

Visiting their Dead

Elephant behavior alters bonefield dynamics



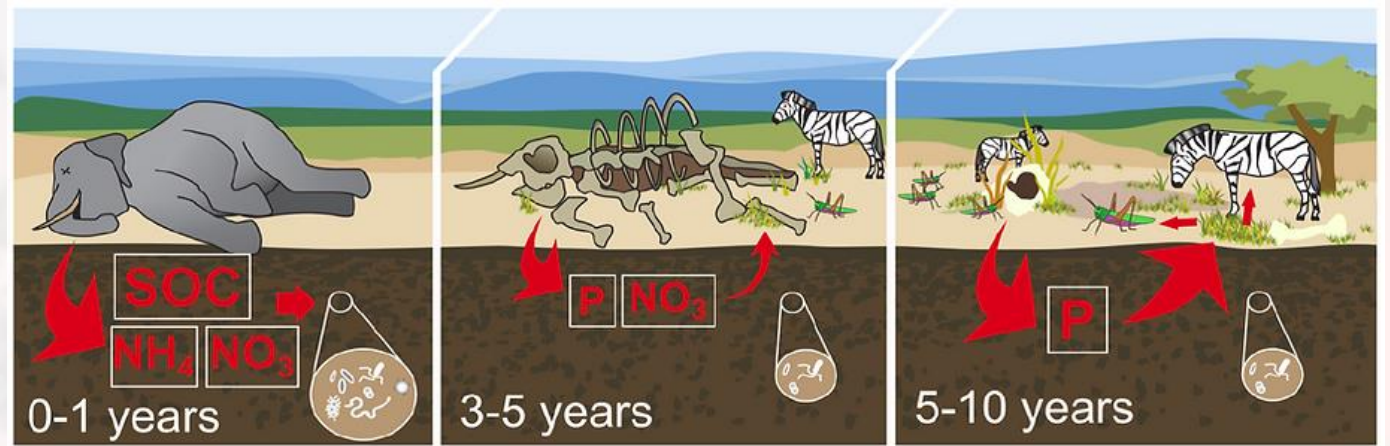
Presentation by Ryan Helcoski



Megacarcass Ecology



Camera trap image of a megacarcass site: Photo by Courtney Reed.



Hypothesized chronosequence of the influence of a megacarcass on the terrestrial environment
Illustration by Nathan Lemoine

MegacarcassEcology.com



Photo by Ryan Helcoski



Photo by Deron Burkepile

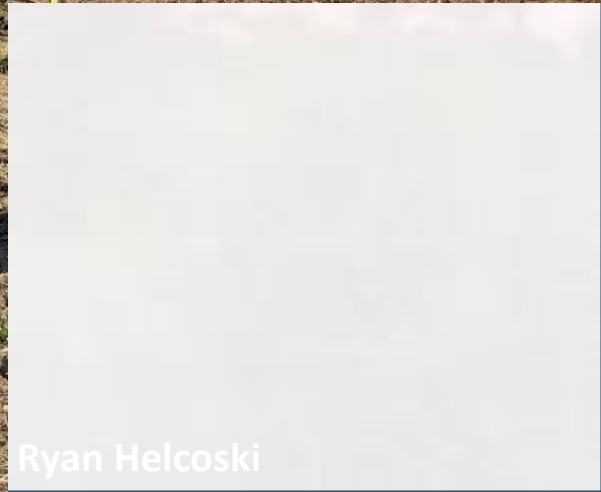




Photo by Deron Burkepile



Photo by Deron Burkepile

How do these sites differ?

