

DIGITIZATION AND CURATION OF MUSSEL SPECIES

FAUNA OF INDIANA

Madison Combs¹; Dr. Suparna Mukhopadhyay¹

¹ Department of Biology, School of Natural Sciences, Indiana University Southeast, New Albany, IN



ABSTRACT

Several surveys were conducted on freshwater mussels in the Blue River and its tributaries by students of IUS under the supervision of Dr. Claude D. Baker and Dr. Bill J. Forsyth between 1973-1997. This impressive collection containing over 36 species of freshwater mussels has been housed in the Life Sciences building for over 40 years, yet this data has not been analyzed or shared with the public until now. We are currently cataloging, digitizing, and researching this mussel collection. We are also documenting all relevant documents such as time, date, coordinates of collection for public outreach.

METHODS

The mussel collections are being classified based on their taxonomy, organized and labeled in filing cabinets. These collections and all relevant documentation are also being digitized in Excel in the form of a database. The excel spreadsheet is organized in two categories: Identified and Unidentified. The Identified mussels have been color coded by their Family Name. There are currently two categories for Family names: **Unionidae** and **Villosa**. The Identified mussels are cataloged based on their Scientific Names, Bag #, Common Name, State, County, location of collections, number of items in each bag and their image. The Unidentified mussels have been color-coded and cataloged by their location of collection. There are currently 10 different locations. The Unidentified mussels are cataloged with their Bag #, Date of collection, Coordinates of the location, number of items in each bag and Image. Once the database is complete, we will start working on a web portal for this database.

INTRODUCTION

The Blue River is a tributary of the Ohio river and is spread over 125,000 acres in Clark, Crawford, Floyd, Harrison and Washington counties in South central Indiana. Between 1973-1997 several surveys were conducted on freshwater mussels in the Blue River and its tributaries by students of Indiana University Southeast under the supervision of faculty members Dr. Claude D. Baker and Dr. Bill J. Forsyth. Samples collected during these surveys were preserved in individual bags and boxes. Over 36 species of freshwater mussels are in this collection and over 127 bags of mussels have been investigated and preserved. This impressive collection has been housed in the Department of Biology in the Life Sciences building for the past 40 years, yet except for one publication this data has not been analyzed or shared with the public until now. Cataloging and research of these freshwater mussels started in Fall 2019 under the supervision of Dr. Mukhopadhyay. The mussels are being organized and labeled in filing cabinets based on their taxonomy. These collections are also being digitized and documented. These mussels were collected from tributaries of the Blue river such as Laughery Creek, Little Blue River (Turkey Fork and South Fork), Little Indian Creek, Sugar Creek, Vernons Creek, Grahams Creek, and Silver Creek locations.

