

08 S76 Applications of Ancient DNA to Wildlife Disease

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Through lectures I will cover the basics of extracting and analyzing DNA from archival and fossil samples. This will extend to the newer pursuit of analyzing pathogens from old and ancient samples. As I have worked on examining retroviruses and retroviral-like elements from both mammoths and museum monkey samples, I will cover the unique biology of retroviruses.

Each class will involve lectures, in some cases demonstrations, and discussion rounds to bring up and cover specific points of interest. Interaction is the best way to learn so I expect everyone to read selected papers I will announce and post beforehand and to be prepared to participate in discussions.

1. Retrieving DNA from archival tissues and fossils

The basic methodologies and challenges will be discussed

2. Applications of ancient DNA

The successes, failures and peculiarities will be covered

3. Bacterial DNA from ancient and archival material

Non-viral pathogens will be discussed

4. Viral and non-bacterial DNA from ancient and archival material

Retroviruses, trypanosomes and other non-bacterial pathogens will be discussed