions will be between 5:00PM and 7:00PM on Thursday, June 22, and Friday, June 23. Authors should remove their posters immediately following the sessions. There will be hors d’oeuvres and a cash bar available during the poster sessions.

COFFEE BREAKS

Coffee service will be available all day long, with soft drinks also available in the afternoons.

CONTINENTAL BREAKFASTS AND LUNCHES

Registration fees include continental breakfast served each morning from 7:00 to 8:00AM. Breakfast on Thursday, June 22, is in the Century Room, and Friday and Saturday, June 23 and 24, breakfast is in the Millennium Room.

Lunches are also included in the registration fee and will be served outdoors on the Pavilion in the Gardens, at 12:00NOON on Thursday, June 22, and Friday, June 23, and at 12:30PM on Saturday, June 24.

RECREATIONAL ACTIVITIES

There will be guided hikes in the nearby mountains for the casual or more conditioned hiker. Bring your hiking shoes and enjoy the wonderful scenery that Boulder and the Front Range Mountains have to offer. Further information will be available at the meeting, but departure time will be 1:00PM, Saturday June 24, which follows the close of the formal conference, and precedes the banquet. Box lunches will be available that day.

The Denver Zoological Gardens will host a zoo tour on Sunday, June 25. Further information will be available at the meeting, but departure time will be 9:00AM from the hotel. There will be a small charge for transportation.
BANQUET

The final banquet ending the conference will be held Saturday, June 24 at 7:00 PM at the Red Lion Inn. Buses will begin transportation from the Regal Harvest House at 6:30 PM for the short trip to the Red Lion Inn. This will be a casual banquet, with both indoor and outdoor seating, nestled in the foothills, and with a great band!

1999 STUDENT COMPETITION WINNERS

The American Society of Primatologists proudly acknowledges the winners of the 1999 Student Paper and Poster Competition:

**Oral Paper:** Christina J. Campbell, Department of Anthropology, University of California at Berkley for “Fur rubbing behavior in free-ranging black handed spider monkeys (*Ateles geoffroyi*) in Panama”;

**Poster:** Jeffrey E. Fite, co-authored by Jeffrey A. French, Department of Psychology, University of Nebraska at Omaha, for “The impact of care on sleep in marmosets (*Callithrix kuhlii*): Is less or disrupted sleep an additional cost of providing care to infants?”;

**Honorable Mention:** Karen Bales, co-authored by James M. Dietz, Department of Biology, University of Maryland, College Park, for a paper entitled, “A new ‘founder effect’—establishment of dominance in wild golden tamarin groups”;

Wendy Dirks, Department of Anthropology, New York University, for a paper entitled “An evolutionary perspective on dental development in the siamang (*Symphalangus syndactylus*) from histology and radiology;

Melissa S. Gerald, Department of Anthropology, University of California at Los Angeles, co-authored by John Bernstein and Roystone Hinkson, for a poster entitled, “A novel method for measuring animal coloration.”
PROGRAM OVERVIEW

Thursday June 22

6:45AM—8:00AM: Past Presidents’ Breakfast (table reserved at the Regal Harvest House Restaurant)

FLAGSTAFF ROOM  
8:00AM—8:15AM Welcome  
Welcome by Mollie Bloomsmith (Program Committee), Mark Laudenslager (Local Host), Richard Reading (Director of Conservation Biology, Denver Zoological Gardens), Steven Dubovsky (Interim Chairman, Department of Psychiatry, University of Colorado Health Sciences Center).  
Introductory Remarks by Nancy Caine (ASP President).

8:15AM—9:15AM  Keynote Address: Duane M. Rumbaugh: “The Apes and Us: Brain and Emergent Processes” [I-1] (Flagstaff Room)

FLAGSTAFF ROOM  CANYON ROOM  SUGARLOAF ROOM  
9:30AM—12:00NOON  Session 1  
Learning and Cognition, Part A

9:30AM—12:00NOON  Session 2  
Enrichment, Breeding and Reproduction

9:30AM—12:00NOON  Session 3  
Acquisition and Maintenance of Social Dominance in Macaques and Vervets (Symposium)

12:00NOON—1:00PM  Lunch Break

1:00PM—2:00PM  Featured Speaker: Patricia Wright: “Moon Ghosts from a Distant Island: Researching the Lemurs of Madagascar” [I-4] (Flagstaff Room)

