

DISTRIBUTION AND SOME SOCIOECONOMIC IMPACTS OF THE  
INTRODUCED LOUISIANA RED SWAMP CRAYFISH (*Procambarus clarkii*)  
IN THE DRAINAGE SYSTEM BETWEEN LAKE BUNYONYI AND LAKE  
MUTANDA IN SOUTH WESTERN UGANDA AND  
IMPLICATIONS FOR ITS MANAGEMENT

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# PRESENTATION OUTLINE

- INTRODUCTION
- RESEARCH PROBLEM
- OBJECTIVES
- METHODS
- OBSERVATIONS FROM THE DATA COLLECTED
- ACKNOWLEDGEMENTS

# INTRODUCTION

- Invasive species
- *Procambarus clarkii* as an invasive species
- *Procambarus clarkii* in Uganda.

# RESEARCH PROBLEM

- Very little information about crayfish in South western Uganda
- As an invasive spp, *Procambarus clarkii* is a big threat to the rich biodiversity.

# OBJECTIVES

- **General objective:**
- Find out the distribution and socioeconomic impacts of *Procambarus clarkii* in south western Uganda
- **Specific objectives**
- To determine the distribution of crayfish in the drainage system
- Determine environmental variables affecting its spread
- Explore the socio economic impacts of crayfish introduction to the local people of south western Uganda

# METHODS

- A total of 8 sites were selected. 3 sites on the upper section, 2 sites on the mid section, and 3 sites on the lower section of the drainage system.
- Sites selected cover the degraded areas, non degraded, almost intact vegetation and the Park boundary
- Sampling will cover both the wet and dry season

# Methods cont'd

- Use of local fish traps is used to determine the distribution of crayfish along the drainage system.
- Specialised Limnological equipment is used to measure the environmental variables which include; pH, Dissolved oxygen concentration, water temperature, turbidity, river width, water current, depth and altitude.
- An interview guide is being used to explore the socio economic impacts of crayfish introduction.

# Observations made

- No crayfish in the mid section (including the park boundary)
- Many crayfish in the lower section and few in the upper section of the drainage system.
- Very few local people are positively embracing the crayfish introduction. The rest are looking for any method that can eliminate the crayfish from their area.

# DATA ANALYSIS

- Means and ranges of all measured environmental variables will be calculated for all study sites. The major relationship among environmental variables will be assessed using a Pearson's correlation matrix
- Principal Components Analysis (PCA) will be used to describe the major environmental gradients of variation among the sites

## Analysis cont'd

- Cluster analysis using Ward's linkage and the Euclidean distance measure of dissimilarity will be used to explore the relationships between sites and their environmental variables and between sites and crayfish assemblage

# ACKNOWLEDGEMENT

- **SPECIAL THANKS TO:**
- ITFC
- UWA
- MY SUPERVISOR
- FIELD ASSISTANTS

**THANK YOU ALL**