SQUIDLE+

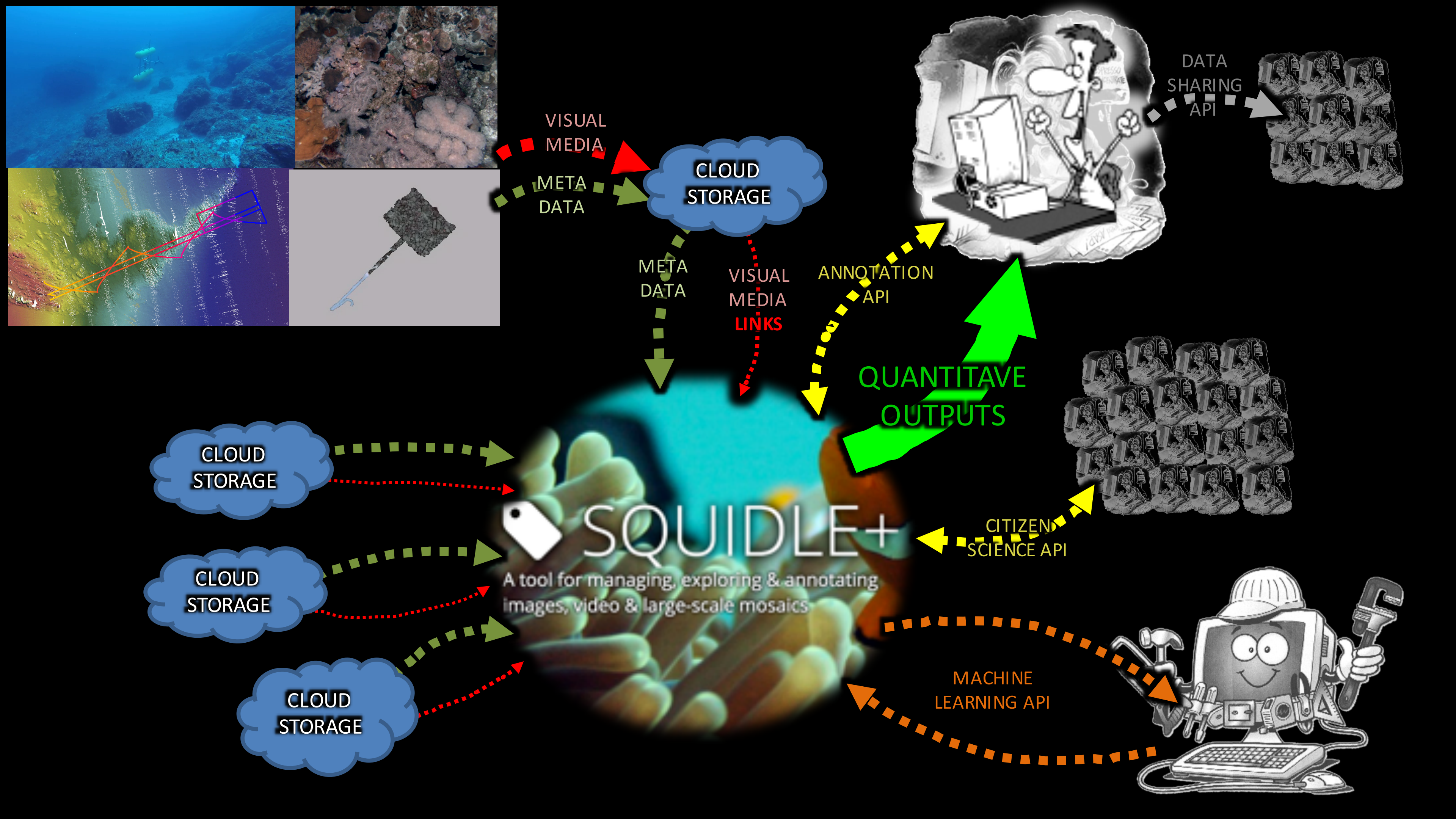
online platform for exploration, management & annotation of georeferenced images & videos