FLAGSTAFF ROOM  CANYON ROOM  SUGARLOAF ROOM  
2:15PM—4:45PM  Session 4  
Social Behavior, Part A

2:15PM—4:15PM  Session 5  
Environmental Enhancement: Policy, Plans and Perspectives (Roundtable)

2:15PM—4:15PM  Session 6  
Cognitive Research in Zoological Parks (Workshop)

CANYON ROOM  
4:30PM—9:00PM  Session 7  
Films Dedicated to Newer Material On Lesser-known Macaques
5:00PM-7:00PM  Session 8: POSTER SESSION I: Enrichment/Colony Management; Breeding/ Reproduction; Feeding/Nutrition; Social Behavior; Ecology/Conservation (Century Room)

7:00PM-9:00PM  ASP Executive Committee Meeting

Friday June 23

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<td>8:00AM—10:30AM</td>
<td>FLAGSTAFF ROOM</td>
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<td>CANYON ROOM</td>
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<td>Creating Employment Niches in 21st Century Primatology (Symposium)</td>
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<td>Nonhuman Primate Behavioral Genetics (Symposium)</td>
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<td>11:00AM—12:00NOON</td>
<td>Featured Speaker: David G. Amaral: “The Role of the Amygdala in Primate Social Behavior” [I-2] (Flagstaff Room)</td>
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<td>12:00NOON—1:00PM</td>
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<td>Social Behavior, Part B</td>
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<td>Preparing for Life after Graduate School (Roundtable)</td>
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<td>Behavioral Genetics Research in Nonhuman Primate Populations (Roundtable)</td>
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<td>3:30PM—5:00PM</td>
<td>ASP Business Meeting (Flagstaff Room)</td>
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<td>5:00PM—7:00PM</td>
<td>Session 15: POSTER SESSION II: Learning/Cognition; Physiology/Immunology; Endocrinology; Neuroscience/Pharmacology; Research Methods; Infant Development/ Maternal Behavior; Demography/Population Studies; Human Evolution/Anatomy/Growth (Century Room)</td>
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Saturday June 24

FLAGSTAFF ROOM                CANYON ROOM            SUGARLOAF ROOM
8:00AM—9:30AM               8:00AM—9:30AM            8:00AM—11:00AM
Session 16                   Session 17             Session 18
Infant Development/            Neuroscience/Pharmacology            Ecology/Conservation
Maternal Behavior              Physiology/Immunology            Feeding/Nutrition
                               Anatomy/Growth

FLAGSTAFF ROOM                CANYON ROOM
9:30AM—11:30AM               9:30AM—11:30AM
Session 19                   Session 20
Gestural Communication       Primates and Public Health
in Primates                  (Roundtable)
(Symposium)

11:30AM—12:30NOON            Featured Speaker: Lynn A. Fairbanks: “The Nurture Assumptions: Things Your Mother Never Told You” [I-3] (Flagstaff Room)

12:30NOON—1:30PM            Lunch Break
American Journal of Primatology Editorial Board Meeting

1:00PM                        Departure for local hikes

6:30PM                        Buses begin transportation to Red Lion Inn for Banquet
7:00PM                        Banquet begins at the Red Lion Inn
                               “Dinner in the Hills with Dancing in the Grass”

Sunday June 25

9:00AM                        Departure for tour of Denver Zoological Gardens
ASP 2000 MEETING

SCIENTIFIC AND SOCIAL PROGRAM

Wednesday June 21, 2000

12:00NOON—7:00PM Registration (Sunshine Room)

6:00PM  Exhibit and Silent Auction Set-up Begins (Millennium Room)

Standing committee meetings

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<tr>
<th>Standing Committee</th>
<th>Time</th>
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<td>Awards and Recognition</td>
<td>1:00PM-5:00PM</td>
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<td>Conservation</td>
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<td>Executive Boardroom</td>
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<td>Education</td>
<td>3:00PM-5:00PM</td>
<td>Suite 231</td>
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<td>Membership and Finance</td>
<td>2:00PM-5:00PM</td>
<td>Suite 229</td>
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<td>Program</td>
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<td>Regal Class Boardroom</td>
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<td>Publications</td>
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<td>Research and Development</td>
<td>2:00PM-5:00PM</td>
<td>Suite 431</td>
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7:00PM—9:00PM:  Opening Reception at the Pavilion (outside in the Gardens)  [Food and Cash Bar]

Thursday June 22

6:45AM—8:00AM:  Past Presidents’ Breakfast (table reserved at the Regal Harvest House Restaurant)

FLAGSTAFF ROOM

8:00AM—8:15AM Welcome
Welcome by Mollie Bloomsmith (Program Committee), Mark Laudenslager (Local Host), Richard Reading (Director of Conservation Biology, Denver Zoological Gardens), Steven Dubovsky (Interim Chairman, Department of Psychiatry, University of Colorado Health Sciences Center).
Introductory Remarks by Nancy Caine (ASP President).

