The biodiversity of amphibians in ephemeral pans in the semi-arid savanna of the Kruger National Park

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South African National Parks

United States Mission South Africa

Overview


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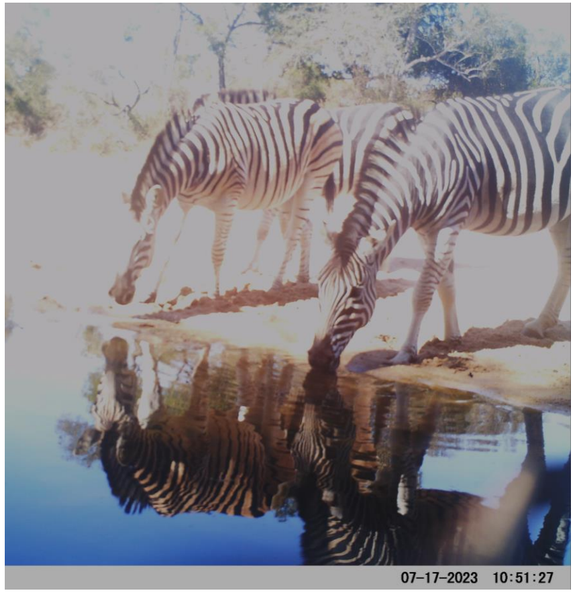
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Problem statement

Aim & Objectives

01

To analyze seasonal trends in amphibian diversity, and environmental variables such as temperature, and precipitation and water quality in ephemeral pools across the southern and northern Granite Supersites of Kruger National Park.

To investigate the diversity and community structure of amphibians living within ephemeral pans using AudioMoth technology.

To investigate the relationship

Methodology

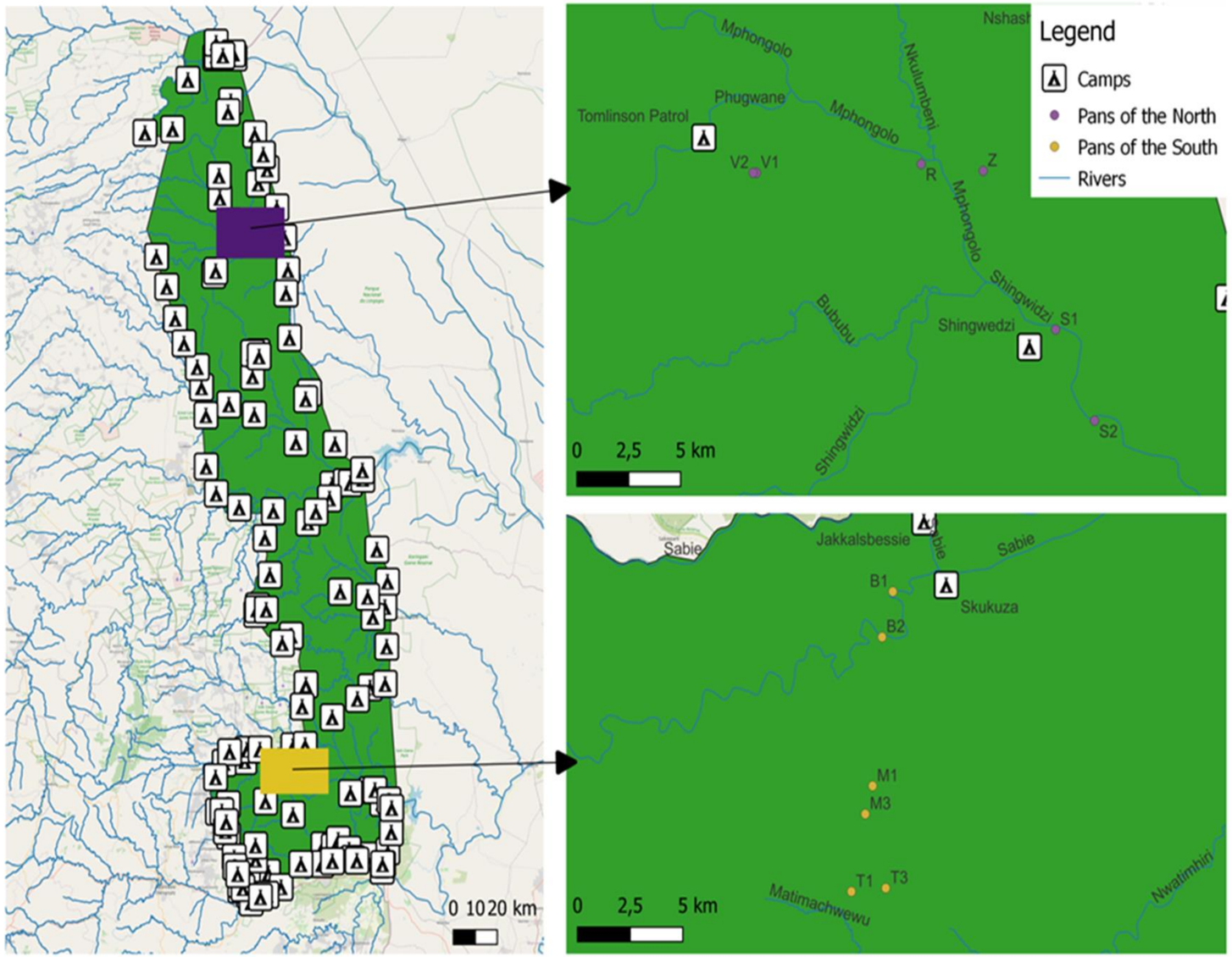

Figure 2: Map showing the location of the twelve study sites across the southern and northern Granite Supersites of Kruger National Park

