Justin A. McNulty, Executive Secretary Volume 40, Number 2

Summer 2016

A Message from the President...



Dear Colleagues,

"The congress was the largest ever held.
.." – this, a reference to the second joint meeting of IPS/ASP in 1996, the XVIth biennial congress of IPS and the 19th annual meeting of ASP [1].

The upcoming joint

meeting in August is expected to exceed that standard in all aspects of size and diversity; the discipline of primatology has grown dramatically over the past 20 years. Not only has the number of individuals working with primates increased, but we are also using new tools, expanding theoretical concepts, increasing collaborations with other disciplines, and improving our outreach to train new primatologists in many primate habitat countries. Many of us who attended that memorable '96 meeting on the campus of the University of Wisconsin in Madison have maintained active ASP and/or IPS membership in the intervening 20 years. And some of you may remember the first joint ASP/IPS meeting in 1982 in Atlanta.

The 5th annual meeting of ASP and the IXth congress of IPS [2], and met with the International Society for Human Ethology in August, 1982. The week-long meeting included 30 symposia and 286 contributed papers and posters presented on biomedicine, genetics, behavior, learning, reproduction, communication, ecology and social

organization. The 2016 joint ASP/IPS meeting in August will be mind-boggling in its size and diversity: five days long; as many as seven concurrent sessions; scientific sessions until 9 p.m.; hundreds of posters; business meetings for the two organizations; and many social events at the beginning, during, and at the end of the meeting.

A quick reading of the 1982 meeting abstracts turned up another difference. Only four papers were given on primate conservation. In contrast, Chicago 2016 will include conservation-related symposia on parasite transmission, ethnoprimatology, translocation, safe capture, and the pet trade; symposia on primate conservation in Brazil, China, and Africa; and five contributed paper and poster sessions. The emphasis on conservation is certainly a sign of the critical state of primate survival and primate habitats in the world today and extends to caring for endangered primates in captivity.

The Society's membership has also undergone a shift during the past 34 years. In 1982, the two dominant "areas of specialization" were behavioral-psychological (52%) and biomedical (29%), followed by anthropology/anatomy, husbandry, and ecology and conservation [3]. In subsequent member surveys, those self-identified as biomedical researchers declined (1992 and 2002 [4]), while ecologists increased.

In the most recent survey [5] 91% of respondents in 2009 said that they studied some aspect of primate behavior, thus maintaining a strong tradition in the

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Society. Primate ecology and conservation have also grown significantly in representation.

The results of these surveys that began in 1977 show an increasingly diverse ASP membership. The upcoming joint meeting with IPS will exemplify that diversity with registrants from 55 countries, 51 invited symposia, workshops and roundtables, more than 200 posters, 45 contributed paper sessions, and a 4-day pre-congress training program for international students.

I wish to acknowledge a few of the many people who have already invested months or years in the success of the 2016 Congress. The local arrangements committee is being led by **Steve Ross** and will be hosted by Lincoln Park Zoo's Lester Fisher Center for the Study and Conservation of Apes. **Steve Schapiro** has been managing the financial resources. I know it is safe to say that more than two years of effort have already been invested by Steve and Steve.

Karen Bales, Joanna Setchell, Kristin Bonnie, and Katie Hinde reviewed hundreds of abstracts and put together the week-long scientific program. Twelve student award finalists have already been announced by the joint ASP-IPS Education committee led by Amanda Dettmer, Karen Hambright, and Elizabeth Lonsdorf. Also, ASP doubled its annual student travel award amount this year to support ten IPS or ASP student participants. Matthew Novak chaired that committee. Research (Larry Williams) and Conservation (Michelle Bezanson and Stacev Tecot) committees will be announcing awards soon or at the meeting. Lynne Isbell's committee (Awards and Recognition) has already made decisions about their awardees for this year. Cochairs of the student committee (Brett Frve and Morgan Chaney) will host a student mixer at the Congress' opening social event at Lincoln Park Zoo and sponsor a panel of science and communicators during the meeting. Christopher Schmitt, head of the Media and Public Engagement committee, will be coordinating official communication during the meeting.

All-volunteer organizations require the input of many individuals to stay healthy; and your investment in ASP will deepen with involvement and responsibility. I invite anyone who has not yet served on a committee to contact a chairperson and become involved.

This is my last *Bulletin* entry as President of ASP. **Kimberley Phillips** will become the next President of ASP at the business meeting. **Mollie Bloomsmith** was recently elected President-Elect. **Cory Ross** will continue as Treasurer and **Amanda Dettmer** will become Executive Secretary. Many thanks to **Justin McNulty** (Executive Secretary) and **Karen Bales** (Past President) for their contributions to the ASP Board of Directors. They will be missed.

