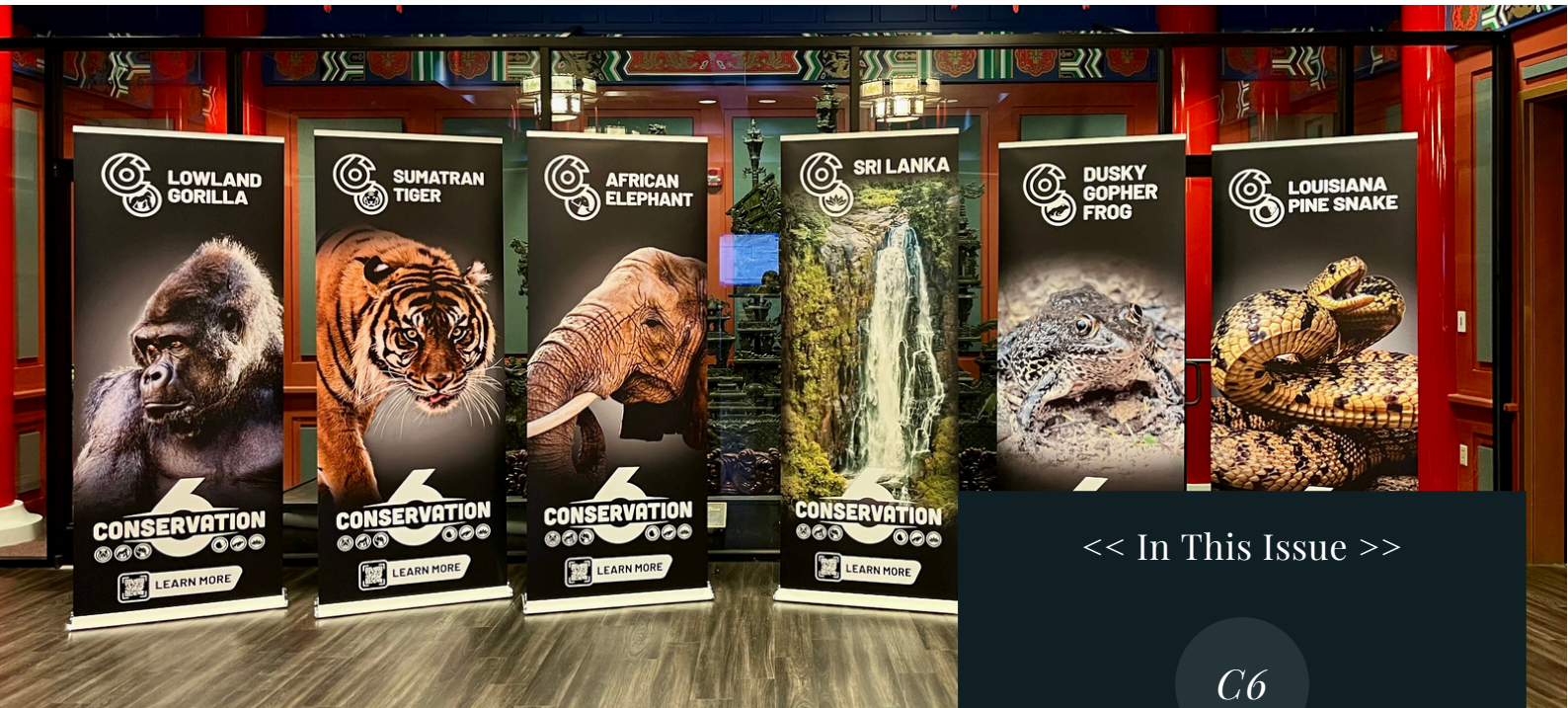


CONSERVATION & RESEARCH



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C6

Updates!

