FIREFLIES OF KANGER VALLEY NATIONAL PARK: FLORAL ASSOCIATES, FAUNAL RELATIONSHIPS AND MYTHS AND BELIEFS

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INTRODUCTION

Fireflies:

- Bioluminescent Beetles
- **Family Lampyridae**
- **Ecological and biomedical importance**
- **Cultural and economic relevance**
- **Globally approx. 2000 Species**
- **Globally threatened**
- **First Comprehensive Study at KVNP (Kanger Valley National Park)**

OBJECTIVE

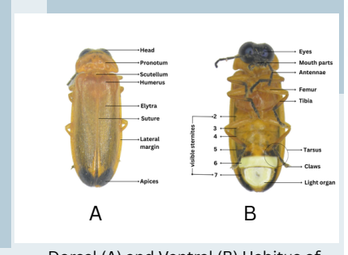
1. **To assess the diversity and distribution of firefly species present in Kanger Valley National Park.**
2. **To evaluate the floral associations of fireflies.**
3. **To assess faunal relationships**
4. **To document ethnozoological aspects - myths, beliefs, and awareness related to fireflies.**

METHODOLOGY

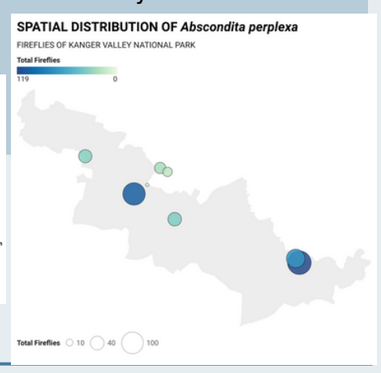
- Stratified line transect survey
- Visual counts
- Net sweeping
- Questionnaire survey

RESULTS

- During the Observation Period Single Species of Adult Firefly - *Abscondita perplexa* were recorded.
- Three different genera of Larva - *Lamprigera*, *Asymmetricata*, and *Abscondita* were recorded.
- Three different morphs of *Abs. perplexa* were recorded .
- Fireflies have higher preference for Trees and non flowering plants in comparison to smaller vegetation and flowering plant.
- Congregation of fireflies is linked to agriculture calendar in indigenous community of KVNP

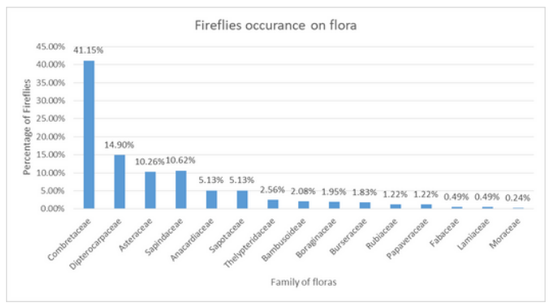


Dorsal (A) and Ventral (B) Habitus of Male *Abscondita perplexa*

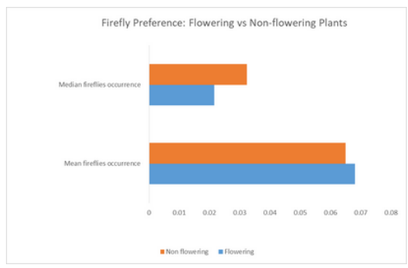


ANALYSIS

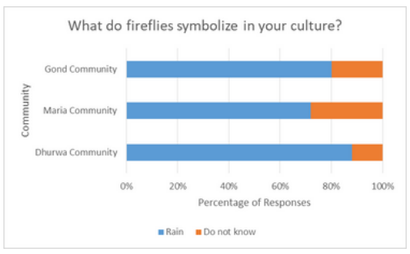
- A **paired T-test** is employed to analyze the differences in firefly counts between two site visits.
- A **chi-square test** is used to investigate the preferences of fireflies between different tree species and smaller Vegetation.
- **Mann-Whitney U test** is used to find out preference of fireflies for flowering plant and non-flowering plant.



Graph 1: Occurrence of Fireflies on Different Flora families



Graph 2: Comparison of Firefly Preference for flowering vs Non-flowering Plant



Graph 3: Fireflies as a symbol of rain in Indigenous community

CONCLUSION

- **Key Finding - Intraspecific diversity, Larval Diversity, and Floral Associates**
- **Future Scope - Development of larval identification key, Molecular analysis of morphs, and study of bio-ecology of fireflies is required.**

References

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A, B, and C represents the larva of *Lamprigera, Assymetricata and Abscondita*