Final word, don't miss the Primate Promenade at 6:15 a.m.! Three chances (Tuesday, Wednesday, and Thursday) to take an early morning walk or run for primate conservation. I hope you enjoy the meeting.

- Marilyn

References

- Proceedings of the XVIth Congress of the International Primatological Society, Madison, Wisconsin, USA, August 11-16, 1996. International Journal of Primatology 16:1059-1069.
- Abstracts of the IXth Congress of the International Primatological Society, August 8-13, 1982, Atlanta, Georgia, U.S.A. International Journal of Primatology 3:239-365.
- 3. Dukelow, W.R., et al. 1983. Membership analysis of the first six years of the American Society of Primatologists. *American Journal of Primatology* 4:319-322.
- 4. Schapiro, S.J. 2003. Membership characteristics of the American Society of Primatologists through 2002. *American Journal of Primatology* 61:45-52.
- 5. Carnegie, S.D. 2009. American Society of Primatologists membership Survey Report 2009. Unpublished.

Joint Meeting of The American Society of Primatologists and The International Primatological Society August 21-27, 2016



CHICAGO 2016

We remind everyone of the American Society of Primatologists and the International Primatological Society joint meeting in Chicago, Illinois, from August 21-27, 2016. The scientific program for the meeting is now available online at: https://www.asp.org/IPS/meetings/conferenceschedule.cfm. We have a great slate of invited speakers including:

2016 IPS Lifetime Achievement Award **Jane Goodall, Ph.D.**Princeton University

2014 IPS Lifetime Achievement Award **Jeanne Altmann, Ph.D.**Princeton University

IPS President's Address **Tetsuro Matsuzawa, Ph.D.**Primate Research Institute, Kyoto University

2015 ASP Distinguished Primatologist Frans de Waal, Ph.D.
Emory University

2014 ASP Early Career Award Winner's Address **Katie Hinde, Ph.D.**Arizona State University

The meeting will also feature 51 invited symposia, round-tables, and workshops, on topics as diverse as primate aging, sensory evolution, the hormone oxytocin, the primate pet trade, and laboratory primate welfare. In addition, there are 45 sessions of contributed oral presentations and three nights of posters. There is a lot of exciting science and we invite you to check out the program!

Committee Update: Conservation Committee

The ASP Conservation Committee supports conservation research and education around the world. The committee raises funds and distributes them to recipients of the Conservationist Award and Conservation Grants

We are seeking donations for the **ASP/IPS auction** in Chicago, Illinois. We had great success with framed art pieces in 2014 and 2015. Therefore, we are inviting all ASP/IPS members that create **primate art pieces** to donate. We will highlight the piece and artists during the auction while auctioning the pieces to raise money for ASP/IPS conservation funding. Are you an artist? Do you know an artist?

Please consider donating your own work or facilitating donations if you know a primate artist! If you know other primatologists with artistic talent, please request a donation, or put the Chairs of the Committee in touch with the primatologist/artist. And help us spread the word!

For the Summer *Bulletin*, we are happy to feature one of our grant recipients and their ASP-funded research (see pages 13-14). We thank conservation committee member **Andrea Eller** for help with editing our reports.

- Michelle Bezanson and Stacey Tecot, Co-Chairs

ASP President-Elect Kimberley Phillips Meets with NIH Director Francis Collins

On March 10, 2016, representatives from several professional organizations met with Dr. Francis Collins, the Director of the National Institutes of Health (NIH). Dr. Kimberley Phillips, President-Elect of the American Society of Primatologists, attended as the representative of the Society. The purpose of the meeting was to discuss NIH support for nonhuman primate (NHP) research.

At this meeting Dr. Collins strongly reaffirmed the NIH's commitment to support of biomedical research involving NHP. He acknowledged that NIH has been under pressure from various groups opposed to NHP research, but asserted that these groups have misinterpreted NIH's recent decisions regarding NHP research. In particular, he stated the decision to discontinue funding for biomedical research with chimpanzees is not intended as a precedent for research with macaques or other nonhuman animals. Dr. Collins also emphasized the need for scientific societies and other groups to mount a strong public education campaign to inform the public about how NHP research contributes to advances in human health.