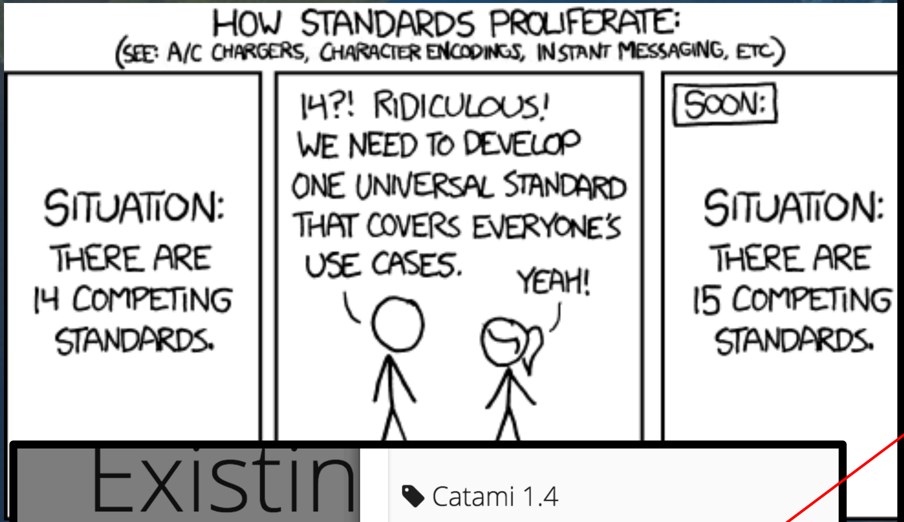
Ariell Friedman, Oscar Pizarro

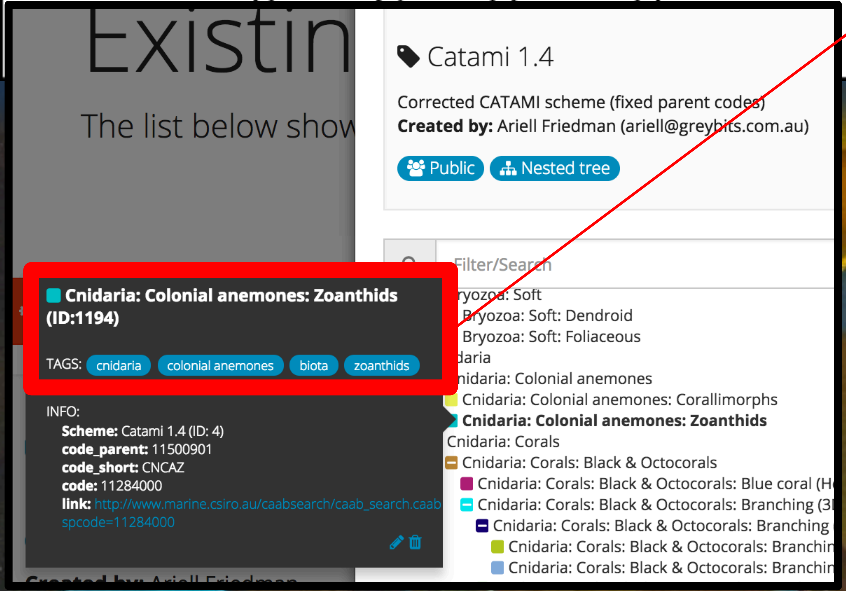
GREY BITS ENGINEERING

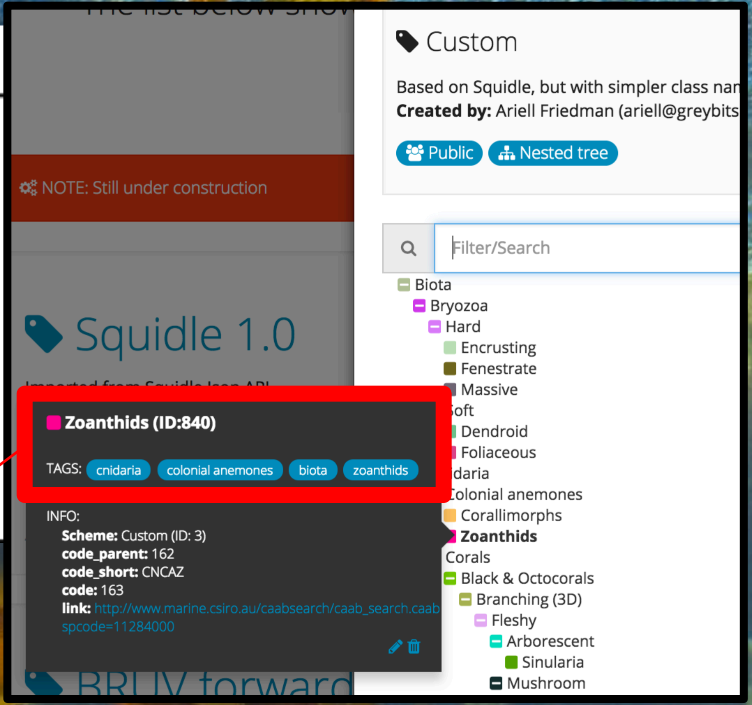
SCHMIDT OCEAN INSTITUTE

IMOS
Integrated **Marine** **Observing** System


VISUAL MEDIA
META DATA
CLOUD STORAGE
META DATA
VISUAL MEDIA LINKS
ANNOTATION API
DATA SHARING API
QUANTITAVE OUTPUTS
CLOUD STORAGE
CLOUD STORAGE
CLOUD STORAGE
SQUIDLE+
A tool for managing, exploring & annotating images, video & large-scale mosaics
CITIZEN SCIENCE API
MACHINE LEARNING API







