

**13TH INTERNATIONAL MAMMALOGICAL CONGRESS  
–PROGRAM CHANGES AND CANCELLATIONS–**

**CANCELLATIONS**

- 51 Canceled Presentation**  
Conservation status of the North American river otter in the United States and Canada  
Tom Serfass\*, Zoe Hanley
- 127 Canceled Presentation**  
The grassland-savanna biome interface of southern Africa as a potential genetic differentiation hotspot in *Micaelamys*  
Amanda Kgaogelo Maswanganye\*, Paulette Bloomer, Chris Chimimba, Nigel Bennett
- 363 Canceled Presentation**  
“A modern outlook on the management of invasive mammals: inclusive, informed, impactful”  
Panel discussion  
Katherine Horak\*, Anna M Mangan, Amy Levine
- 436 Canceled Presentation**  
Phylogenomics of Trowbridges shrew (*Sorex trowbridgii*) and comparative diversification of western North American forest mammals  
John Demboski\*, Giorgia Auteri, Sean Maher, Chris Conroy, Andrew G Hope
- 500 Canceled Presentation**  
Antimicrobial protection of immunologically underdeveloped marsupial neonates  
Jongbeom Park\*, Aella Kaage, Mohamed S. Donia, Ricardo Mallarino
- 529 Canceled Presentation**  
African wild dog movement and space-use in a system with depleted prey and dominant competitors  
Ben Goodheart\*, Scott Creel, Matthew Becker
- 585 Canceled Presentation**  
Naming Caribou  
Lee Harding\*

**PRESENTATION UPDATES**

- 101 Changed Presentation Topic & Authorline**  
Historical and ancient *Canis* mitogenomes confirm antiquity and conspecific maternal origins of red and eastern wolves  
Benjamin N. Sacks\*, Cate Quinn, Kristin Brzeski, Stevi Vanderzwan, Hope Loiselle, Alberto Carmagnini, Sabrina Taylor, Burton K. Lim, Logan Kistler, Roland Kays, Frank Hailer, Alice Mouton, Laurent Frantz

Red wolves (*Canis rufus*) and eastern wolves (*C. lycaon*) (collectively, “forest wolves”) reflect admixed nuclear genetic ancestry from the lineages giving rise to the gray wolf (*C. lupus*) and coyote (*C. latrans*). Although coyotes and gray wolves each hybridized with forest wolves recently, the deeper-time origins of forest wolves are unclear. The fossil record suggests that phenotypic red wolves occurred in southeastern forests for the past 10 thousand years prior to their extirpation half a century ago. However, few samples taken prior to extirpation have been examined genetically and only one of these was collected east of the Mississippi River (in 1917). Previous research suggests that red and eastern wolves share a recent maternal history that diverged from both coyotes (~30 kya) and gray wolves (~ 1 my). As part of a broader genomics study, we sequenced complete mitochondrial genomes to more thoroughly investigate the maternal history of North American *Canis*, especially the relationship between red and eastern wolves. We used 95 historical and ancient specimens sourced no later than 1930, and observed much higher diversity and genetic effective population sizes of matrilineal lines in historical forest wolves than those from coyotes. We estimate mitochondrial divergence between red and eastern wolves coincided with the colonial era. Together, findings provide the strongest evidence to date

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that red and eastern wolves are conspecific and reflect a relictual Pleistocene wolf. Although nuclear DNA analyses are needed, if confirmed, conspecificity of red and eastern wolves could greatly expand possibilities for genetic management of these endangered wolves.

**233 Changed Presentation Topic**

Turnover species retain mammalian communities in highly fragmented landscapes  
Mayara Beltrao\*, Ana Paula Carmignotto, Maria Luisa Jorge, Mauro Galetti

High demand for food and other products due to global human population growth is one of the main factors of land use change, mainly conversion of native areas into arable and to livestock, making the remaining native habitats unsuitable for the survival of many species through habitat loss and fragmentation. Our aim is to identify how habitat loss, fragmentation and anthropogenic factors influence the composition, number and beta-diversity of medium and large sized mammals. Using camera trapping, we sampled 21 well-distributed landscapes in the Alagoas state, Brazil and evaluated the relationship of recorded mammals with seven variables through generalized linear models and multiple matrix regression, in addition to assessing community diversity using conventional statistical analyses. We recorded 22 species, one of which is the domestic dog, and confirmed the expected species composition pattern for the region, with a predominance of generalist species and community homogeneity. We identified a high rate of species loss per landscape ranging between 43% and 76%, corroborating the also high species turnover (84%) between landscapes, mainly for narrow species. All biodiversity metrics were influenced by habitat fragmentation to the detriment, evidencing the tragic conservation status of the CEP and its devastating effects. This panorama evidences a defaunation ongoing and that the development of species strategies to persist in the region are not enough to mitigate the extinction rates and restore ecosystem services, for that it is necessary that the connectivity between the fragments be restored and all the others conservation efforts are evidence-based.