Also attending the meeting were senior members of the NIH leadership, and representatives from the following organizations: American Psychological Association, American College of Neuropsychopharmacology, American Physiological Society, Comparative Cognition Society, International Study Group Investigating Drugs as Reinforcers, National Primate Research Centers, Research Society on Alcoholism and Society for Neuroscience



ASP President-Elect Dr. Phillips & NIH Director Dr. Collins

Committee Update: Education Committee

The ASP Education Committee represented the ASP as an Official Partner of the biennial USA Science & Engineering Festival April 15-17, 2016 in Washington, D.C. an enormously popular event that this year served 365,000 participants of all ages. Strategically located adjacent to the National Primate Research Centers' booth, we increased the awareness of primates with interactive educational materials. As in past years, our booth attracted visitors with the query, "Are You Smarter Than a Monkey?" where we demonstrated the adaptiveness of trichromatic color vision with the color-sorting task using 3-D glasses to simulate dichromatic vision. Kids and parents alike were amazed at the perceptual difference with and without the glasses. We also discussed red-green color blindness in human males as an X-linked mutation with the older children and parents, and gave the adult females a view of the perceptual world of their colorchallenged male friends and family members.



We introduced a new activity this year, an adaptation of evolutionary anthropologist Holly Dunsworth's evolution activity. We engaged children to think about classification of animals and grouping them into a branching tree-like model. We had participants look over materials for each primate superfamily and discussed the similarities and differences between groups. Children then placed photos of extant species on a phylogenetic superfamily tree.

Our appreciation goes out to George Washington University students **Sean Lee** and **Kaitlin Wellens** who made popsicle stick masks for the younger

children to have their photos made as a loris, capuchin, bonobo, or chimpanzee. By far the most popular activity for all ages, was the video loop of female chimpanzee Ai outperforming a human participant on a computerized spatial memory task involving a sequence of nine numbers. The video was accompanied by an iPad version where participants could try for themselves beginning with five number sequence with the possibility of performing the task up to seven. This activity was quite the eye-opening hit, particularly with the adolescent male participants who were humbled by their inability to even approach Ai's level of performance.



The EC extends their sincere appreciation and herein recognizes this year's volunteers without whom the success of this event would not have been possible: Amanda Bania, Joe Denicola, Amanda Dettmer, Denisse Guitarra, Karen Hambright, Kielee Jennings, Catherine Knight, Ashley Murphy, Ryan McNeill, Kim Phillips, Alex Reddy, and Cory Ross. The committee would like to thank the Society for providing their support of this important outreach opportunity. We look forward to continuing to increase the array of interactive demonstrations in the 2018 festival.

For those of you who may have missed the *Society News* in April, the ASP and IPS Education Committees are pleased to announce this year's Student Competition finalists! We received ten

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poster and 22 oral entries. After the first round of blinded judging, the finalists have been selected. Congratulations to the following students! Be sure to mark their presentation times in your ASP/IPS schedule once the program is finalized.

POSTER FINALISTS

<u>Isabelle Clark</u>, <u>Duke University</u>, "Bamboo cyanide does not protect *Hapalemur aureus* or *Prolemur simus* from gastrointestinal parasite infections"

<u>Justin D'Agostino</u>, Southern Illinois University <u>Carbondale</u>, "Vocal self-recognition in captive Javan gibbons (*Hylobates moloch*)"

Meredith Lutz, Bucknell University, "Evidence of self-handicapping in captive capuchin monkeys (*Cebus apella*)"

<u>Ashley Murphy</u>, NICHD, "Effects of maternal parity on infant impulsivity in socially housed rhesus macaques (*Macaca mulatta*)"

Kourtney Phillips, California State University, Channel Islands, "Developmental Differences in Rapid Facial Mimicry in Captive Chimpanzees"

ORAL FINALISTS

<u>Hazel Byrne</u>, <u>University of Salford</u>, "Phylogenetic relationships of the New World titi monkeys (*Callicebus*): First appraisal of taxonomy based on molecular evidence"

Ashley Edes, The Ohio State University, "Does proximity to the silverback increase allostatic load in zoo-housed western lowland gorilla (*Gorilla gorilla gorilla*) females?"

Erin Kane, The Ohio State University, "Fecal glucocorticoids, feeding behavior, and sociality among free-ranging female Diana monkeys (*Cercopithecus diana*) in Taï, Côte d'Ivoire"

<u>Lindsay Mahovetz</u>, Georgia State University, "The influence of AVPR1A genotype on individual differences in mirror self-recognition in chimpanzees (*Pan troglodytes*)"

Christopher Marsh, Bournemouth University, "The effect of 3-dimensional habitats and microclimate changes due to forest degradation on the ranging habits and activities of Sumatran orang-utans (*Pongo abelii*)."