CAN

*2024 Projects
Announced*

AZA

C&R Showcase

New

*Projects &
Collaborations*

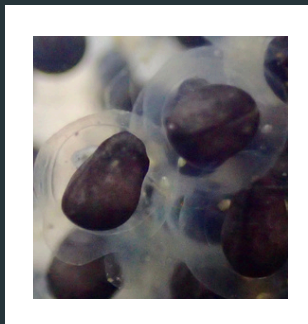


*Talks &
Publications*

Hi Everyone,

Lots of exciting news to share from the Conservation & Research Department. Here are some updates on the progress of the Conservation Six (C6) programs, a new round of projects funded by the Conservation Action Network Grant, the symposium showcasing a wide range of projects at AZA Mid-Year, new and exciting collaborations, and some recent presentations and publications from our team.

Cheers,
Sheila (Dr. Sinlan Poo, Curator of Research)



C6 UPDATES



Sri Lanka

Construction has started for the Memphis Zoo-TERN Conservation, Awareness, Research, and Education **(C.A.R.E) Center** in Sri Lanka.

In protected forest managed by Indonesian government natural resource agencies in Aceh, Sumatra, a **juvenile Sumatran tiger** pulls a research camera from a tree. These cameras have already been set at several dozen locations by Dr. Joe Figel and teams from MAHAGAPA and the Leuser International Foundation, with continual support from Dinas Lingkungan Hidup dan Kehutanan (Environment and Forestry Service of Aceh) and the American Indonesian Exchange Foundation.



Tigers

Dusky Gopher Frogs



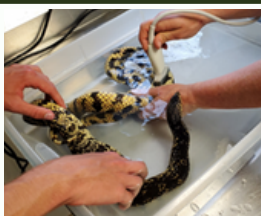
Natural breeding was observed at our reintroduction site in Mississippi (in collaboration with Audubon Zoo) & in ponds on Memphis Zoo grounds! This is the **4th consecutive year of breeding** recorded & an important milestone for the longterm recovery project.

Photo: C&R Husbandry Tech Cassie Collins and student volunteer Kate Robinson retrieving egg clutch

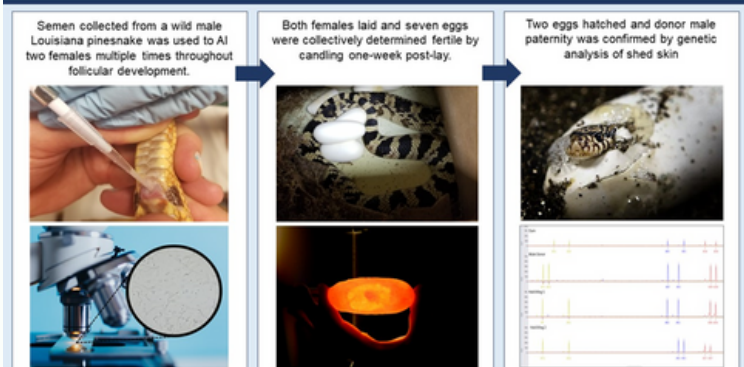
Louisiana Pine Snakes

Beth Roberts, Dr. Mark Sandfoss, Dr. Steve Reichling, and collaborators published a paper in **Zoo Biology** on the “**First successful artificial insemination of the endangered Louisiana pinesnake**”!

Beth, Crista, Jamie, Cassie, and Jess assessed the follicular growth in LPS using ultrasound.



Artificial insemination (AI) of an endangered snake



(Figure from Roberts et al. 2024)

2024 C.A.N. PROJECTS

This year, five Conservation Action Network (CAN) Grants were awarded for 2024. Projects encompassed in situ and ex situ studies in the US and abroad.

JOHN BEACHEY

Continued Monitoring of Male Elephants Around Makgadikgadi Pans National Park Via Global Positioning Collars



KATHERINE DRISCOLL
EMILY MARCUS

The Impossible Sleepover: An Observational Study of Interspecific Interactions Between Southern White Rhinos, Grant's Zebra and Scimitar-Horned Oryx in a Mixed Species Exhibit



JESSICA CANTRELL &
FELICIA KNIGHTLY



Surveying the Natural Occurrence of *Cryptosporidium* spp. in Two Sites of Louisiana Pinesnake Populations



IANIE RUNKLE

Participating in SANCCOB's "Animal Professional Experience" to Help Rehabilitate and Release Endangered African Penguins