Photo by Ryan Helcoski

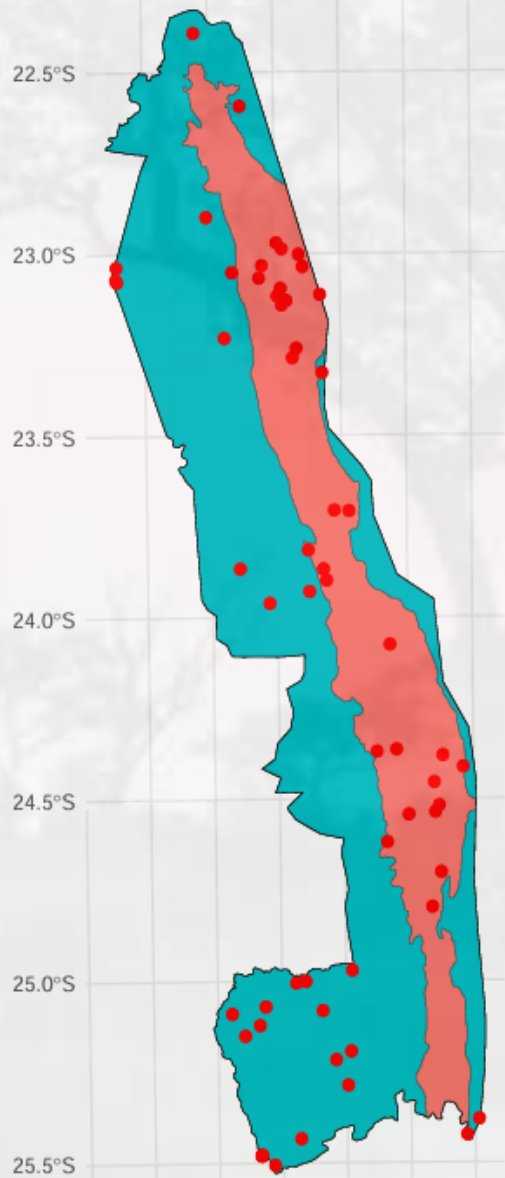


Photo by Ryan Helcoski

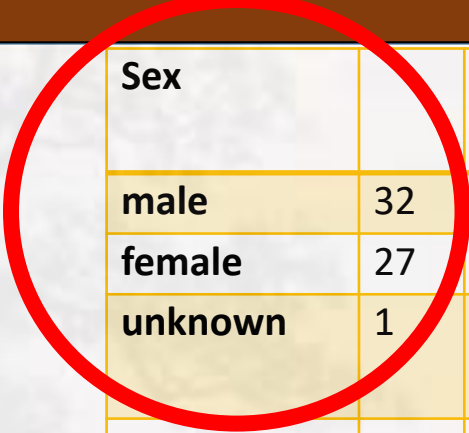


Photo by Ryan Helcoski

Soil Types in Kruger with Site Locations



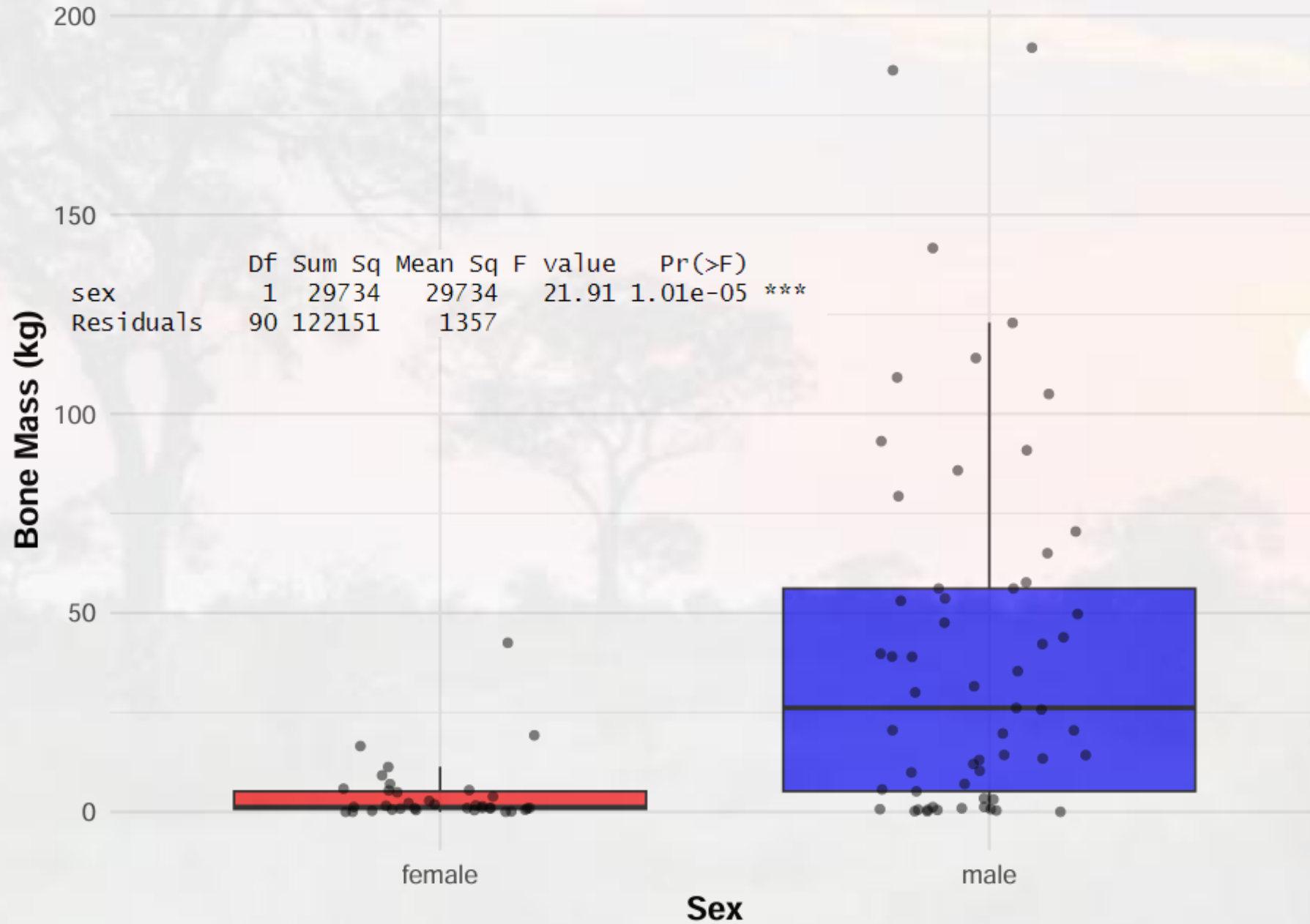
Soil Type
■ Basalt
■ Granite



