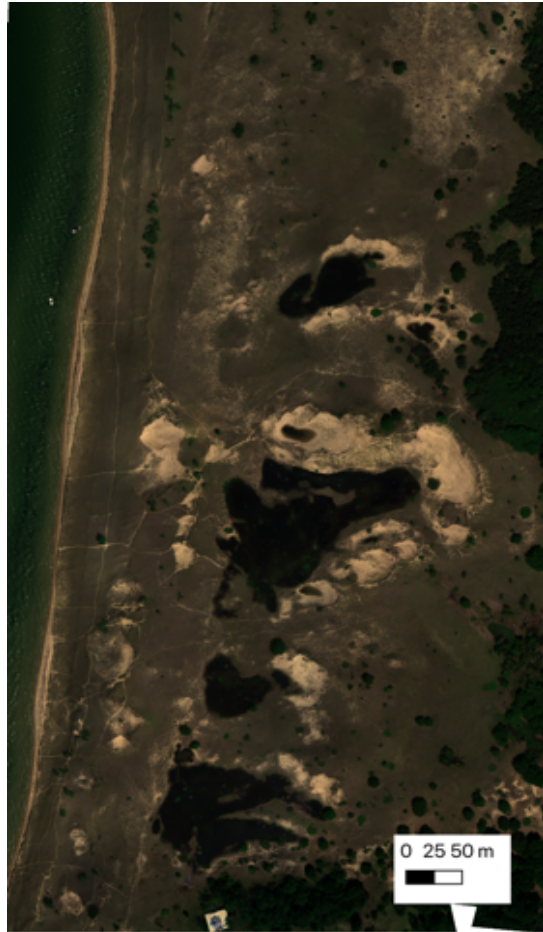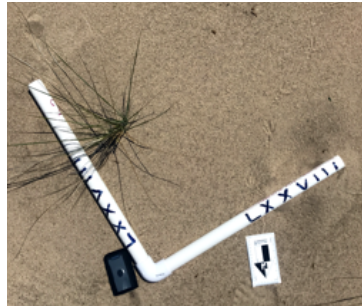# Mapping Dune Vegetation Using Drones and Machine Learning

Jack Krebsbach, Dr. Brian Yurk, Dr. Paul Pearson, Dr. Edward Hansen, Eric Leu
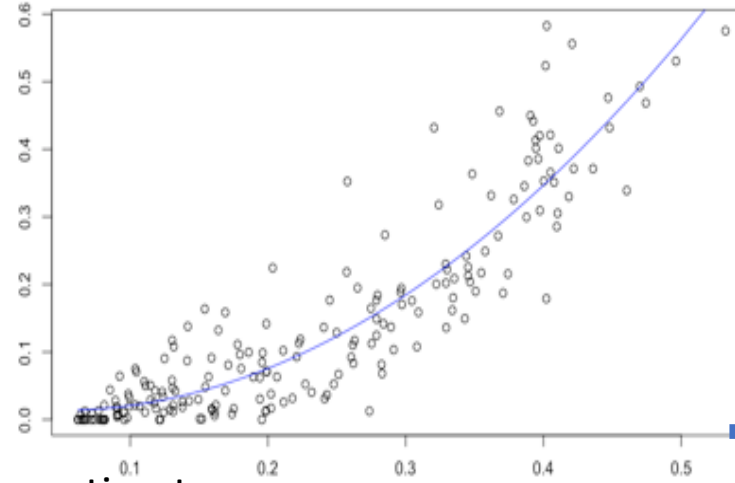
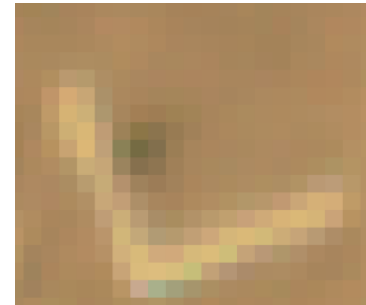Dune Complex (SHNA): Orthomosaic

Empirical model predicting vegetation coverage

Vegetation Coverage Map

Ground Based Photo

High-Altitude Photo

1. Use machine learning to estimate vegetation coverage in ground-based imagery
2. Calculate Normalized Difference Vegetation Index (NDVI) in high-altitude imagery
3. Create Empirical Model predicting coverage from Ave. NDVI Values
4. Apply model to the entire orthomosaic