Anuran diversity

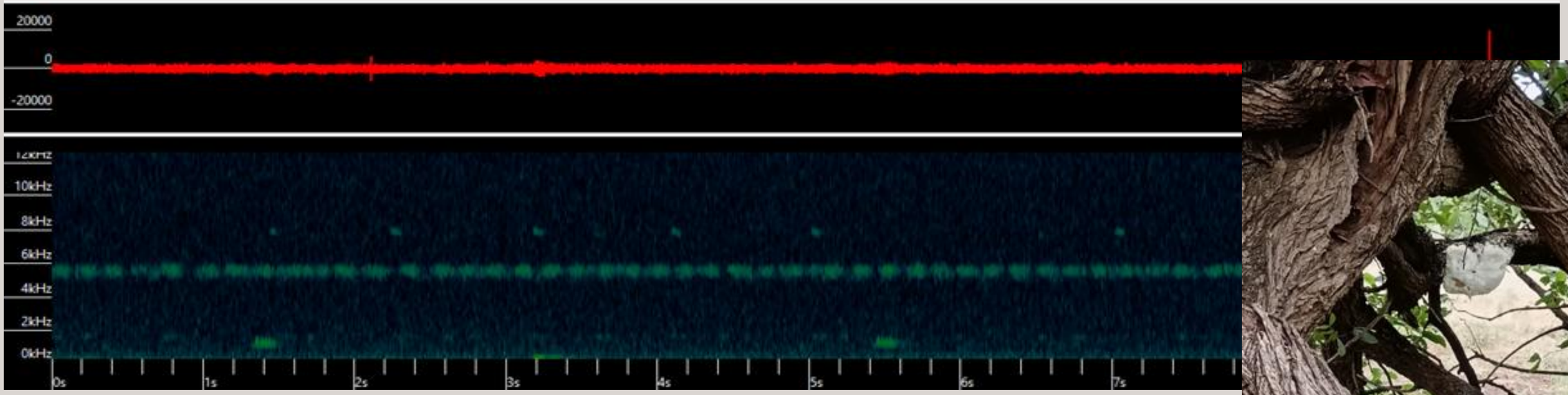

Figure 3:Oscillogram (Top) and spectrogram (Bottom) of the Grey Foam-nest Tree Frog (Chiromantis xerampelina) (winter survey up North) pan S1