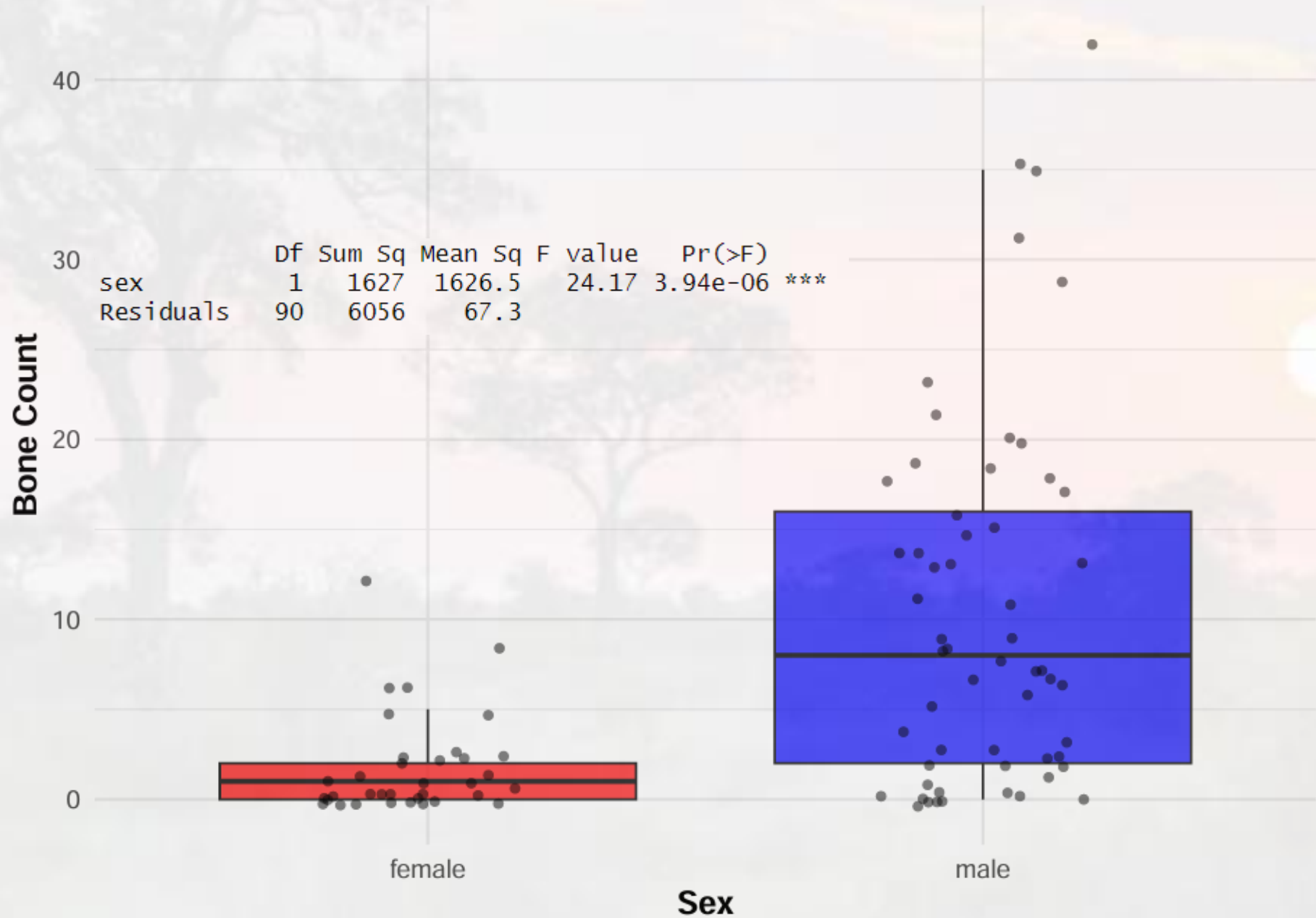
Sex		soil type		year observed		Area	
male	32	basalt	30	2016	1	North	21
female	27	granite	30	2017	1	Central	20
unknown	1			2018	2	South	19
				2019	1		
				2020	3		
				2021	6		
				2022	17		
				2023	19		
				2024	10		

	Dist to road (m)	Dist to River (m)	Dist to Artificial water (m)	Annual rainfall (mm)	Hyena density #/km2	Elephant density #/km2
min	0.3606904	569.737976	896.758117	259.92	0.234335944	0.211246371
max	2159.5967	17775.1074	8105.19726	685.66	0.954412690	0.664397717
average	591.82203	4757.6643	4042.24568	454.03	0.531790617	0.46805621