<u>Lauren Robinson</u>, <u>University of Edinburgh</u>, "Happiness means welfare in brown capuchins (*Sapajus apella*)"

Monica McDonald, Washington University, St.
Louis, "Factors influencing reproductive success in a Kinda x chacma baboon hybrid group in Kafue National Park, Zambia"

Corinna Most, University of California, San Diego, "Ecological factors influence weaning behavior and mother-infant proximity in a troop of wild olive baboons (*P. anubis*) in the Laikipia Plateau, Kenya"

Michèle Schubiger, University of Zurich, "How task format affects cognitive performance: a memory test with two species of New World monkeys"

Nicole Thompson, Columbia University, "Social Influences on Survival in Female Blue Monkeys"

Alison Wade, University of Auckland, "Nesting habitat and plant preferences of free-ranging Nigeria-Cameroon Chimpanzees (*Pan troglodytes ellioti*) and Cross River Gorillas (*Gorilla gorilla diehli*) in the Mone-Oku Forest, Cameroon"

- Amanda Dettmer and Karen Hambright, Co-Chairs



APS + IPS 2016 What You Need to Know!

Joint meeting of the American Society of Primatologists and the International Primatological Society, August 21- 27 2016, hosted by Lincoln Park Zoo's Lester E. Fisher Center for the Study and Conservation of Apes.

We are very excited that the world's largest ever meeting of primatologists will soon be upon us when primatologists from around the world will gather in Chicago for a week of scientific communication and collaboration.

The conference will be held at **Navy Pier**, which is centrally located in downtown Chicago, and our meeting rooms are located at the easternmost point of the Pier: http://www.ipschicago.org/venue-navy-pier/. **Registration** will open there on the afternoon of Sunday 21st and close on Friday 26th. In addition to the team of Lincoln Park Zoo staff and volunteers at the registration desk, there will also be numerous zoo volunteers available throughout the venue to ensure that help is on hand whenever you need it.

The meeting will kick off on the evening of Sunday August 21st with an **opening reception** hosted at Lincoln Park Zoo (http://www.ipschicago.org/aboutlincoln-park-zoo/). The zoo will be closed for this after-hours event allowing exclusive access for IPS/ASP registrants. Enjoy discussion with zoo staff and stroll among the exhibits observing the animals with a drink in your hand! Note, this evening event is only open to those who have registered for the conference. If you have already checked-in at Navy Pier that Sunday please bring your conference name badge with you to the zoo for the opening reception. If you are unable to check in prior to coming to the zoo for the opening reception, then please bring a photo ID with you to the zoo so we can admit you at the gate. Lincoln Park Zoo is located two miles north of Navy Pier and there are a number of different public transport options to travel there from downtown Chicago, along with the option of taking a taxi, Uber or Lyft:

http://www.ipschicago.org/directions/.

Talks, roundtables, and workshops will all be held at Navy Pier from Monday 22nd to Friday 26th. (Sunday 21st and Saturday 27th are reserved for IPS and ASP council meetings and the IUCN Section for Great Apes meeting.) The week will conclude with the closing banquet, which will be held in Navy Pier's Ballroom on the evening of Friday August 26th. If you wish to attend the banquet, you must purchase a banquet ticket in addition to your registration fee.

Throughout the week, the centrally-located Exhibit Hall will act as the meeting's hub. There will be the **silent auction** items for you to bid on, **exhibitors** to chat with, and a **gallery** of amazing primate art produced by Stephen Nash, Dao Van Hoang and Charity Oetgen, as well as Jean Baulu's collection of antique primate prints, for you to peruse. The three **poster sessions**, will also be in the Exhibit Hall on the evenings of Tuesday 23rd, Wednesday 24th and Thursday 25th.

For all you early birds, there will be a **5K fun run** held on the mornings of Tuesday 23rd, Wednesday 24th and Thursday 25th along the shore of Lake Michigan: http://www.ipschicago.org/primate-promenade/. Registration for the run is not included in the conference registration fee and you must register separately; you will also receive an official IPS/ASP Primate Promenade dry-fit t-shirt when you register for this event.

On the evening of Monday 22nd there will be a presentation in the Ballroom to announce the current **IUCN 25 most endangered primates** list and we hope you can all attend. Keeping the current plight of our primate cousins in mind, we have worked with the Navy Pier catering team to reduce the amount of disposable plastic used throughout the week, for example by replacing bottled water provided at breaks with carafes of water. We also encourage all attendees to help reduce the amount

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of plastic used in accordance with the IPS Conservation Committee's commitment to the Plastic Pollution Coalition.