8:15AM—9:15AM
Keynote Address: Duane M. Rumbaugh “The Apes and Us: Brain and Emergent Processes” [I-1] (Flagstaff Room)
9:30AM—12:00NOON: Session 1: Learning and Cognition, Part A (M. J. Jorgensen, Chair) (Flagstaff Room)

9:30  Observational Learning of Food Processing Techniques in Gorillas (Gorilla gorilla gorilla). T.S. Stoinski, N. Ure, J. Wrate and A. Whiten [118]

9:45  Spontaneous Tool Behaviors in a Captive Group of Gorillas (Gorilla gorilla gorilla): Innovation and Observational Learning. S. Woods [131]

10:00  WITHDRAWN


10:30  Concerning Recall Memory in a Chimpanzee (Pan troglodytes). C. R. Menzel [76]


11:00  Hemiretina Use is Stimulus Dependent in Chimpanzees (Pan troglodytes). M.A. Hook, S.J. Schapiro and J.P. Ward [56]

11:15  Vocalization Production and Usage in Language-Competent, Captive Bonobos (Pan paniscus). J.P. Taglialatela and E.S. Savage-Rumbaugh [122]


11:45  Memory Organization by an Orangutan (Pongo pygmaeus). K.B. Swartz [121]

9:30AM—12:00NOON: Session 2: Enrichment, Breeding and Reproduction (S. J. Schapiro, Chair) (Canyon Room)


10:00  Control Over Videotape Enrichment for Socially Housed Chimpanzees. M.A. Bloomsmith, S.P. Lambeth, J.E. Perlman, M.A. Hook and S.J. Schapiro [16]

10:15  Positive Reinforcement Training Paired with Videotape Exposure Decreases Training Time Investment for a Complicated Task in Female Chimpanzees. J.E. Perlman, S.P. Lambeth and S.J. Schapiro [91]

10:45  Reproduction in Indonesian vs. Chinese Cynomolgus Macaques Revisited. M. K. Izard and D. G. Smith [57]

11:00  Testosterone Across the Cycle of Female Bonobos (*Pan paniscus*). M.H. Jurke, R.H. Sommovilla, N.M. Czekala and R.W. Wrangham [61]


11:30  Variation in Lifetime Reproductive Success in Female Chimpanzees (*Pan troglodytes schweinfurthii*) of Gombe Stream Research Centre. K.B. Kerr [64]


9:30AM—12:00NOON: Session 3—Symposium: Acquisition and Maintenance of Social Dominance in Macaques and Vervets (J.D. Higley, I.S. Bernstein, B. Chapais, L. Fairbanks, organizers) [S-19] (Sugarloaf Room)

9:00  Bernstein, I.S.  The Dominance Concept: Causes and Consequences  [S-20]

9:30  Chapais, B.  Nepotistic Dominance Systems: What is the Exact Role of Kinship?  [S-21]

10:00  Fairbanks, L.  Dominance in Vervets: Social, Reproductive and Developmental Correlates of Rank  [S-22]

10:30  Higley, J.D., Bastain, M. Hurley, A. Developmental and Biological Variables Related to Social Dominance  [S-23]

11:00  Discussion

12:00NOON—1:00PM  Lunch Break

1:00PM—2:00PM  Featured Speaker: Patricia Wright “Moon Ghosts from a Distant Island: Researching the Lemurs of Madagascar” [I-4] (Flagstaff Room)
2:15PM—4:45PM: Session 4: Social Behavior, Part A (M. L. Boccia, Chair) (Flagstaff Room)

2:15  Behavioral Consequences of Aging in Great Apes: A Pilot Study. M.A. Bloomsmith, L.R. Tarou and J.M. Erwin [18]