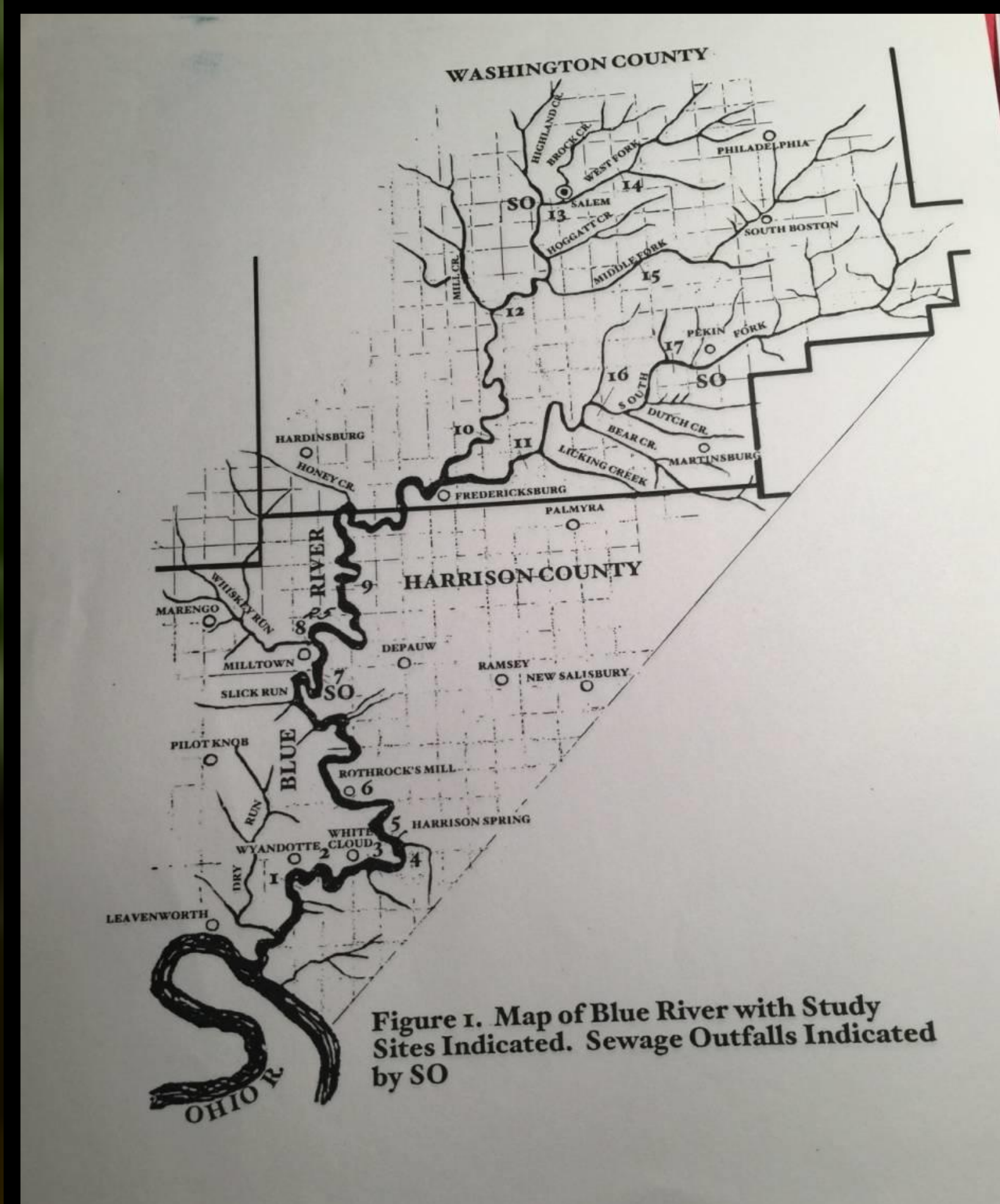


Figure 1. Map of Blue River with Study Sites Indicated. Sewage Outfalls Indicated by SO



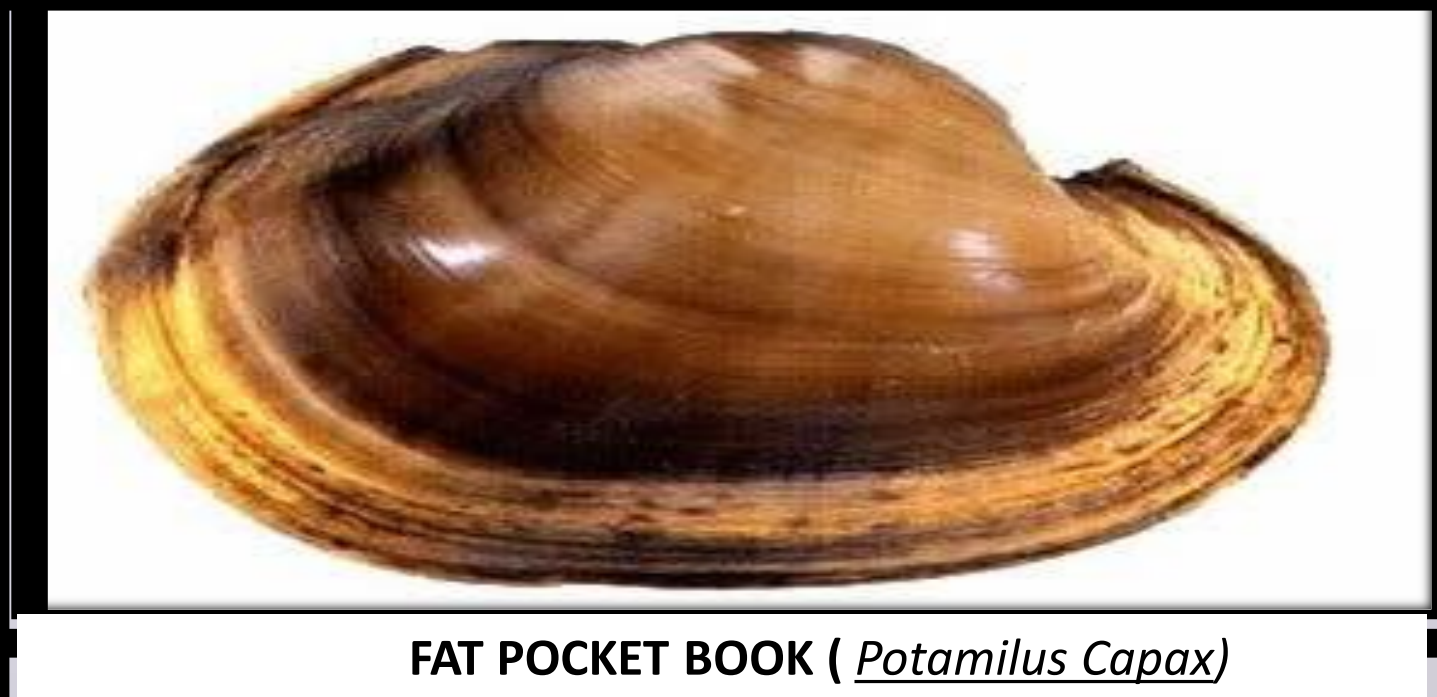
DIGITIZATION AND RESEARCH

This river was recorded by the Department of Natural Resources (DNR) to have flooded 50 years ago. It is believed that the increased water supply moved mussels down the river from the Little Blue River to Little Indian Creek in Floyd County, Indiana. We will continue to catalog and digitize all mussels in the collection, digitize relevant documents regarding these mussels such as the time, date and coordinates of their collection and we plan to research more about the current distribution of **Fat Pocketbook** mussels and the **Rainbow Shell** mussels which are of our interest. Both of this mussel species are currently designated as endangered under DNR website. Rainbow Shell mussels are currently distributed in Wisconsin and seem to be locally extinct from Indiana. We will need further research to confirm our findings.