We are striving to ensure that IPS/ASP is a **family-friendly** conference. On-site accommodations include a children's soft play area in the Exhibit Hall and a private partitioned "pumping" room for nursing mothers equipped with a small refrigerator to store milk during the day.

If you are coming to the joint IPS/ASP meeting don't forget that you can find much useful information about travel (to and within Chicago), accommodations and food, and of course about the

conference itself and the venue on the official conference website: http://www.ipschicago.org/
You will also be able to find the conference program on this website so bookmark this link now as we will not be providing printed programs. You can also get up to the minute announcements by following the conference on Twitter (@IPS_2016) and on Facebook (https://www.facebook.com/IPS2016/). If you have any questions, you are welcome to <a href="mailto:email

- Steve Ross and Lydia Hopper, Local Hosts

2016 Ruppenthal Student Travel Awards

The Ruppenthal Student Travel awards were created at the 2005 ASP meeting in Portland, Oregon in memory of Gerry "Rupe" Ruppenthal who had never missed a single ASP conference and often used his own money to make sure students from the Infant Primate Research Laboratory and the University of Washington, where he worked for most of his career, could come with him and experience their first scientific conference. While there are many great applicants each year, the committee attempts to continue in Gerry's footsteps and identify students who would otherwise not be able attend the conference and/or experience all that ASP has to offer.

Today, we are proud to announce that we had over 100 applicants for the Joint Meeting of ASP and IPS in Chicago, Illinois. This year, to accommodate the larger Joint Meeting we are able to double the amount of awards that are typically given. We are pleased to announce that **ten awards in the amount of \$500.00 each** have been approved. The 2016 winners of this award are:

- Gupta, Shreejata, National Institute of Advanced Studies, Bangalore, India
- Brown, Tara, Clemson University
- Gogarten, Jan, Department of Biology, McGill University, Montreal, Canada; Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany; Project Group Epidemiology of Highly Pathogenic Microorganisms, Robert Koch Institute, Berlin, Germany
- Coutts, Natasha, University of Western Australia
- Jasso del Toro, Cristina, National Autonomous University of Mexico (UNAM)
- Saldaña, Amor, Instituto de Neuroetología, Universidad Veracruzana
- Nielsen, Molly, Clemson University
- **Abondano, Laura**, The University of Texas at Austin
- Paim, Fernanda, Universidade Federal de Minas Gerais, Brazil
- Eschmann, Caitlin, University of Bristol, UK

Committee Update: Primate Care Committee

Members of the Primate Care Committee are looking forward to this summer's conference with multiple symposia planned that will focus on welfare-related issues. We also encourage you to attend the talks and posters of those competing for ASP's Primate Welfare Award, and we will honor a deserving primatologist for his or her outstanding presentation at the conference.

We are happy that a special issue of the *American Journal of Primatology* on "The well-being of laboratory non-human primates" will be published soon, with **Kate Baker** and **Amanda Dettmer** as editors. Most of the manuscripts are available through "early view" on the AJP website.

Committee Update: Student Committee (ad hoc)

The ASP Student Committee will be hosting several events at this year's meetings! During the opening reception (8/21: 6:30-10:00 p.m.), we will have a small area in the Lincoln Park Zoo set aside for a **student mixer**. Earlier that day (8/21: 3:00-5:00 p.m.), we will have our **business meeting** in Room 207. Later in the week (8/24 or 8/26), we will have a space set aside for an informal **orphans' lunch** (especially for anyone who will be in attendance without their advisers). We hope to see you at any or all of these events!

We are also looking for new members! If you would like to join our committee, please contact either Morgan (mchaney1@kent.edu) or Brett (bfrye@g.clemson.edu).

- Brett Frye and Morgan Chaney, Co-Chairs

Get Social With #IPSASP16

Connect with ASP, IPS, and the upcoming meeting!

<u>@IPS 2016</u> | <u>@ASPVoice</u>

Don't forget to join the ASP members Facebook page via the members-only section of www.ASP.org.

We are developing a "Hot Topics in Welfare Science" piece to be featured on the ASP website, which will be a good way to get new information out to ASP members, as well as to the general public.

We are doing some further work with the Association of Primate Veterinarians and the American College of Laboratory Animal Medicine writing a statement concerning the application of the term "ethologically appropriate environments" to the laboratory primate setting. This statement is being made available to ASP members for their feedback.

- Mollie Bloomsmith, Chair

Committee Update: Awards & Recognition Committee

Funded through an educational grant from the Maderas Rainforest Conservancy (MRC), ASP offers up to two scholarships annually to outstanding undergraduate and graduate students for research and career training in a field course at La Suerte Biological Research Station, Costa Rica or Ometepe Biological Research Station, Nicaragua. The goals of the MRC are to advance research, education and conservation of primates and tropical forests.