Kelp

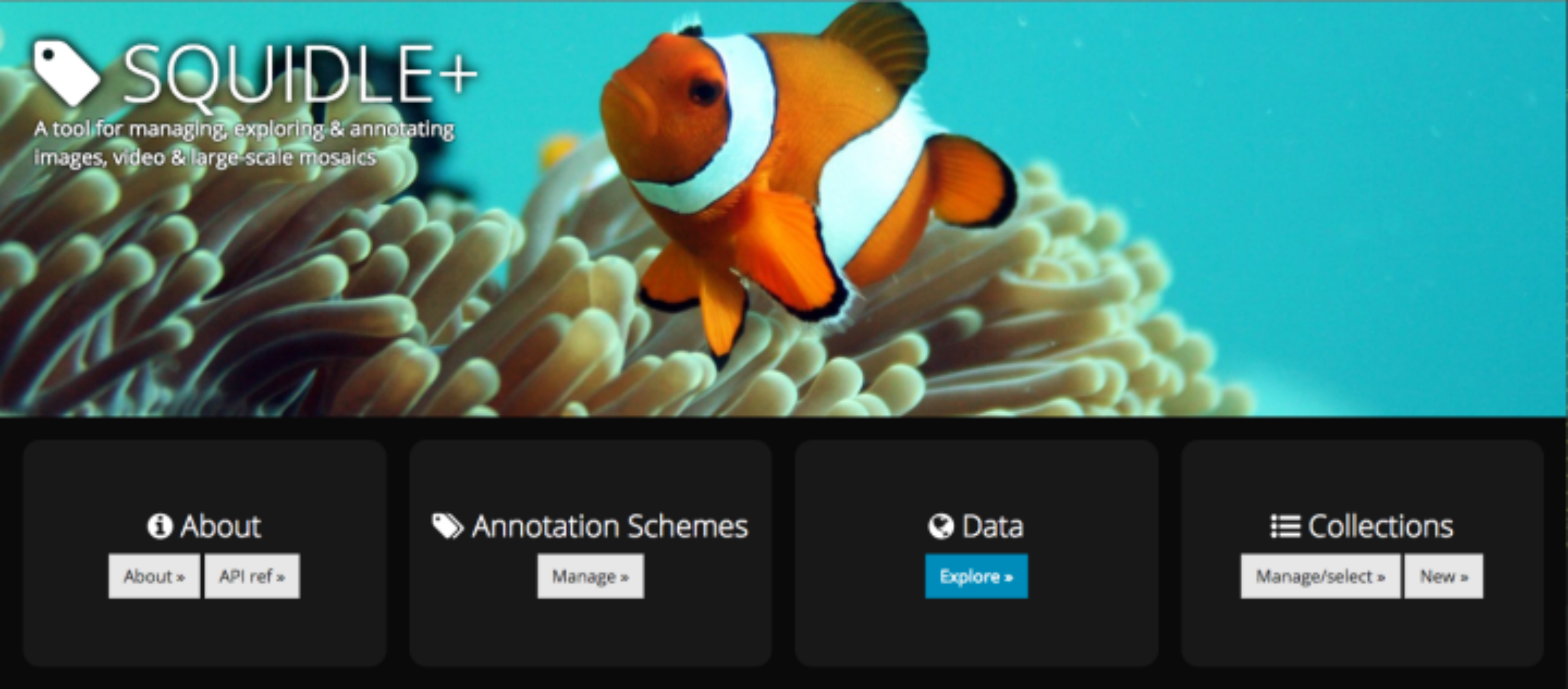
Seaweed

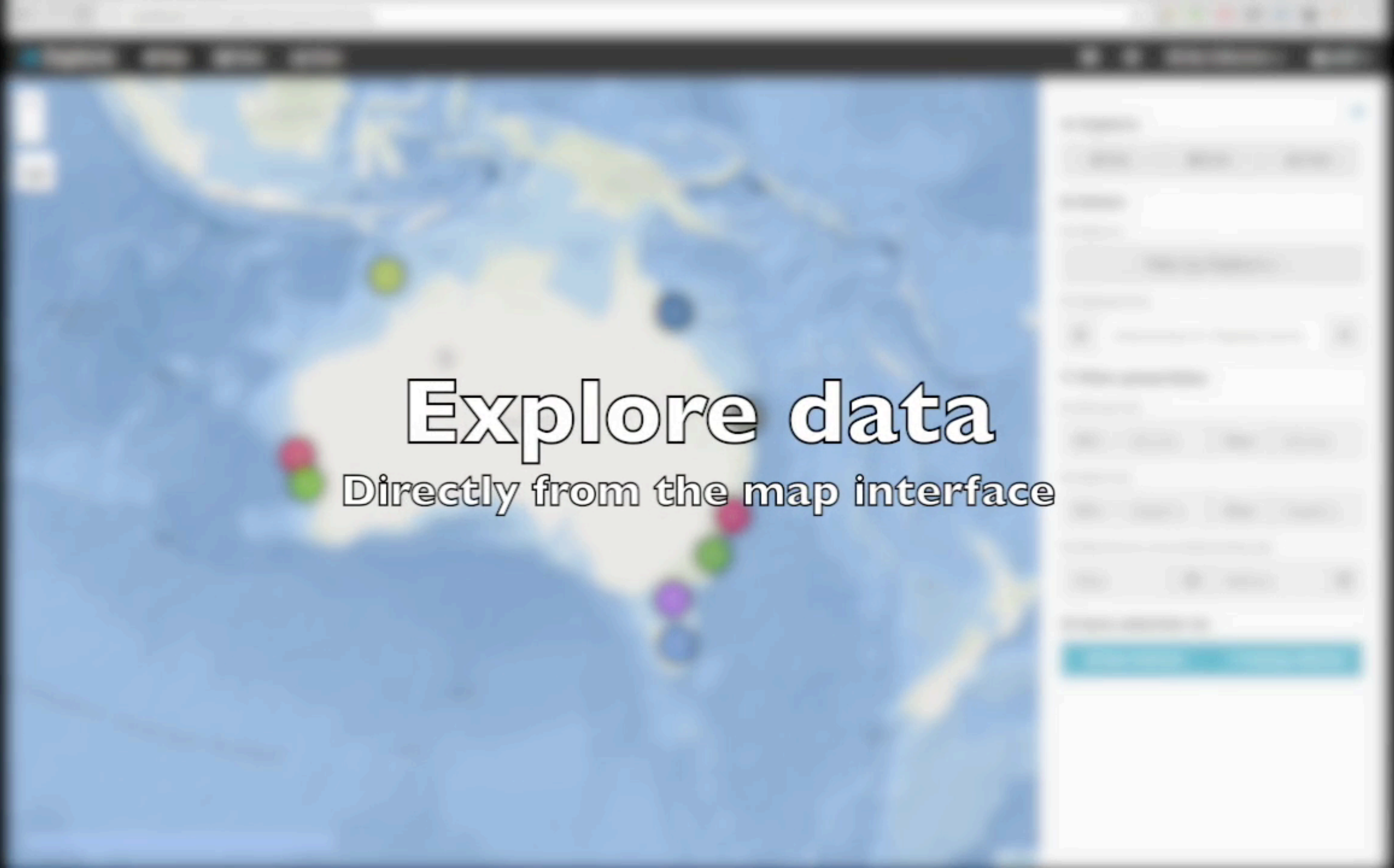
Macroalgae

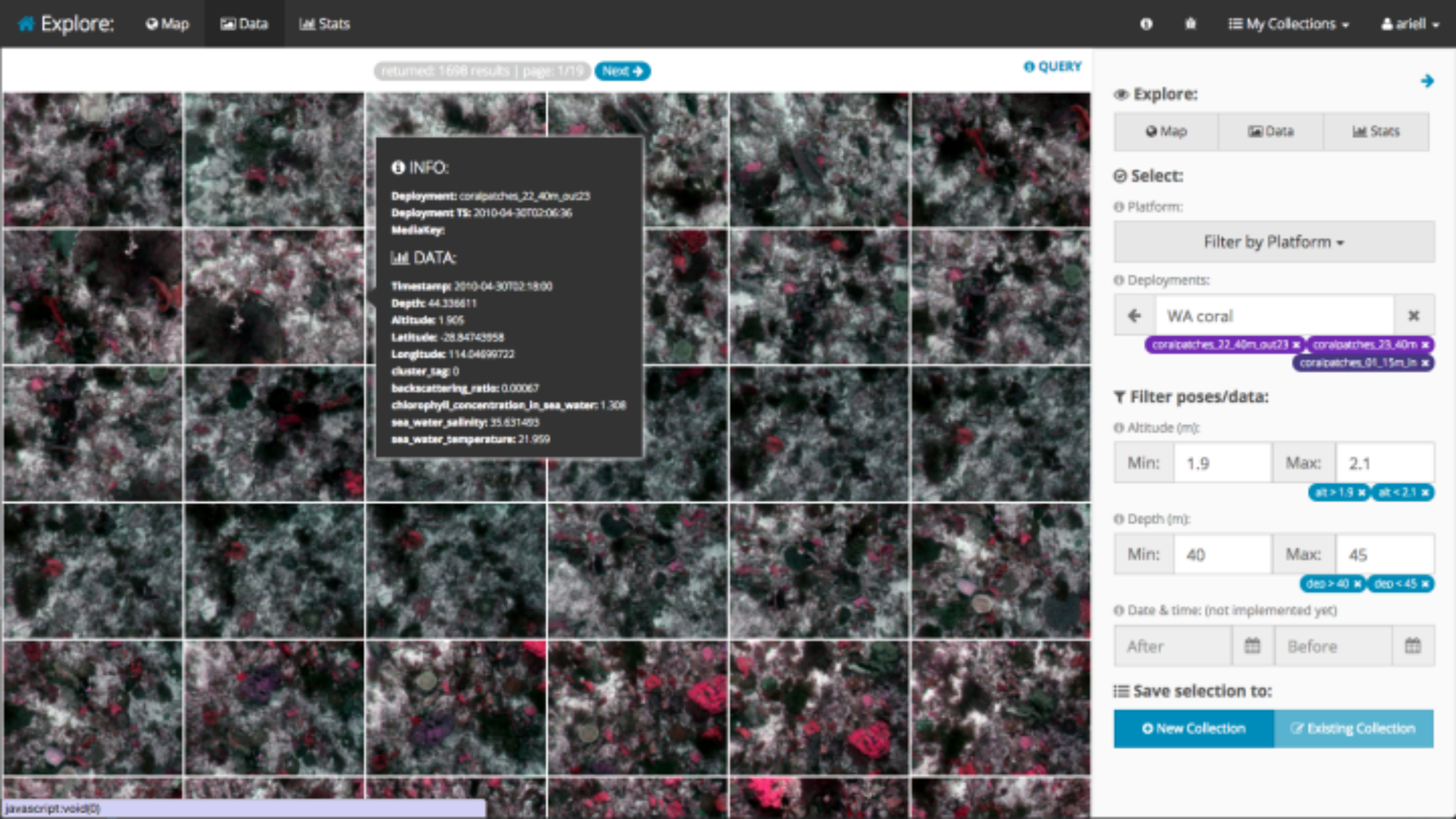
Phaeophyceae