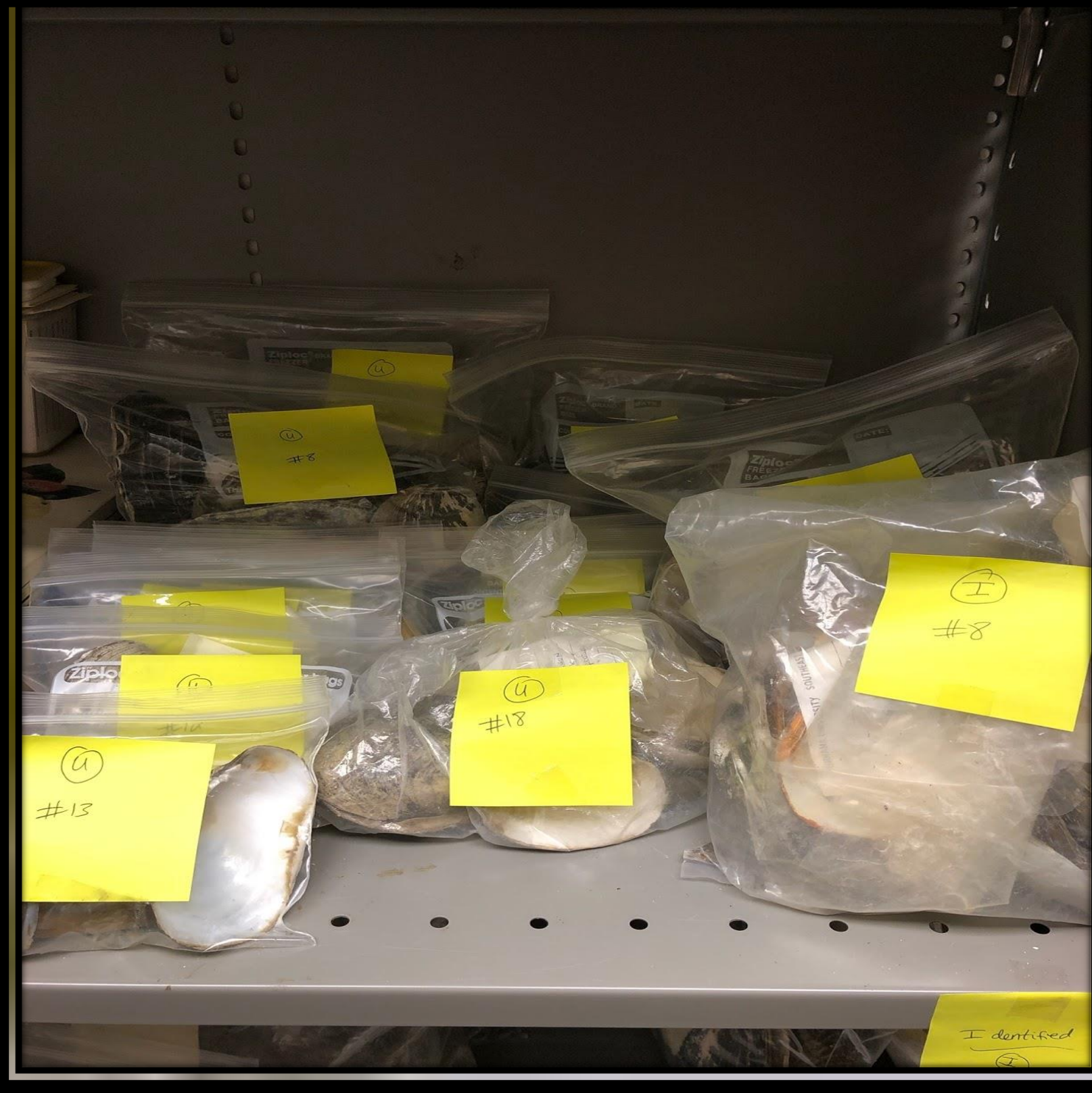
CATALOG OF MUSSEL COLLECTION

Scientific Name	Common Name	State	County	Date of Collection	Number of Items	Image
Unionidae	Unionidae	Indiana	Washington	1-15-2019	1	[Image]
Unionidae	Unionidae	Indiana	Washington	1-15-2019	1	[Image]
Unionidae	Unionidae	Indiana	Washington	1-15-2019	1	[Image]
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FAT POCKET BOOK (*Potamilus Capax*)



RAINBOW SHELL MUSSEL (*Villosa iris*)

FUTURE DIRECTIONS

We will continue to catalog, curate and digitize the entire collection and all relevant documents on the year, date, time of collection of the mussel species. We will **Geo-reference** each sample and work on creating a **Web Portal** of our database for public outreach.

Acknowledgements

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