The Awards and Recognition Committee reviewed **eight** applications for the Maderas Rainforest Conservancy Scholarship. This years' awardee is...

Kira Collins, who is an undergraduate majoring in Anthropology at San Diego State University.

Do you know an undergraduate and/or graduate student that is interested in research and career training involving fieldwork? Recommend that they apply for the Maderas Rainforest Conservancy Scholarship. To learn more, see:

https://asp.org/grants/scholarship/index.cfm

- Lynne Isbell, Chair

American Journal of Primatology's 2015 Editor's Choice Award

We are pleased to announce that The American Journal of Primatology's 2015 Editor's Choice Award for the most cited research article published in 2015 goes to Mattew J. Kessler, Raisa Hernandez Pacheco, Richard G Rawlings, Angelina Ruiz-Lambrides, Diana L. Delgado, and Alberto M. Sabat for their manuscript titled "Long-Term Effects of Tetanus Toxoid Inoculation on the Demography and Life Expectancy of the Cayo Santiago Rhesus Macaques"

- Paul Garber, Executive Editor, American Journal of Primatology

Please remember to start all of your amazon.com shopping trips at ASP.org!

When you start your shopping trip at ASP.org, a percentage of your purchases at Amazon go to the Conservation Fund.



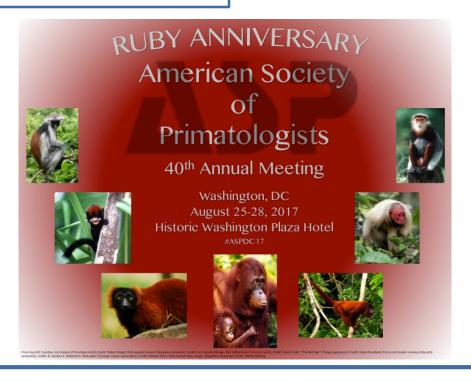
From Good Care to Great Welfare: A Workshop Designed for Animal Care Professionals

The Detroit Zoological Society's Center for Zoo Animal Welfare is offering an immersive five-day workshop October 5-9, 2016 for professionals working with and around captive animals.

DETROIT ZOOLOGICAL SOCIETY

The workshop is designed to help participants better understand animals' perspectives and experiences, address the challenges captivity imposes on animal welfare, and develop the skills necessary to assess and improve overall well-being. The workshop is comprised of lectures, discussions, group projects and hands- on exercises in the zoo.

The early registration fee of \$225 includes all lunches, snacks, and two dinners. Early registration ends August 12, 2016, at which time the fee will increase to \$275. There are also limited registration scholarships available. For more information, please visit www.czaw.org or email to czaw@dzs.org.



In memoriam: Robert W. Sussman

Robert W. Sussman, prominent biological anthropologist and field primatologist passed away peacefully at his home on June 8th, 2016.

Bob received his Ph.D. from Duke University in 1972 and joined the faculty of the Department of Anthropology at Washington University, St. Louis in 1973, where he achieved the status of Full Professor. For over 40 years Bob Sussman was a leading scholar of the behavior, ecology, evolution, and conservation of both human and nonhuman primates. Bob was the author of over 150 journal articles and edited and authored several books. His most recent book, The Myth of Race: The Troubling Persistence of an Unscientific Idea (Harvard University Press) was published in 2015, and focused on his life-long commitment to educating others to the fallacies of race and eugenics. Bob also was the author of a series of articles and book chapters focusing on the importance of cooperative behavior and both kin and nonkin bonds in the evolution of primate sociality. To this end, he coedited a volume in 2011 titled. The Origins of Altruism and Cooperation (Springer Press). Bob published several seminal papers in his distinguished career. Two of these, published in the American Journal of Primatology (Primate Origins and the Evolution of Angiosperms - Am J Primatol 23:209-223, 1991 and Rethinking Primate Origins Again -Am J Primatol 75:95–106, 2013) offered new insights into our understanding of early primate evolution.

Bob Sussman was a co-founder of the Beza Mahafaly Reserve and Research Center in Madagascar in 1986, where he, many of his students, and collaborators have continued to examine questions related to the ecology, reproductive biology, sociality, genetics, dispersal, behavioral adaptations, life history, and conservation of lemurs. He also served the discipline of Anthropology as Editor-in-Chief of the *American Anthropologist*, as both the Head and Secretary of Section H for the American Academy for the Advancement of Science, and was a founding member and President

of the Mid-West Primate Interest Group (MPIG). During his career he received many distinguished awards and honors.