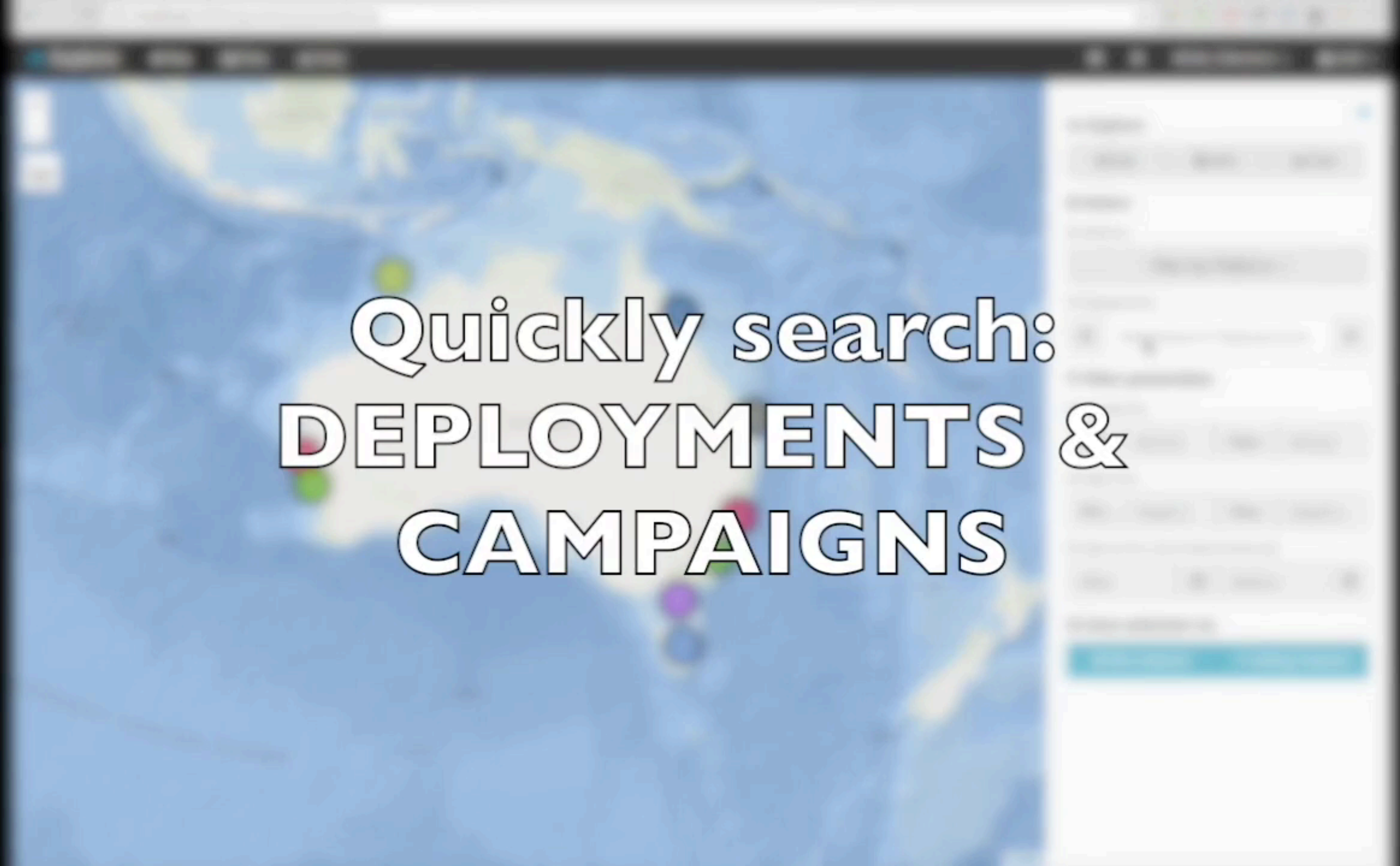
Ecklonia Radiata

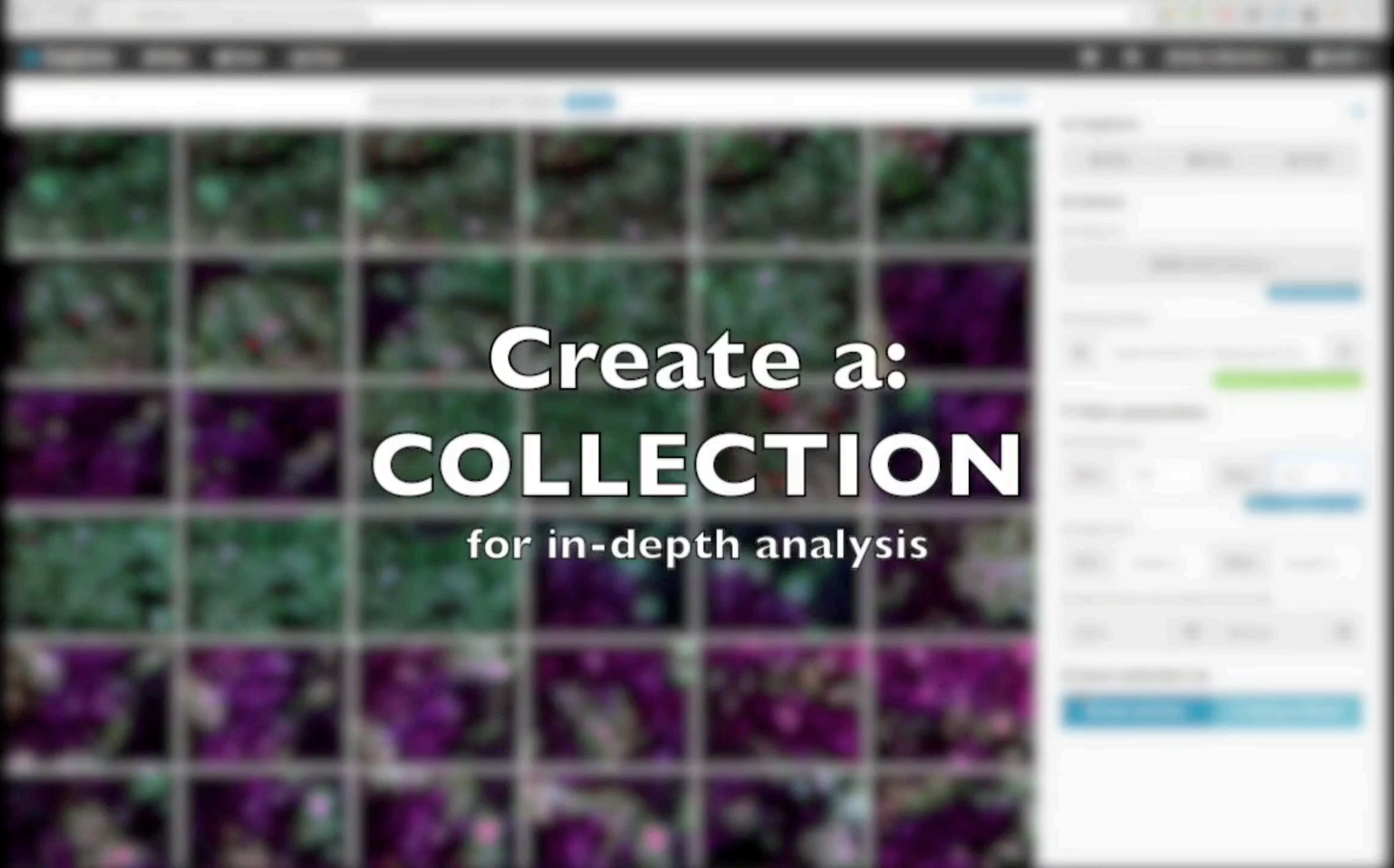
Erect Canopy-forming Brown Macroalgae

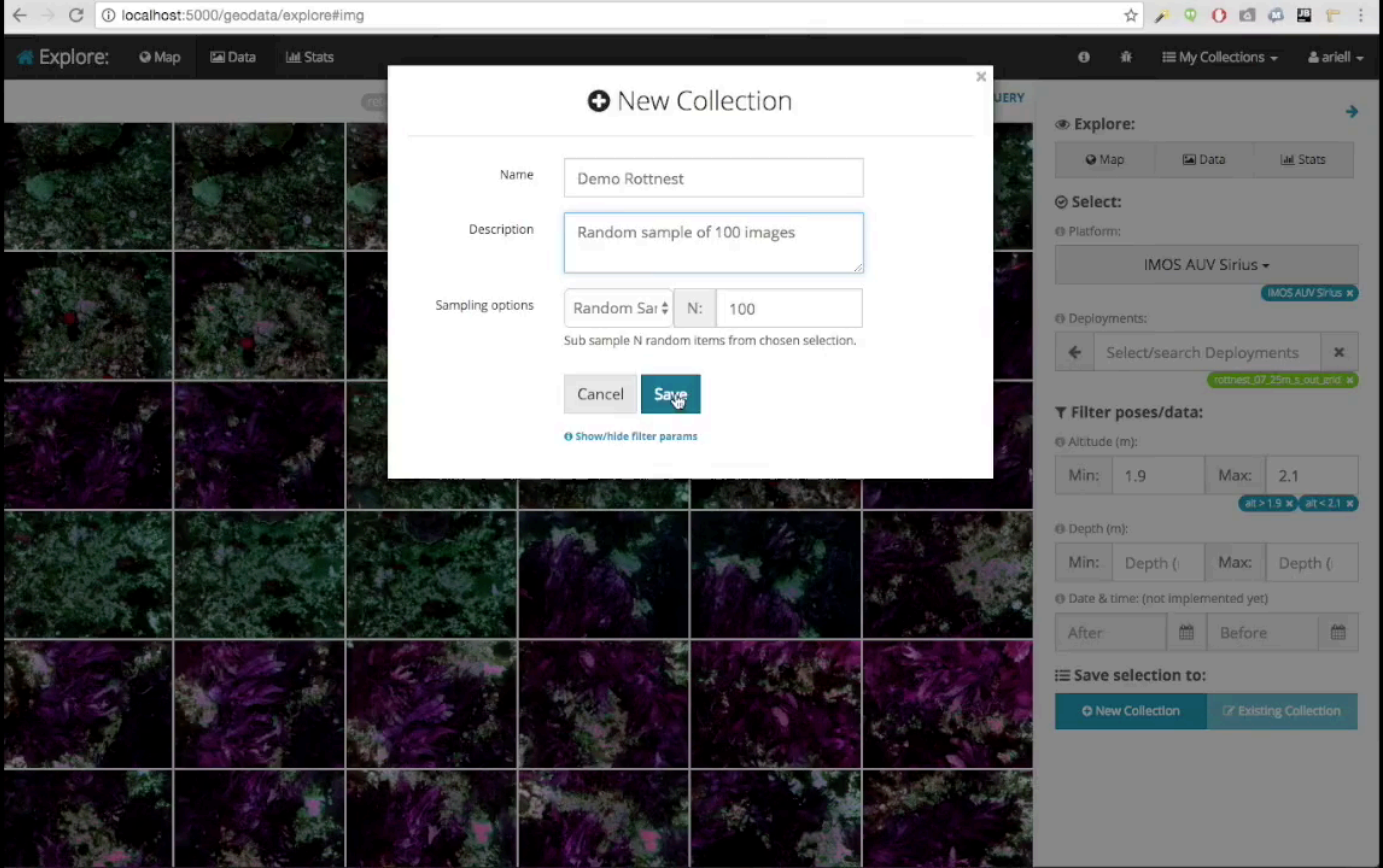

SQUIDLE+
A tool for managing, exploring & annotating
images, video & large-scale mosaics
About
About »
API ref »
Annotation Schemes
Manage »
Data
Explore »
Collections
Manage/select »
New »