Variation across pans

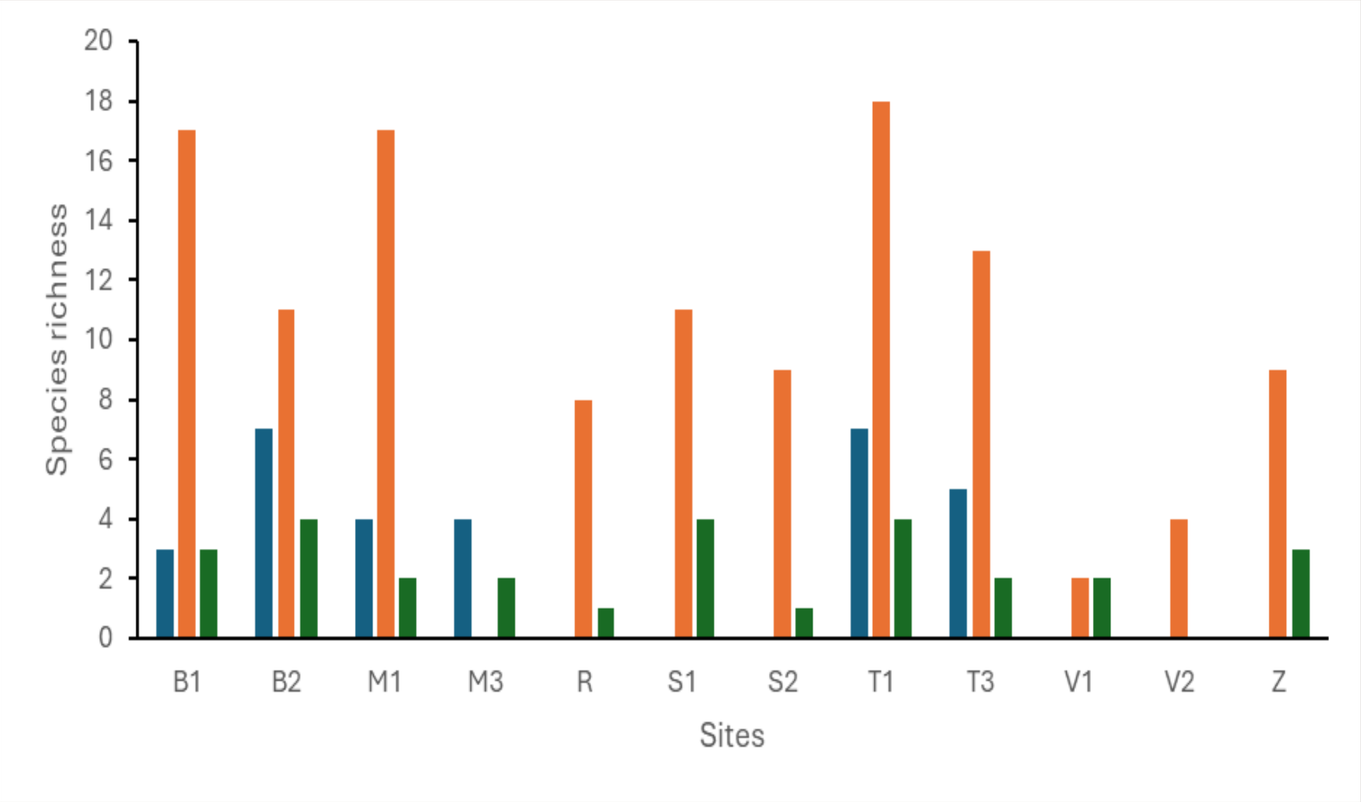

Figure 3: Species richness in the twelve study pans in the northern and southern granite supersites Kruger National Park Blue bars represent dry season 2023, Orange bars wet season 2024, green bars dry season 2024.

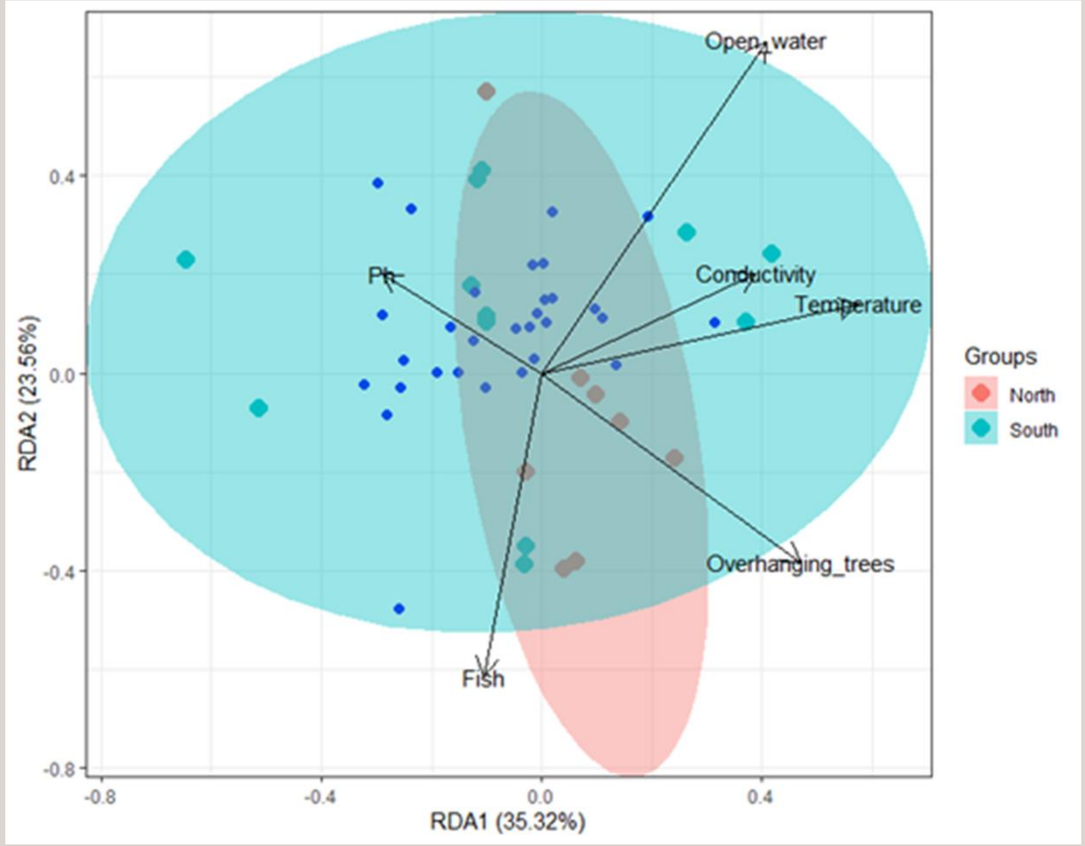

Figure 4: Redundancy Analysis (RDA) biplot displaying the relationship between environmental variables and frog species in the "North" (red) and "South" (blue) regions. The x-axis represents RDA1 (35.32% variance explained), and the y-axis represents RDA2 (23.56% variance explained). Environmental variables are shown as blue arrows.



Pan variation (SOUTH)



Pans variation (SOUTH)

Pan variation (NORTH)

Pan variation (NORTH)

Conclusion


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Thank You


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