In addition to his own exceptional scholarly achievements, Bob was a caring and inspirational mentor who instilled upon his students the importance of natural history, ethology, ecology, and detailed field observations in conducting primate research. Bob was the doctoral advisor for some 29 Ph.D. students, who motivated by his enthusiasm, have themselves conducted field research on prosimians, New World monkeys, Old World monkeys, and lesser and great apes. In this regard Bob's contributions to anthropology and primatology cannot be understated. Throughout his career, Bob Sussman has challenged anthropologists and primatologists to revisit and rethink long held theories and beliefs. We are grateful for his enduring legacy that lives on in his writings, and in the work of his students and colleagues.



Robert W. Sussman 1941 – 2016

American Journal of Primatology Top Cited Articles Published in 2015

Rank	Title	Authors	Publication Date	Issue	Total Citations
1	Long-Term Effects of Tetanus Toxoid Inoculation on the Demography and Life Expectancy of the Cayo Santiago Rhesus Macaques	Kessler, Matthew J.; Pacheco, Raisa Hernandez; Rawlins, Richard G.; Ruiz-Lambrides, Angelina; Delgado, Diana L.; Sabat, Alberto M.	FEB 2015	2	7
2	Crowding Increases Salivary Cortisol But Not Self-Directed Behavior in Captive Baboons	Pearson, Brandon L.; Reeder, DeeAnn M.; Judge, Peter G.	APR 2015	4	4
3	Pathogenic Enterobacteria in Lemurs Associated With Anthropogenic Disturbance	Bublitz, Deanna C.; Wright, Patricia C.; Rasambainarivo, Fidisoa T.; Arrigo-Nelson, Summer J.; Bodager, Jonathan R.; Gillespie, Thomas R.	MAR 2015	3	4
4	Chimpanzees Prey on Army Ants at Seringbara, Nimba Mountains, Guinea: Predation Patterns and Tool Use Characteristics	Koops, Kathelijne; Schoening, Caspar; McGrew, William C.; Matsuzawa, Tetsuro	MAR 2015	3	3
5	Core Promoter Short Tandem Repeats as Evolutionary Switch Codes for Primate Speciation	Ohadi, Mina; Valipour, Elaheh; Ghadimi-Haddadan, Saeed; Namdar-Aligoodarzi, Pegah; Bagheri, Abouzar; Kowsari, Ali; Rezazadeh, Maryam; Darvish, Hossein; Kazeminasab, Somayeh	JAN 2015	1	3
6	Which is the Appropriate Scale to Assess the Impact of Landscape Spatial Configuration on the Diet and Behavior of Spider Monkeys?	Ordonez-Gomez, Jose D.; Arroyo-Rodriguez, Victor; Nicasio-Arzeta, Sergio; Cristobal-Azkarate, Jurgi	JAN 2015	1	3
7	The Geographic Distribution of Genetic Diversity within Gorillas	Fuenfstueck, Tillmann; Vigilant, Linda	SEP 2015	9	2
8	Population genetic insights into the social organization of Guinea baboons (Papio papio): Evidence for female-biased dispersal	Kopp, Gisela H.; Fischer, Julia; Patzelt, Annika; Roos, Christian; Zinner, Dietmar	AUG 2015	8	2
9	White-cheeked macaque (Macaca leucogenys): A new macaque species from Medog, southeastern Tibet	Li, Cheng; Zhao, Chao; Fan, Peng-Fei	JUL 2015	7	2
10	Female participation in collective groiup defense in black howler monkeys (Alouatta pigra)	Van Belle, Sarie	JUN 2015	6	2

Population estimate of southern muriqui (*Brachyteles arachnoides* PRIMATES, É. GEOFFROY 1806) and hunting assessment in Carlos Botelho State Park, Paranapiacaba Ecological Continuum, São Paulo, Brazil

Landis, M. B. ASP Conservation Award, 2013

INTRODUCTION

The southern muriqui (*Brachyteles arachnoides*) is an endemic primate from Brazilian Atlantic Forest and is classified as "Endangered" (*sensu* IUCN, 2013). It is estimated that there are only about 1300 individuals left in nature (Melo & Dias, 2005). At São Paulo State, the main threat to the species is hunting, which occurs even within protected areas. Little is known about the conservation status of southern muriquis in continuous forest, so it is crucial to evaluate these areas. This work was designed to assist in actions from goals 1 and 2 of the National Action Plan for the Muriqui Conservation (PAN Muriqui). The main objectives are to quantify the remaining population of muriquis, to expand enforcement measures, and to reduce hunting pressure on muriqui populations in protected areas and their surroundings (ICMBio, 2011). In this project, the southern muriqui population, from the north of Carlos Botelho State Park, was estimated and different areas were evaluated for the occurrence of hunting pressure and possible variations of habitat conditions, allowing the assessment of the status of the species.