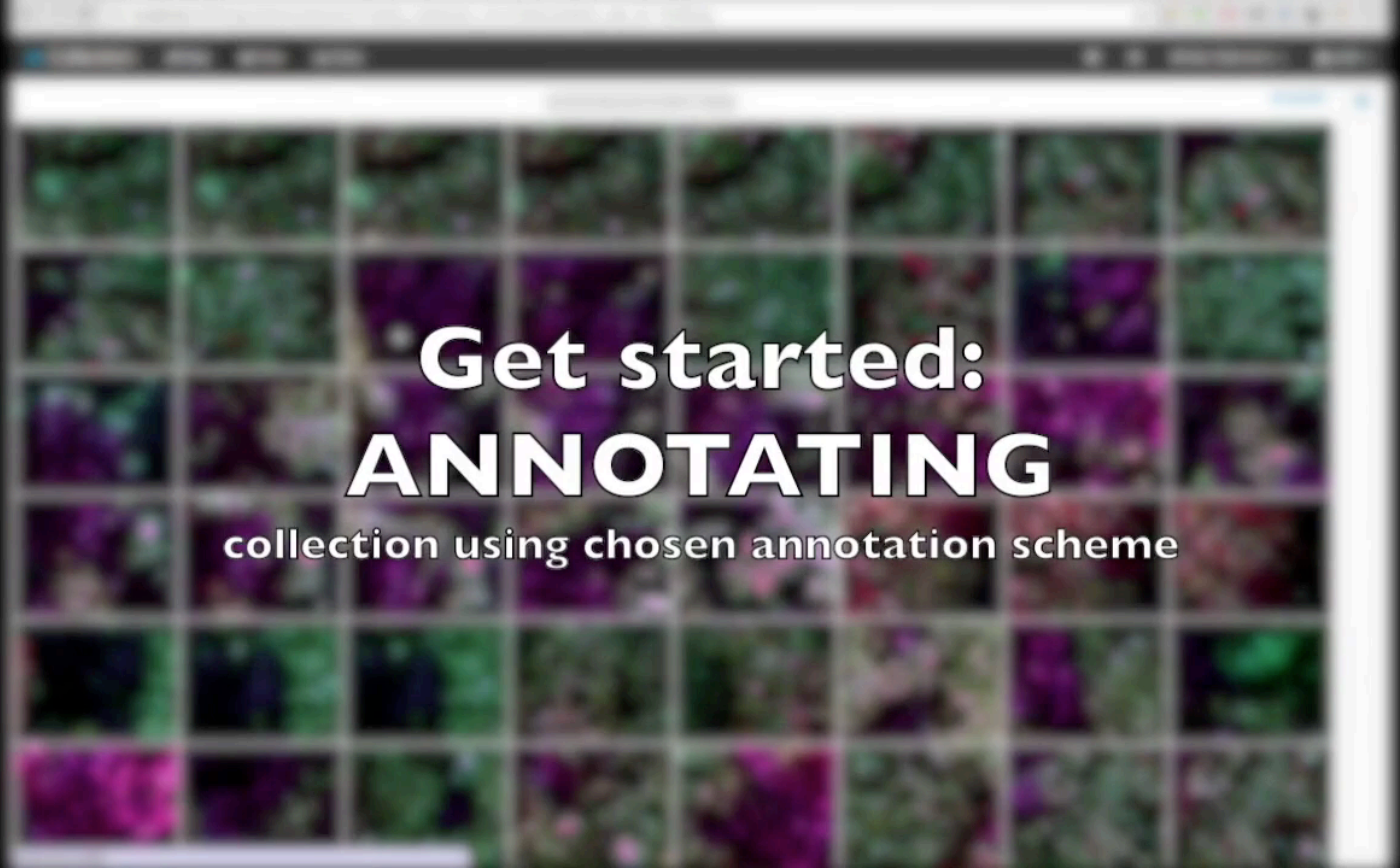

Explore data
Directly from the map interface

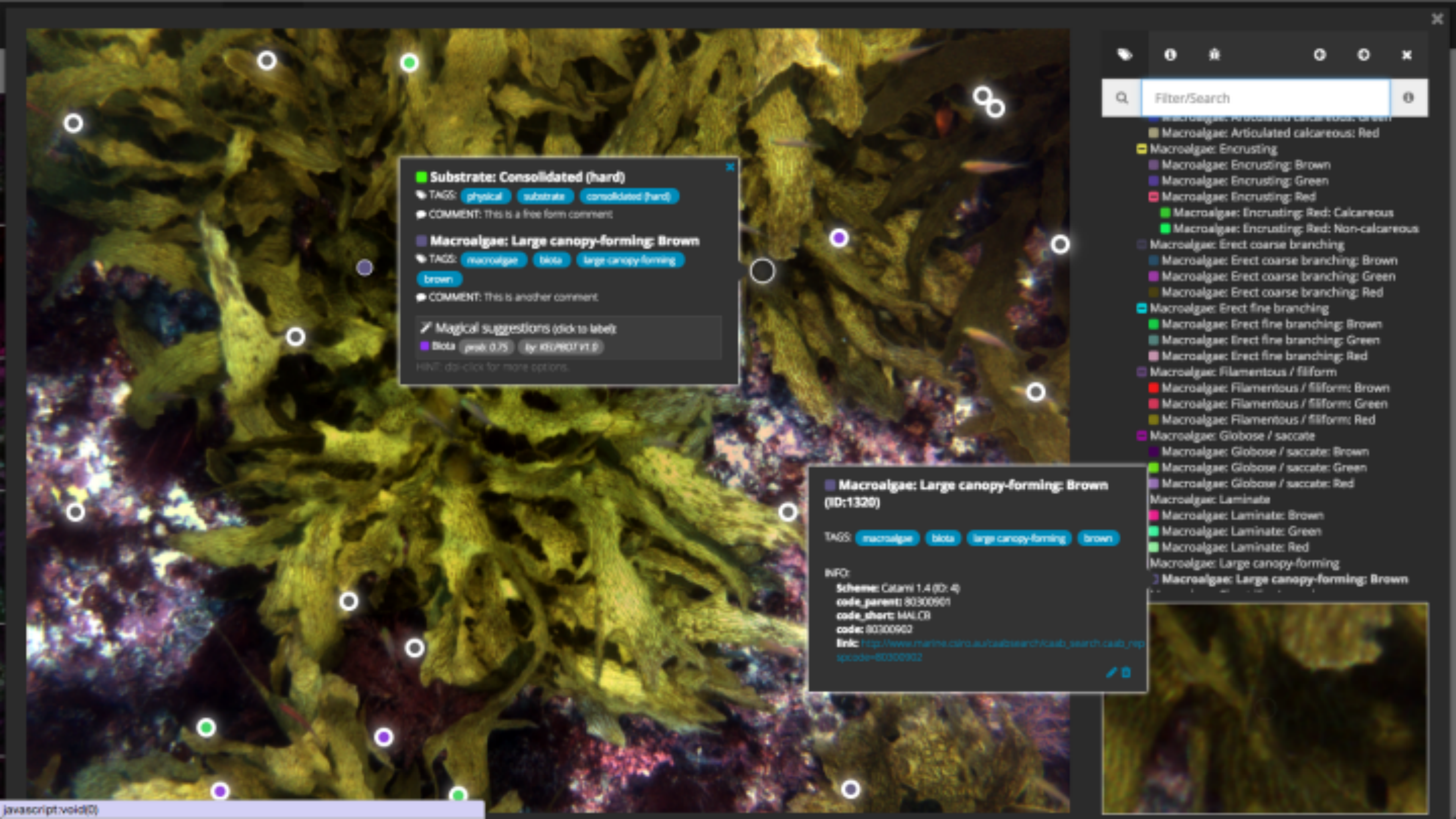

Explore:
Map
Data
Stats
My Collections
ariell
returned: 1698 results | page: 1/19
Next
QUERY
INFO:
Deployment: coralpatches_22_40m_out23
Deployment TS: 2010-04-30T02:06:36
MediaKey:
DATA:
Timestamp: 2010-04-30T02:18:00
Depth: 44.336611
Altitude: 1.905
Latitude: -28.84743958
Longitude: 114.04699722
cluster_tag: 0
backscattering_ratio: 0.00067
chlorophyll_concentration_in_sea_water: 1.308
sea_water_salinity: 35.631493
sea_water_temperature: 21.959
Explore:
Map
Data
Stats
Select:
Platform:
Filter by Platform
Deployments:
WA coral
coralpatches_22_40m_out23
coralpatches_23_40m
coralpatches_01_15m_in
Filter poses/data:
Altitude (m):
Min:
1.9
Max:
2.1
alt > 1.9
alt < 2.1
Depth (m):
Min:
40
Max:
45
dep > 40
dep < 45
Date & time: (not implemented yet)
After
Before
Save selection to:
New Collection
Existing Collection
javascript:void(0)


Quickly search:
DEPLOYMENTS &
CAMPAIGNS


Create a:
COLLECTION
for in-depth analysis


localhost:5000/geodata/explore#img
Explore:
Map
Data
Stats
My Collections
ariell
New Collection
Name
Demo Rottnest
Description
Random sample of 100 images
Sampling options
Random Sa
N:
100
Sub sample N random items from chosen selection.
Cancel
Save
Show/hide filter params
Explore:
Map
Data
Stats
Select:
Platform:
IMOS AUV Sirius
IMOS AUV Sirius
Deployments:
Select/search Deployments
Filter poses/data:
Altitude (m):
Min:
1.9
Max:
2.1
alt > 1.9
alt < 2.1
Depth (m):
Min:
Max:
Date & time: (not implemented yet)
After
Before
Save selection to:
New Collection
Existing Collection