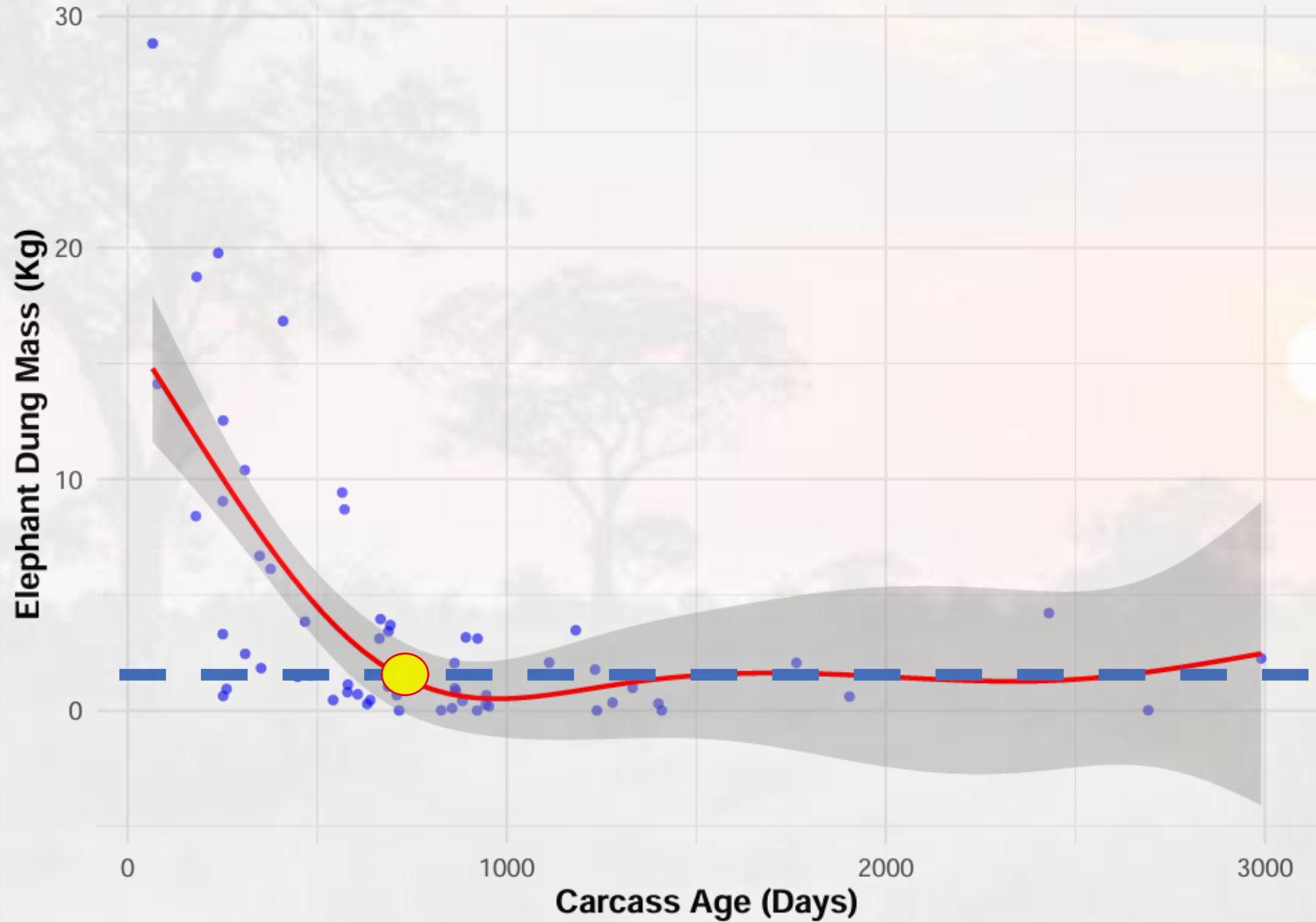
Total Mass of Bones by Sex



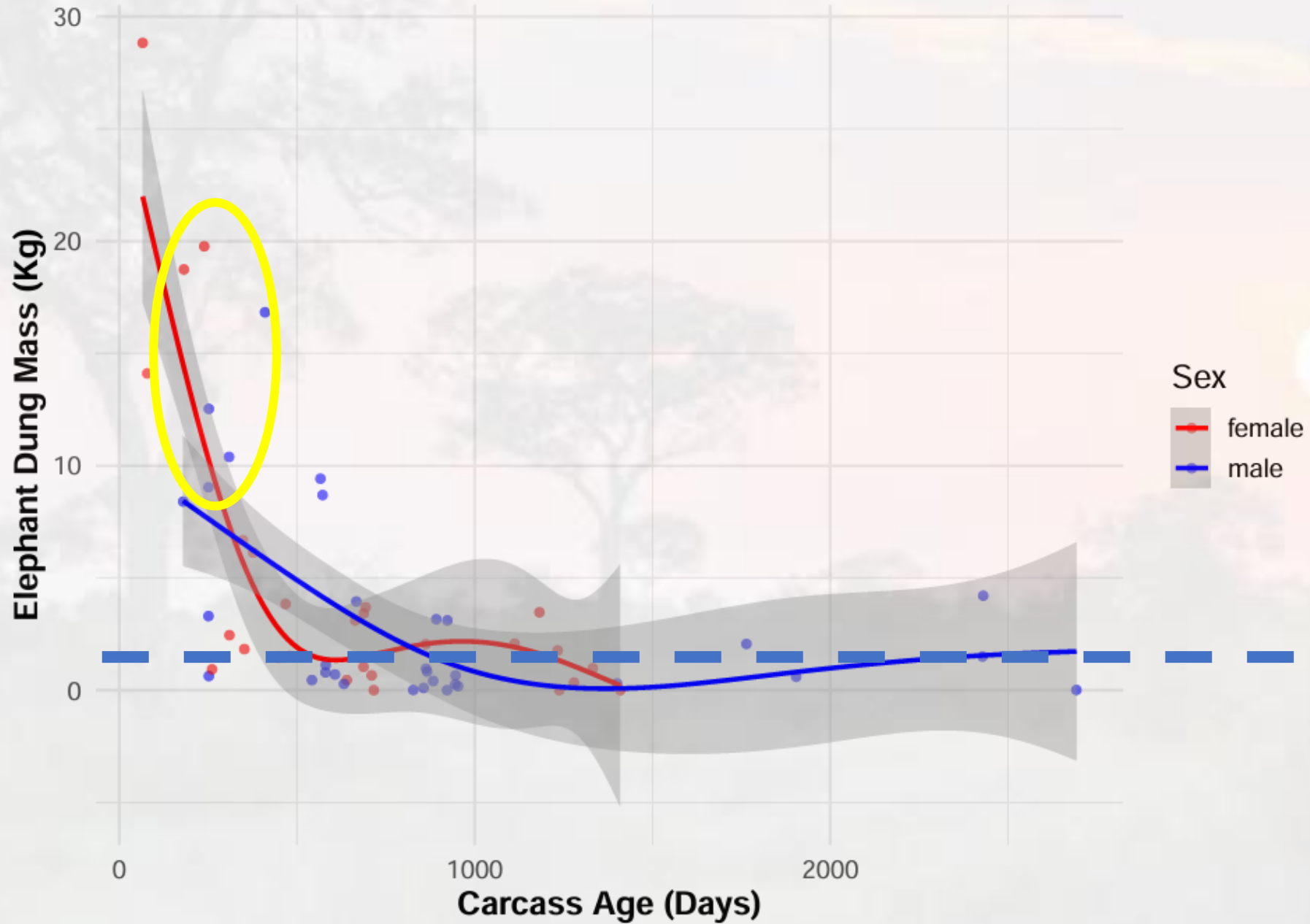
Total Bone Count by Sex



Impact of Carcass Age on Elephant Dung



Impact of Carcass Age on Elephant Dung (by Sex)





12°C 52°E 2024/01/04 02:24:14 0050



Photo by Courtney Reed



Photo by Courtney Reed



Photo by Courtney Reed



