

Virtual Biogeography / Finding Nemo - GROUP

DISCUSSION 1

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Participating members:

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DISCUSSION NOTE:

- Divide the movie into equal overlapping parts, record species observations, assemblages/interaction, and abundance of species
- **Possible data sources**
 - ~~- iNaturalist~~
 - GBIF has more data available, also includes "professional" sources, not just citizen science (gbif.org)
 - OBIS (obis.org)
 - + includes metadata like depth, temperature, salinity etc.
 - + Also has an API and associated R package
 - IUCN range map
- **Assess assemblages/interaction**

Map distribution in natural
In the dentist office? - Finishing touch
- **Assess abundance**

Species per pixel
- **Defining range**
 - Spatial

Finding Nemo takes place in the Great Barrier Reef

 - + Limit our search to the GBR, see if all species observed in the movie are found there
 - + Come up with a checklist for data filtering (start the analysis with small number of species, then apply this for a
 - + IUCN range maps
 - + Can we figure out where in the GBR this movie occurs? Is there only a limited part of the GBR where all of these species co-exist?

How to we define "space" in a movie? Can't measure distances, don't have measured transects or known areas

-Temporal

Specific time of year? (do reef fish migrate?)

Data up-to-date?

- **Possible literature**

<https://onlinelibrary.wiley.com/doi/abs/10.1111/ele.12716>

<https://sallykeith.weebly.com/>

<https://www.iucnredlist.org/resources/spatial-data-download>

- **Data organization**

- Have a separate folder for images/screenshot, standardize names for each image file, then reference the file name in a database.

- Mirror the screenshots to avoid copyright issues

- Split up "fish" vs "not fish"?

crustaceans

birds

mammals

-Step 1: species inventory, number of occurrences

Watch the movie, take screenshots to capture species

Identify species, make a species list

Build a filter based on the

-Step 2: more precise interactions (i.e. coral - fish interactions)

Action plan

1. Species inventory: Watch movie and screenshot all species - Indigo

Naming: ScreenShot-timestamp-locationIdentifier

(Location identifier: GBR, dentist, coastal shelf, current,)

2. Double-check the screenshots by other members - Emily

3. Species identification by screenshots - Jenna + Etienne as leads

ID

of occurrences

4. Look at databases (OBIS, GBIF, etc.) - assign after finishing 1-3