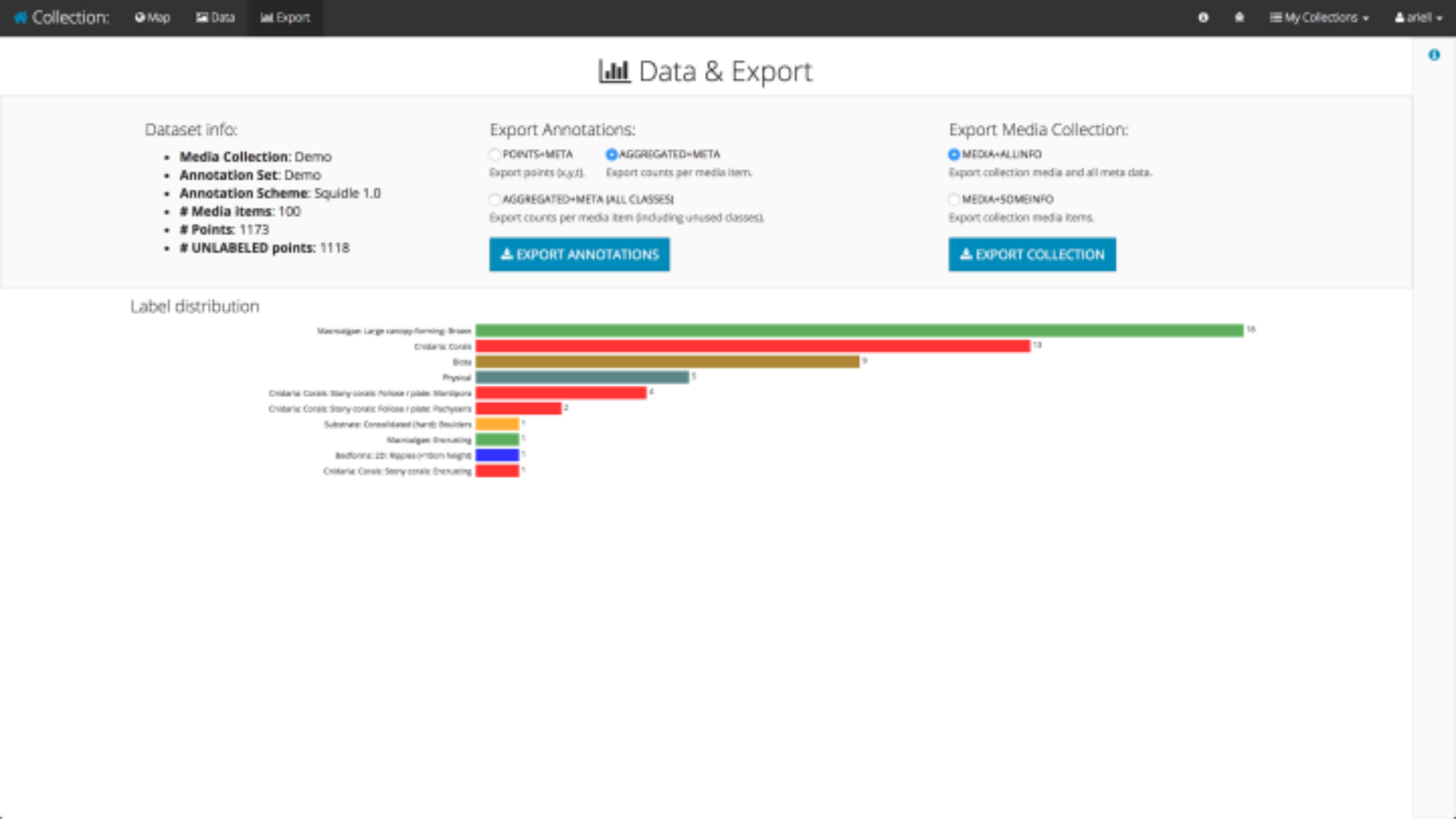

Get started:
ANNOTATING
collection using chosen annotation scheme


Filter/Search
Macroalgae: Articulated calcareous: Red
Macroalgae: Encrusting
Macroalgae: Encrusting: Brown
Macroalgae: Encrusting: Green
Macroalgae: Encrusting: Red
Macroalgae: Encrusting: Red: Calcareous
Macroalgae: Encrusting: Red: Non-calcareous
Macroalgae: Erect coarse branching
Macroalgae: Erect coarse branching: Brown
Macroalgae: Erect coarse branching: Green
Macroalgae: Erect coarse branching: Red
Macroalgae: Erect fine branching
Macroalgae: Erect fine branching: Brown
Macroalgae: Erect fine branching: Green
Macroalgae: Erect fine branching: Red
Macroalgae: Filamentous / filiform
Macroalgae: Filamentous / filiform: Brown
Macroalgae: Filamentous / filiform: Green
Macroalgae: Filamentous / filiform: Red
Macroalgae: Globose / saccate
Macroalgae: Globose / saccate: Brown
Macroalgae: Globose / saccate: Green
Macroalgae: Globose / saccate: Red
Macroalgae: Laminate
Macroalgae: Laminate: Brown
Macroalgae: Laminate: Green
Macroalgae: Laminate: Red
Macroalgae: Large canopy-forming
Macroalgae: Large canopy-forming: Brown
Substrate: Consolidated (hard)