2:30  How Rhesus Macaques Age: Differences in Male and Female Social Behaviors. J. Corr [33]

2:45  Dominance Style or Phylogenetic Affiliation: What Predicts the Social Functions of Affiliative Facial Displays in Pigtailed Macaques (*Macaca nemestrina*)? S. Preuschoft, J. Flack, M.L. Gong and F.B.M. de Waal [97]

3:00  Individual Differences in Response to a Stranger: Social Impulsivity as a Dimension of Temperament in Vervet Monkeys. L.A. Fairbanks, D. Pollack and K. Blau [39]


3:30  Negotiating Changes in Status among Female Bonobos. C.M. Johnson and M. Ronneberg [58]


4:00  Effects of Timing of Environmental Stress on Social Behavior Patterns During Pregnancy in Captive Squirrel Monkeys (*Saimiri boliviensis*). M.E. Glasgow and L.E. Williams [46]


*Session Jointly Sponsored by ASP and APV (Association of Primate Veterinarians)*


4:30PM—9:00PM: Session 7—Film Session: Films Dedicated to Newer Material on Lesser-known Macaques (C. Weisbard and C. Southwick, organizers) [R-5] (Canyon Room)

5:00PM—7:00PM  Session 8: POSTER SESSION I: Enrichment/Colony Management; Breeding/Reproduction; Feeding/Nutrition; Social Behavior; Ecology/Conservation (Century Room)

Enrichment/Colony Management

1. Bramblett, C.A. Stability of Guenon Social Behaviors after Extreme Changes in Housing Conditions [23]

2. Williams, L.E., Steadman, A., Kyser, B. Increased Cage Size Affects *Aotus* Time Budgets and Partner Distances [129]

3. Weed, J.L., McCollom, K.J., Cisar, F.A. Methods for Socializing Unfamiliar Primates to Provide Environmental Enrichment and Promote Psychological Well-Being [128]

4. Harvey, H., Rice, T., Kayhart, R., Torres, C. The Effects of Specific Types of Music on the Activity Levels of Singly-Housed Chimpanzees (*Pan troglodytes*) [50]

5. Veira, Y., Brent, L. Behavioral Intervention Program: Enriching the Lives of Captive Nonhuman Primates [126]

6. Nitsch, M. Affiliative Interactions within an All-Male Group of Western Lowland Gorillas (*Gorilla gorilla gorilla*) at Loro Park, Tenerife, Spain [88]


Breeding/ Reproduction

8. Lukas, K.E., Maher, S.A., Jacobs, B.A., Henderson, A. Assessing the Effect of Visitor Presence on Reproductive Behavior in Gibbons (*Hylobates leucogenys*) at Lincoln Park Zoo [71]

Feeding/Nutrition

9. Milliken, G.W., Ferra, G., Kraiter, K.S., Mallard, S., Ross, C.L. Lateral Reach and Posture Preferences during Arboreal Folivory in *Propithecus* Species [81]

Social Behavior

11. Schaffner, C.M., Aureli, F. Embracing and Face Greeting in a Captive Group of Colombian Black-Faced Spider Monkeys (Ateles fusciceps robustus) [107]


13. Brosnan, S.F., Seres, M., de Waal, F.B.M. The Effects of Food Quantity and Audience on Food Calls in Chimpanzees (Pan troglodytes) [25]


15. Favia, J.L., Guerra, A., James-Aldridge, V. Family Mediated Female Rank and Chimpanzee-Human Begging Interactions [40]


17. Zucker, E.L. Kaplan, J.R. Dominance and Parameters of Social Grooming by Adult Female Patas Monkeys (Erythrocebus patas) in Puerto Rico [133]

18. Mertl-Millhollen, A. Ringtailed Lemur (Lemur catta) Over-Marking as an Example of Resource Defense [77]

19. Mertl-Millhollen, A. Components of Scent Marking Behavior by Male Ringtailed Lemurs (Lemur catta) at Berenty Reserve, Madagascar [78]

**Ecology/Conservation**

20. Méndez-Cárdenas, M.G. Vocal Variation in Howler Monkeys (Alouatta) on Allopatric and Sympatric Populations and its Use for Phylogenic Analysis [75]