METHODS

Carlos Botelho State Park (CBSP) has an area of 37,644 hectares and is located in the south of São Paulo State, Brazil (IF, 2008). Three locations were determined in northern CBSP: Sede 1 (area without hunting pressure), Sede 2 (poorly known remote area), and Turvinho (area with hunting pressure). Line transect sampling was used to estimate the muriqui population density, respecting the design suggested by Buckland *et al.* (2010) for primate census. Transects were walked at an average speed of 1 km/h, with a total effort of 400.7 kilometers. Data were evaluated using <u>Distance</u> software. To evaluate if possible differences between three areas could influence *B. arachnoides* abundance, we used vegetation structural heterogeneity data through the Point Centered Quarter Method. One-hundred eighty-three points were sampled in linear transects. Selection of informers through reference groups was used to obtain information about occurrence of muriqui hunting (Davis & Wagner, 2003). We selected the nearest neighborhoods of the areas where the census was conducted: Abaitinga (close to Sede) and Turvinho. Eight selected informants were interviewed using a semi-structured script. We also analyzed reports of the surveillance operations accomplished by the park keepers and environmental police, from January 2008 to September 2012.

RESULTS

The census resulted in 56 registrations of *Brachyteles arachnoides* subgroups. The population density was 0.16 individuals/ha, generating an estimate of 1406 individuals for the north of CBSP, which comprises approximately 9000 ha. Population density was largest at Sede 2, then the Turvinho, and then Sede 1. In habitat comparisons between the three areas, the differences in altitude and tree height were significant. The canopy height, basal area, and tree height were different only between transects located in Turvinho. In the interviews, all the informants demonstrated knowledge about southern muriquis. 87.5% of people said they had already hunted. All interviewed from Abaitinga said that hunting pressure persists in the region. In Turvinho, 40% say that hunting is still present. According to interviews, in the southern region of CBSP, palm extraction and hunting are more intense, since the two activities occur in association. This practice resulted in the reduction of muriquis in the southern region. They also reported that currently muriquis are hunted only in this region; there are no recent reports of muriqui hunting in north of the CBSP. Every interviewee affirmed that there was a reduction of hunting in general in recent years, and 87.5% say that surveillance operations keep the hunters away from the conservation area. Between 2011 and 2013, the

Environmental Police that operates in the region recorded four incidents involving muriqui hunting, one at CBSP and others nearby a conservation unit.

DISCUSSION AND CONCLUSION

The population density of muriquis estimated for the north of CBSP is relatively high compared to most previous studies of the *Brachyteles* genus, approximating from values obtained in smaller and fragmented areas. Several factors could explain the results, but probably the quality of the habitat is a key factor for maintaining such density (Zunino *et al.*, 2001). The results suggest an absence of relationship between the hunting pressure and differences in the muriqui abundance, since the highest abundance was estimated in the area with a hunting record. Thus, hunting pressure in this region is probably directed to other species, and the muriqui abundance differences could be explained by differences in the habitat. The data obtained from the interviews suggest two profiles of hunters in the region: those interested only in hunting, most frequently north of CBSP; and those who associate the extraction of palm with hunting, acting in the southern region. Although there is no evidence of muriqui hunting in north of CBSP, the frequent occurrence of such activity is detected in the southern region.

The data presented contribute to the two main goals of the PAN Muriqui. Through the combination of population estimates and the initial understanding of the hunting pressure this study contributes to the development of more effective strategies, helping to ensure the future of the muriqui population at CBSP. By estimating the remaining population we can prioritize areas for conservation of the species. Through information about the hunting pressure, it is possible to design mitigation measures for this threat. This association generates a higher subsidy for conservation actions, which may be extended to other conservation units where muriquis faces similar pressures. The results also demonstrate the importance of deepening knowledge about remaining populations of endangered species, even if they reside in protected areas. In many cases, the lack of involvement with the communities surrounding the protected areas and the low availability of resources prevents the expansion of surveillance measures, and the effective protection of the species. Thus, the effective conservation of the southern muriquis will be possible only through the union of several strategies, such as environmental education, income generation projects to the surrounding communities, improved surveillance of conservation units, and continuity in monitoring of populations.

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