Photo by Courtney Reed



Photo by Courtney Reed



Photo by Courtney Reed



Photo by Courtney Reed

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A behaviorally mediated example of
zoogeochemistry?

Are elephant behaviors significantly altering
megacarcass impacts?

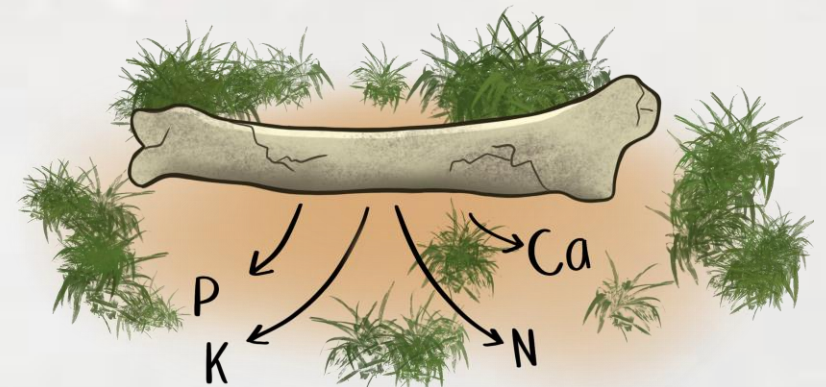


Illustration by Mallory Lambert

Thank you