**415 Changed Presenting Author (Rode to Wilson)**

Using ecological indicators to monitor polar bear population status when sea ice loss limits data  
Karen Rode, Ryan Wilson\*, Justin Crawford, Lori Quackenbush, Eric Regehr, Jeffrey Bromaghin, and Michelle St. Martin

**521 Changed Presentation Topic & Authorline**

Leveraging Historical Records of Animal Locations to Study Long-term Movement Responses to ENSO Cycles

Odd T. Jacobson\*, Brendan J. Barret, Susan Perry, Irene Godoy, Kate Tiedeman, Genevieve Finerty, Margaret C. Crofoot

The widespread adoption of GPS technology in the early 21st century revolutionized animal movement research. However, relying on technology imposes temporal limitations on long-term studies, hindering our understanding of how animal movement responds to climate change and El Niño Southern Oscillation (ENSO) cycles. Many longitudinal animal field sites have an untapped wealth of maps and timestamped descriptions of locations of biological importance, such as foraging and sleep sites, as well as locations relative to trail systems or landmarks. Converting historical records into reliable spatial data can yield valuable insights. Here, we present a generalized workflow for estimating home ranges from 30 years of sleep site data (1990-2022) and 13 years of high-resolution GPS data (2009-2022) from 11 white-faced capuchin groups in Costa Rica. We describe the annotation and extraction process, which involves generating spatial observations using an interactive georeferenced map and field notes. By comparing movement models based on sleep site descriptions with high-resolution GPS data, we reliably predict home range measurements from historical records, including area, shape, and geographical position. Additionally, we reveal how capuchin home range areas fluctuate with ENSO cycles, highlighting their preference for riparian habitat during dry El Niño years. These findings have significant implications for conservation and ecological research. Converting historical records into usable data is crucial to preserve valuable knowledge and understand how animals adapt to a changing world.

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- 276 Changed Presentation Topic & Authorline**  
Energetic and behavioural consequences of pulsed resources  
Studd EK\*, Boutin S, McAdam AG, Dantzer B, Lane JE, Humphries MM

Animals that consume pulsed resources have adapted in many ways to deal with the inconsistency of their food source. For example, organisms must be capable of adjusting to resource conditions, capitalizing when the resources are available and conserving when resources are absent. To do this successfully, organisms need to be flexible in both their metabolism and their behaviour. Here, I explore how extreme flexibility in energetics and activity allows red squirrels to thrive in an environment where their main resource is only available every 4 – 8 years.

**SCHEDULING CHANGES**

- 26 Moved from Technical Session 1 to Symposium 17 (Abstract # 470)**  
Gorongosa elephants population: recovery and challenges  
Dominique Gonçalves\*
- 43 Moved from Technical Session 3 to Virtual Technical Session**  
Accurately estimating wildlife abundance in remote areas: case studies for snow leopard and kiang  
Xinhai Li\*, Renqiang Li, Duifang Ma, Erhu Gao
- 85 Moved from Technical Session 8 to Technical Session 23 (Abstract # 365)**  
Translocation to safe havens averts extinction of the worlds rarest marsupial, Gilberts potoroo.  
James Friend\*, Dept Biodiversity, Timothy Button, Stephanie Hill, Alan Danks, Sarah Comer
- 104 Moved from Technical Session 11 to Technical Session 37 (Abstract # 527)**  
Causes and consequences of hybridization between representatives of the genus *Canis*  
Małgorzata Pilot\*, Roya Adavoudi, Wiesław Bogdanowicz, Karolina Doan, Alejandro Flores-Manzanero, Francelly Martinez Sosa, Andre Moura, Milomir Stefanovic
- 113 Moved from Technical Session 13 to Virtual Technical Session**  
Impacts of food limitation and predation risk on the stress physiology of snowshoe hares  
Yasmine Majchrzak\*, Michael Peers, Stan Boutin, Sophia Lavergne, Emily Studd, Allyson Menzies, Charles Krebs, Rudy Boonstra
- 123 Moved from Poster Session I to Virtual Poster Session**  
Changes in the elevational distribution of small mammals over time: implications for biodiversity conservation  
Genet Berhe Gebrezgiher\*, Yonas Meheretu, Abdul Katakweba, Rhodes Heriabdiel Makundi
- 259 Moved from Technical Session 17 to Virtual Technical Session**  
Living amidst anthropogenic pressure: a large mammal conservation perspective  
Milda David\*, Ashish K, Tharmalingam Ramesh, Riddhika Kalle, M Thanikodi
- 286 Moved from Technical Session 18 to Technical Session 28 (Abstract # 416)**  
Feasting at the fringe: dietary limitations red squirrels face at the sub-Arctic treeline  
Alexandra Windsor\*, James Roth
- 365 Moved from Technical Session 23 to Virtual Technical Session**  
Pyrodiversity begets taxonomic and functional richness of mammals in a neotropical savanna  
Clarice Vieira Souza, Águeda Lourenço, Maria Clara Chagas, Emerson Monteiro Vieira\*
- 416 Moved from Technical Session 28 to Technical Session 18 (Abstract # 286)**  
Sympatric predators respond differently to seasonal resource scarcity on the Low Arctic tundra

