

Intertidal Biodiversity DNA Barcode Library Project

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Background/Rationale

- In our last meeting, we discussed all the ways eDNA tools are being used to inform management decisions
 - Invasive and endangered species, biodiversity, bioassessment
- We also discussed challenges facing adoption of eDNA tools
 - Gaps in DNA reference libraries are one of the biggest roadblocks to broadscale adoption
- **The Intertidal Project will help SCCWRP and California improve our capacity for DNA-based tools and assessments**

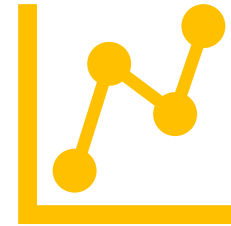
Project Elements



DNA reference
library



Develop
interpretation tools



Assess biodiversity
across the State

DNA reference library

- **Goal:**
 - **Generate DNA reference sequences for thousands of intertidal taxa**
- **Approach:**
 - Intensive, week-long sampling events at ~6 locations across the State
 - Taxonomic experts on-site to ensure correct species identification
 - Complemented by a statewide survey to pick up remaining species
- **Products:**
 - A complete DNA reference library for intertidal environments
 - Museum archives of voucher specimens for all species
 - A resource for California for decades
 - Standardized protocols and manuals for future barcoding efforts

Data Dashboard

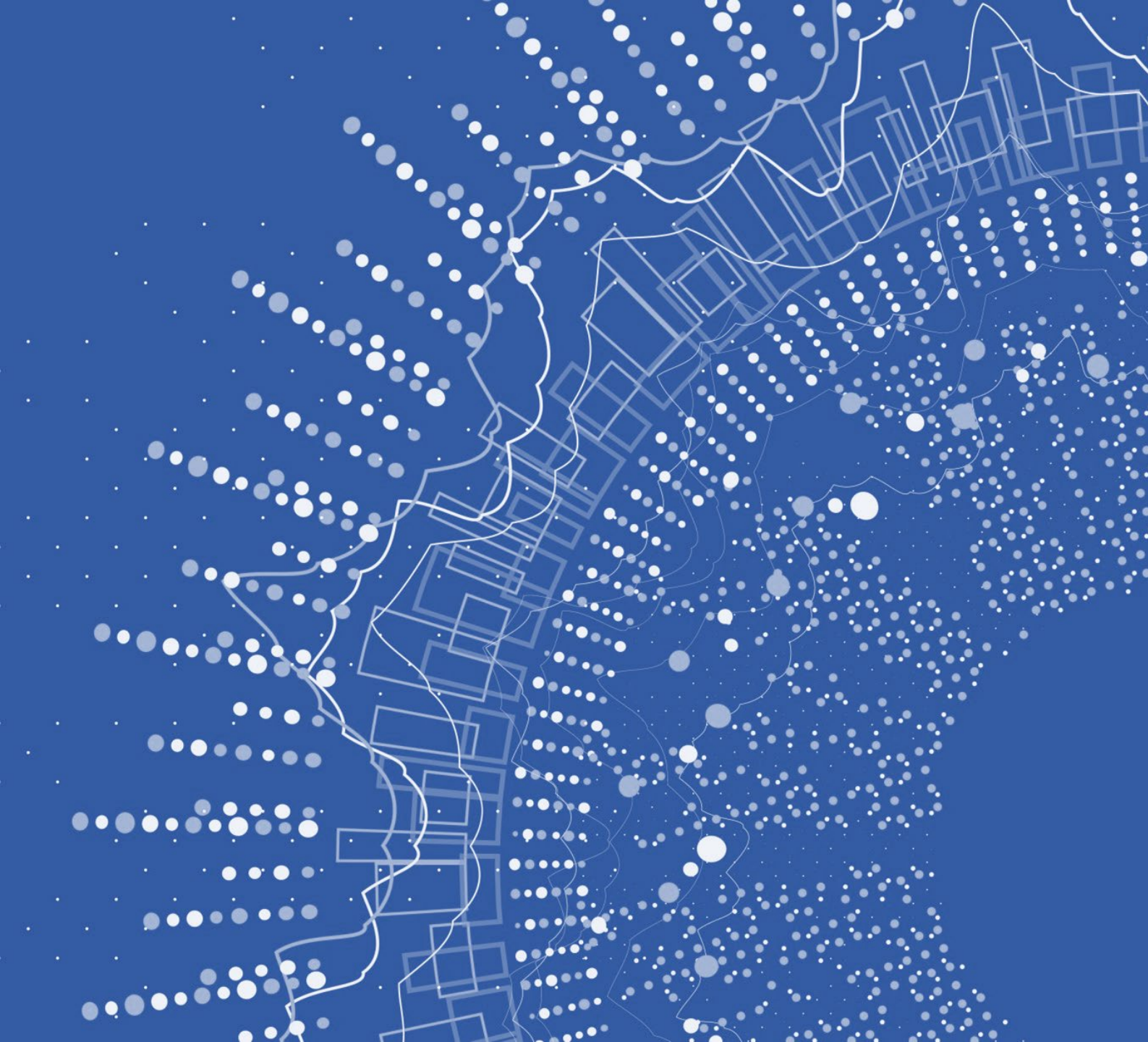
- **Goal:**
 - **Create a data dashboard to make DNA reference library accessible and interpretable**
- **Approach:**
 - Interactive dashboard with data, maps, interpretation tools
 - Query data for species distributions and biodiversity maps
 - Training to support use of the library for management decision-making
- **Products:**
 - Interactive dashboard for data query and download
 - Training materials for use and interpretation of DNA reference library

Biodiversity assessment

- **Goal:**
 - **Illustrate the utility of the DNA reference library**
- **Approach:**
 - Assessments of statewide biodiversity addressing management needs
 - Specific assessment goals will be determined in partnership with the project's Advisory Committee
- **Potential Products:**
 - Statewide maps of biodiversity
 - Identification of vulnerable taxa and biodiversity hot spots
 - Evaluation of species range shifts

Project team

- This is an ambitious project with a large team
- **We have brought together world experts to help us achieve these goals**
 - Museum of Natural History of Los Angeles
 - Scripps Institute of Oceanography
 - UC Berkeley
 - California Academy of Sciences
 - Florida Museum of Natural History
 - UC Santa Cruz



Thank you!

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