23. Martinez-Mota, R., Serio-Silva, J.C. Interactions in a Fragment of Tropical Rain Forest of Los Tuxtlas, Mexico: A Dispersal Case Study among Howler Monkeys (Alouatta palliata mexicana), Amates (Ficus perforata) and ants (Azteca) [74]
24. Serio-Silva, J.C., Rico-Gray, V. Microclimatic Factors that Influence Seed Germination of *Ficus perforata* and *Ficus lundelli* (Urostigma) Dispersed by *Alouatta palliata mexicana* in Several Arboreal Strata (Conserved and Perturbed Habitats) [109]

25. Nekaris, K.A.I., Buzzell, C.A. How Cryptic is the Slender Loris (*Loris tardigradus lydekkerianus*)? [85]


27. Searcy, Y.M., Caine, N.G. Captive Geoffroy's Marmosets (*Callithrix geoffroyi*) React to Soaring Bird Models with Anti-Predator Behaviors [108]


30. Eniang, E.A. Confirmation of the Preuss Red Colobus in the Rainforest of Southeastern Nigeria [36]

7:00PM—9:00PM: ASP Executive Committee Meeting

Friday June 23

8:00AM—10:30AM: Session 9: Learning and Cognition, Part B (K.A. Bard, Chair) (Century Room)

8:00 Social Responses to Self-Image versus Reflections of Conspecifics in Male Rhesus Macaques (*Macaca mulatta*). K.C. Baker [5]

8:15 The Use of Spatial Memory in Foraging by a Group of Captive Golden Lion Tamarins (*Leontopithecus rosalia*). L.R. Tarou and T.L. Maple [123]

8:30 Preferences for Conspecific and Heterospecific Faces: Effects of Inversion and Feature Re-Arrangement. M.L. Boccia and C. Pedersen [19]

8:45 The Use of a Puzzle Feeder Task to Assess Relationships between Cognition, Age, and Behavior in Young and Middle-Aged Female Cynomolgus Monkeys (*Macaca fascicularis*). R.C. Stavisky, M. Hook and S.J. Schapiro [117]
9:00  Cognitive Function in Aged Ovariectomized Female Rhesus Monkeys. A. Lacreuse, J.G. Herndon and M.B. Moss [67]

9:15  Observational and Experimental Studies of Hand Preferences in Captive Vervet Monkeys (Cercopithecus aethiops). I. Phan and M. Jorgensen [93]

9:30  Simultaneous and Delayed Identity Matching-To-Sample: Acquisition and Transfer of Responding to Photographic Stimuli by Rhesus Monkeys (Macaca mulatta). S. Himmanen [53]


10:15 Can Concurrent Speed and Directness of Travel Indicate Locational Knowledge in the Free-Ranging Yellow Baboons (Papio hamadryas cynocephalus) of Ruaha National Park, Tanzania? S.T. Pochron [95]

9:00AM—11:00AM: Session 10-Symposium: Creating Employment Niches in 21st Century Primatology or Where Do We Go From Here? (S.M. Howell, L.E. Miller and J. Fritz, organizers) [S-1] (Canyon Room)


Jazrawi, S.E.  Postural Congruence in a Captive Group of Chimpanzees (Pan troglodytes) [S-3]

Gupta, K.K. Primate Research and Conservation Education Opportunities in India [S-4]


Morris, J. B. The Role of Primatology Internships for Veterinary Students [S-6]

Schwandt, M.L., Howell, S., Fritz, J. Applied Primatology in the Captive Environment: Science-Based Colony Management of Chimpanzees (Pan troglodytes) [S-7]

Howell, S., Miller, L.E. and Fritz, J. Panel Discussion

8:00AM—10:30AM: Session 11-Symposium: Nonhuman Primate Behavioral Genetics (A. Bennett, T. Comuzzie, K.P. Lesch, J.C. Long and J. Rogers, organizers) [S-15] (Sugarloaf Room)
Rogers, J. Comuzzie, A.G. Methods and Study Design Issues in the Behavioral Genetics of Nonhuman Primates [S-16]

Lesch, K.P. Serotonin Transporter and Monoamine Oxidase A: Two Examples for the Candidate Gene Approach to Behavioral Traits [S-17]


11:00AM—12:00NOON Featured Speaker: David G. Amaral “The Role of the Amygdala in Primate Social Behavior” [I-2] (Flagstaff Room)

12:00NOON—1:00PM Lunch Break
ASP Board of Directors Meeting and Luncheon

1:00PM—3:15PM Session 12: Social Behavior, Part B (A. Weaver, Chair) (Flagstaff Room)