ENOKA
KUDAVIDANAGE &
JITHMANTHI DE SILVA

Gut Parasite Composition of Amphibians across Land Use Types in the Wet Intermediate Zone of Sri Lanka: Support for Evidence-based Conservation



Images by Enoka P. Kudavidanage

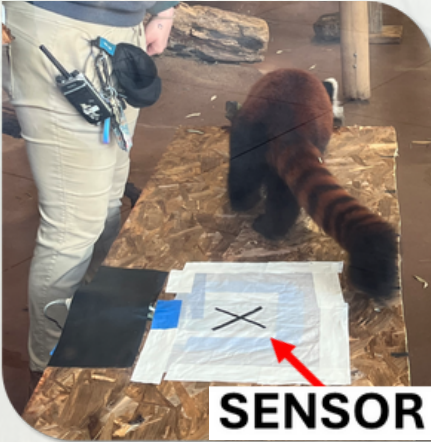
As part of the AZA Mid-Year Zoo Day, Memphis Zoo Research Staff, Curators, Keepers, as well as Arkansas State U & U of Memphis Researchers showcased the diverse C&R Projects supported by the Memphis Zoo.

Here's what we talked about:



NEW COLLABORATIONS

Red Panda - False Thumb Evolution



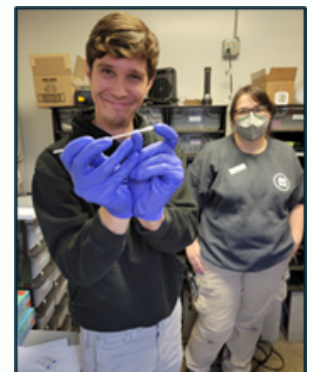
Dr. Michael Granatosky, Dr. Melody Young, & Dr. Edwin Dickenson from **NY Institute of Technology** collaborated with Dan Dembiec, Sandi Shoemakers, China & Cat Country keepers, & Dr. Sheila Poo to investigate the evolution & function of the false thumb.



China & Cat Country Keepers built platforms for the research team to record walking behavior of the red pandas!

Louisiana Pinesnake - Gut Microbiome

Beth Roberts started a collaborative effort with Dr. Donny Walker from **Middle Tennessee State University** and post doctorate researchers in his lab, Dr. Kaitlyn M. Murphy and Dr. Jason Dallas to characterize Louisiana Pinesnake skin and gut microbiome of adult breeders, headstarts, and wild snakes.



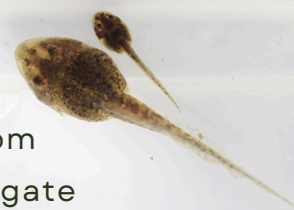
GREW Exchange

Beth Roberts and Crista Fennessee visited the Cincinnati Zoo to work on validating assays to characterize biomarkers for Giant Pandas.



Amphibian Disease

Dr. Sheila Poo started a new project with Dr. Steven Whitfield from **Audubon Zoo** to investigate a pathogen (Amphibian Perkinsea) affecting tadpoles at our dusky gopher frog reintroduction site.



TALKS & PUBLICATIONS

Conferences, Talks, & Seminars



Dr. Steve Reichling

- Overton Park Conservancy - Science Cafe Talk

Beth Roberts

- International Society of Wildlife Endocrinology Conference

Dr. Melanie Richter

- Society for Integrative & Comparative Biology Conference

Jess Cantrell

- Species 360 Annual Meeting Presentation

Dr. Joe Figel

- U of Memphis CBio Meeting
- Western Washington Fulbright Chapter Meeting

Dr. Sheila Poo

- Chinese Cultural U (Taiwan) Biology Dept Seminar
- U of Memphis Biology Dept Seminar
- U of Florida Natural Resource Dept Seminar



Publications



Jess Cantrell

- 2024 Dusky Gopher Frog Studbook

Dr. Joe Figel

- Paper in ***Ursus*** on spectacled bears surrounded by gold mines in the Serranía de San Lucas, Colombia
- Paper in ***Biota Colombiana*** on

Dr. Sheila Poo

- Chapter in book by **Cornell University Press** on stories from field herpetologists from around the world

Ch. 42
**The Captain
and The Frog**
By Sinlan Poo