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James Roth\*, Chloe Warret Rodrigues

- 459 Moved from Poster Session IV to Virtual Poster Session**  
Is sea otter harvest correlated with their population spread and abundance in southeast Alaska  
Jillian Schuyler\*, Perry Williams, Joseph Eisaguirre, Paul Schuette, Sarah Hanchett, Brad Benter
- 470 Moved from Symposium 18 to Technical Session 38 (Abstract # 529)**  
Species limits in red-nosed mice reinforce the São Francisco River as a major biogeographic barrier  
Pablo Rodrigues Gonçalves\*, Camilla Di-Nizo, Ana Lazar, Carlos Cunha-Filho, Alexandra Bezerra, Elkin Suárez-Villota, Leila Pessôa, Maria José Silva, Cibele Bonvicino
- 482 Moved from Technical Session 31 to Technical Session 16 (OPEN SLOT)**  
Acoustic disturbance in diving northern elephant seals: venous blood temperature and control of perfusion  
Allyson Hindle\*, Birgitte McDonald, Markus Horning, Holger Klinck, Paul Ponganis, Dan Costa, Cassandra Williams
- 489 Moved from Technical Session 33 to Technical Session 42 (Abstract # 576)**  
Forest composition shapes seed-rodent interactions in a gradient of broadleaves and conifers  
Pedro Mittelman\*, Scott Appleby, Niko Balkenhol
- 527 Moved from Technical Session 37 to Technical Session 11 (Abstract # 104)**  
Insights into the evolution of reproductive isolation: contrasting hybridization patterns in two hedgehog contact zones  
Barbora Cerna Bolfikova\*, Kristyna Eliasova, Jose Ignacio Lucas Lledo, Jose Horacio Grau, Pavel Hulva
- 529 Moved from Technical Session 38 to Technical Session 41 (OPEN SLOT)**  
African wild dog movement and space-use in a system with depleted prey and dominant competitors  
Ben Goodheart\*, Scott Creel, Matthew Becker
- 573 Moved from Technical Session 42 to Virtual Technical Session**  
That's my moose! Kleptoparasitism between two top carnivores in Southeast Alaska  
Alexandra Lewis\*, Tania Lewis, Gretchen H. Roffler
- 576 Moved from Technical Session 42 to Technical Session 33 (Abstract # 489)**  
Distribution and habitat use of free ranging dogs in rural areas in Uruguay  
Eliana Walker\*, Jennifer González-Buve, Nicolás Fernández-Sauleda, Giancarlo Pedrini, Elias Guerra, Andrés Canavero, Ariel Farías
- 580 Moved from Technical Session 43 to Poster Session III**  
Connectivity across the glittery lights and solar fields of southern Nevada: a rodent's perspective  
Sean A Neiswenter\*, Wren Varga
- V-58 Moved from Virtual Technical Session to Technical Session 24 (OPEN SLOT)**  
Costs of competition and the benefits of affiliative relationships  
Melissa A. Pavez Fox\*, Delphine De Moor, Erin Siracusa, Clare Kimock, Samuel Ellis, Nahiri Rivera-Barreto, Josué Negron-Del Valle, Daniel Phillips, Angelina Ruiz-Lambides, Noah Snyder-Mackler, James Higham, Lauren Brent

**OTHER CHANGES**

- Capstone Session moderator will be Link Olson and not Janet Rachlow.