1:00  Reconciliation in Captive Chimpanzees (Pan troglodytes): A Re-Evaluation with Controlled Methods. S. Preuschoft, X. Wang, F. Aureli and F.B.M. de Waal [98]

1:15  Patterns of Conflict Intervention and the Control Role in Pigtail Macaque Society. J.C. Flack and F.B.M. de Waal [43]


2:00  Mating in the Absence of Ovarian Activity following a Resident Male Turnover in a Wild Blue Monkey Group, Kakamega, Kenya. K. Pazol and T.E. Ziegler [90]


3:00  The Spacing System of the Slender Loris (Loris tardigradus lydekkerianus) and its Implications for Slender Loris Social Organization. K.A.I. Nekaris [86]
1:00PM—3:00PM: Session 13-Roundtable Discussion: Preparing for Life After Graduate School (L.E. Miller and ASP Education Committee, organizers) [R-2] (Canyon Room)

1:00PM—3:00PM: Session 14-Roundtable Discussion: Current Studies and Future Directions for Behavioral Genetics Research in Nonhuman Primate Populations (A.J. Bennett, organizer) [R-3] (Sugarloaf Room)

3:30PM—5:00PM  ASP Business Meeting (Flagstaff Room)

5:00PM—7:00PM  Session 15: POSTER SESSION II: Learning/Cognition; Physiology/Immunology; Endocrinology; Neuroscience/Pharmacology; Research Methods; Infant Development/Maternal Behavior; Demography/Population Studies; Human Evolution/Anatomy/Growth (Century Room)

**Learning/Cognition**


2. Minahan, M.F., Beran, M.J., Savage-Rumbaugh, E.S. Object Permanence in Bonobos (*Pan paniscus*) and Chimpanzees (*Pan troglodytes*) [82]


**Physiology/Immunology**


6. Marinus, L.M., Chase, W.K., Novak, M.A. Self-Biting Behavior in Rhesus Macaques (*Macaca mulatta*) is Preferentially Directed to Body Areas Associated with Acupuncture Analgesia [73]

Endocrinology


Neuroscience/Pharmacology

11. Bard, K.A. Predicting Lateral Bias and Affect from Neonatal Measures in Chimpanzees (Pan troglodytes) [9]


Research Methods


18. Smith, M.A., Shively, C.A. Behavioral Trait Inventory Predicts Habituation to a Standardized Stimulus: A Potential Technique to Study Behavioral Responsiveness to Social Stress in Captive Cynomologus Macaques [113]


**Infant Development/ Maternal Behavior**

21. Spini, L. Growing Up in Different Environments: The Behavior of Juvenile Chimpanzees (*Pan troglodytes*) in the Budongo Forest Reserve (Uganda) and in the Chester Zoo (UK) [116]


26. Lindell, S.G., Maestripieri, D., Megna, N.L., Higley, J.D. CSF 5-HIAA and MHPG Predict Infant Abuse and Rejection by Rhesus Macaque Mothers [70]


**Demography/Population Studies**


29. Erwin, J., Landon, K., Smith, K. Aging Apes in America: A Strategy for Long-Term-Care that Promotes Individual Well-being and Advances Comparative Gerontology [38]
Human Evolution/Anatomy/Growth

30. Carosi, M., Gerald, M.S., Ulland, A.E., Suomi, S.J. Male-Like External Genitalia in Female Tufted Capuchins (*Cebus apella*) [28]

31. WITHDRAWN

Saturday June 24

8:00AM—9:30AM Session 16: Infant Development and Maternal Behavior (G. Ruppenthal, Chair) (Flagstaff Room)

8:00 Maintenance of Proximity/Contact by Mothers and Infants among Captive Olive Baboons (*Papio hamadryas anubis*). V.K. Bentley-Condit [12]

8:15 Social Interactions of Adolescent Bonnet and Pigtail Macaques (*Macaca radiata* and *Macaca nemestrina*) are Related to Early Events. R.L. Richardson, W.L. MacCannell and M.L. Laudenslager [102]

8:30 Relationship Quality and the Development of Reconciliation in Captive Brown Capuchins (*Cebus apella*). A. Weaver and F.B.M. de Waal [127]

8:45 Mental Retardation in a Pigtailed Monkey with Trisomy 16. G.C. Ruppenthal, C.M. Moore, R.G. Best, G.P. Sackett [106]

9:00 Crying and Fussing in Infant Chimpanzees (*Pan troglodytes*): Do Apes Get Colic? K.A. Bard [10]


8:00AM—9:30AM: Session 17: Neuroscience, Pharmacology, Physiology, Endocrinology and Immunology (K.L. Rasmussen, Chair) (Canyon Room)

8:00 Urinary Cortisol and Testosterone in Male Gorillas (*Gorilla gorilla gorilla*) Housed in Heterosexual and All-Male Groups. T.S. Stoinski, N. Czekala, K.E. Lukas and T.L. Maple [120]


8:30 The Effect of Habitat on Fecal Cortisol Concentrations in Squirrel Monkeys (*Saimiri sciureus*). S.R. Tecot [124]

9:00 Long Term Changes in Social Interaction with Chronic Moderate Alcohol Consumption. C.A. Shively, K.A. Grant and W.R. Johnson [111]


8:00AM—11:00AM: Session 18: Ecology, Feeding, Nutrition, Demography, Anatomy and Growth (C. Grassi, Chair) (Sugarloaf Room)

8:00 Callimico goedlii: Understory Monkeys of Northern Bolivia. L.M. Porter [96]

8:15 Nutrient Composition and Distribution of Fungal Sporocarps Consumed by Goeldi’s Monkeys in Northern Bolivia. A.M. Hanson and L.M. Porter [49]

8:30 Patterns of Interspecific Associations between Wild Golden-Headed Lion Tamarins and Sympatric Wied’s Marmosets in Southern Bahia, Brazil. B.E. Raboy and J.M. Dietz [99]

8:45 Forest Structure and Sleeping Site Choice by a Wild White-Faced Saki Group (*Pithecia pithecia*). J.A. Brush [26]

9:00 Ecological and Social Influence on Female Reproduction in Langurs (*Presbytis entellus*). C. Borries and A. Koenig [22]

9:15 Germination Responses of Ficus (Urostigma) Seeds Ingested by Different Primate Species. Righini, N., Serio-Silva, J.C., Martinez-Mota, R., Bárrios-Espinosa, C. [103]

9:30 Factors Affecting Variation in Daily Food Intake by Wild Golden Lion Tamarins (*Leontopithecus rosalia*). K. Miller and J. Dietz [80]

9:45 The Sense of Taste in the Common Marmoset: Taste Fiber Type Determines Behavior. V. Danilova, T. Roberts and G. Hellenkant [34]

10:00 *Colobus guereza* and Exotic Plant Species in the Entebbe Botanical Gardens. K. Grimes and J.D. Paterson [48]


10:30 Number of Males and Infanticide: A Modeling Approach. A. Koenig and C. Borries [65]

9:30AM—11:30AM: Session 19-Symposium: Gestural Communication in Primates (J. Wallis and J. Tanner, organizers) [S-8] (Flagstaff Room)

Partan, S. Variability and Stereotypy of Facial Expressions in Rhesus Macaques [S-9]

Wallis, J. Muzzle Wiping in Baboons: Intentional Communication or Nervous Twitch? [S-10]

Tanner, J.E., Byrne, R.W. Iconic and Pointing Gestures in Zoo-Living Lowland Gorillas (Gorilla gorilla gorilla) [S-11]

Call, J., Tomasello, M. Use and Comprehension of Gestures in Chimpanzees and Orangutans [S-12]

Leavens, D.A., Hopkins, W.D. What Does a Chimpanzee Food Beg Mean? [S-13]

Wilcox, S.E., Armstrong, D.F. The Nature of Gestures in Humans [S-14]

9:30AM—11:30AM: Session 20-Roundtable Discussion: Primates and Public Health (S. Evans, organizer) [R-4] (Canyon Room)

11:30AM—12:30NOON Featured Speaker: Lynn A. Fairbanks “The Nurture Assumptions: Things your Mother Never Told You” [I-3] (Flagstaff Room)

12:30NOON—1:30PM Lunch Break

American Journal of Primatology Editorial Board Meeting

1:00PM Departure for local hikes

6:30PM Buses begin transportation to Red Lion Inn for Banquet

7:00PM Banquet begins at the Red Lion Inn

“Dinner in the Hills with Dancing in the Grass”

Sunday June 25

9:00AM Departure for tour of Denver Zoological Gardens