TAGS: physical substrate consolidated (hard)
COMMENT: This is a free form comment
Macroalgae: Large canopy-forming: Brown
TAGS: macroalgae biota large canopy-forming brown
COMMENT: This is another comment
Magical suggestions (click to label):
Biota
Macroalgae: Large canopy-forming: Brown (ID:1320)
TAGS: macroalgae biota large canopy-forming brown
INFO:
Scheme: Catami 1.4 (ID: 4)
code_parent: 80300901
code_short: MALCB
code: 80300902
link:
javascript:void(0)

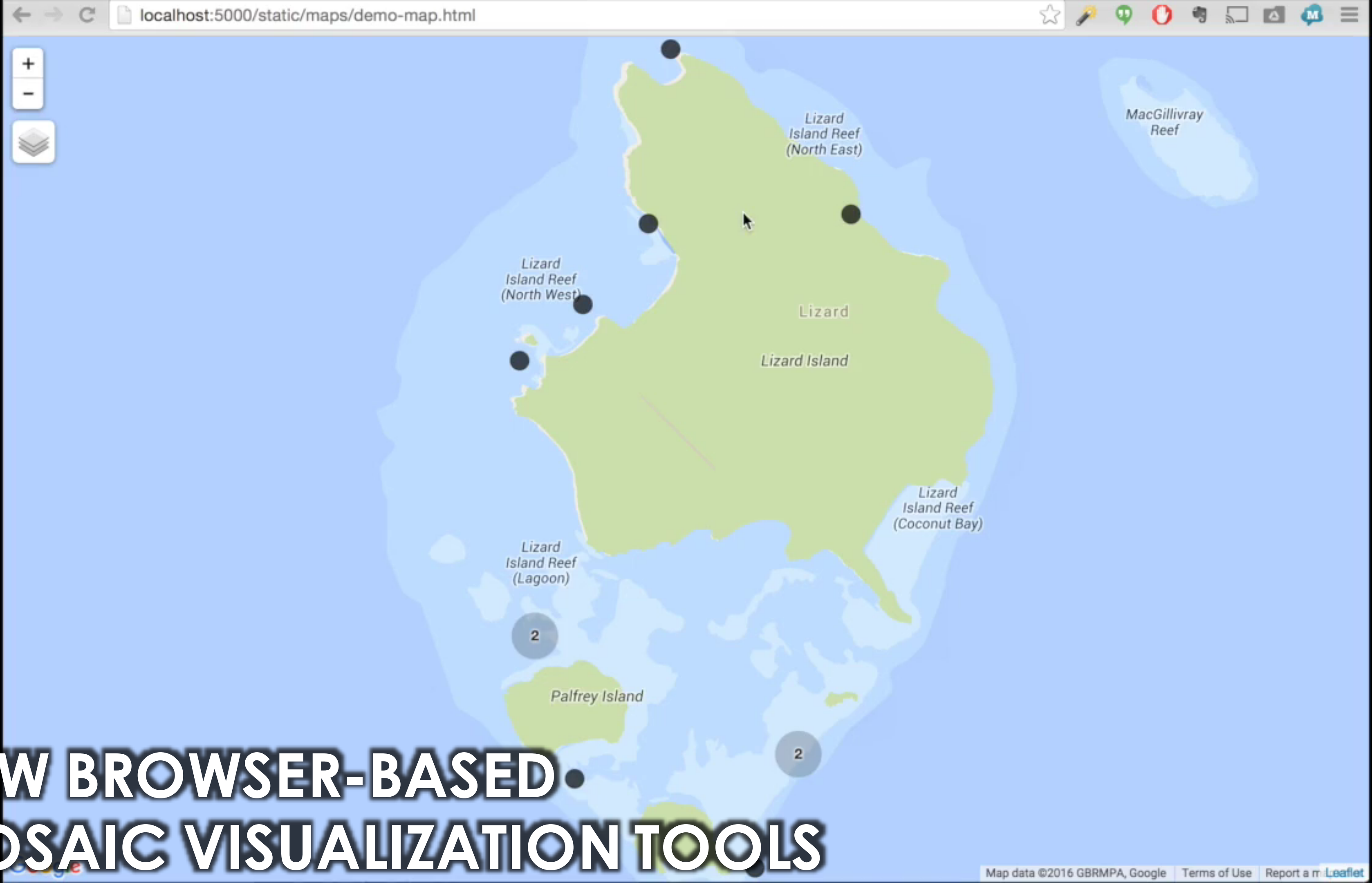
...OR choose from:

"Magical Suggestions"!

from automated machine learning algorithms


Collection:
Map
Data
Export
My Collections
ariell
Data & Export
Dataset info:
Media Collection: Demo
Annotation Set: Demo
Annotation Scheme: Squidle 1.0
Media items: 100
Points: 1173
UNLABELED points: 1118
Export Annotations:
POINTS+META
Export points (x,y,t).
AGGREGATED+META
Export counts per media item.
AGGREGATED+META (ALL CLASSES)
Export counts per media item (including unused classes).
EXPORT ANNOTATIONS
Export Media Collection:
MEDIA+ALLINFO
Export collection media and all meta data.
MEDIA+SOMEINFO
Export collection media items.
EXPORT COLLECTION
Label distribution
Cnidaria: Corals
Biota
Physical

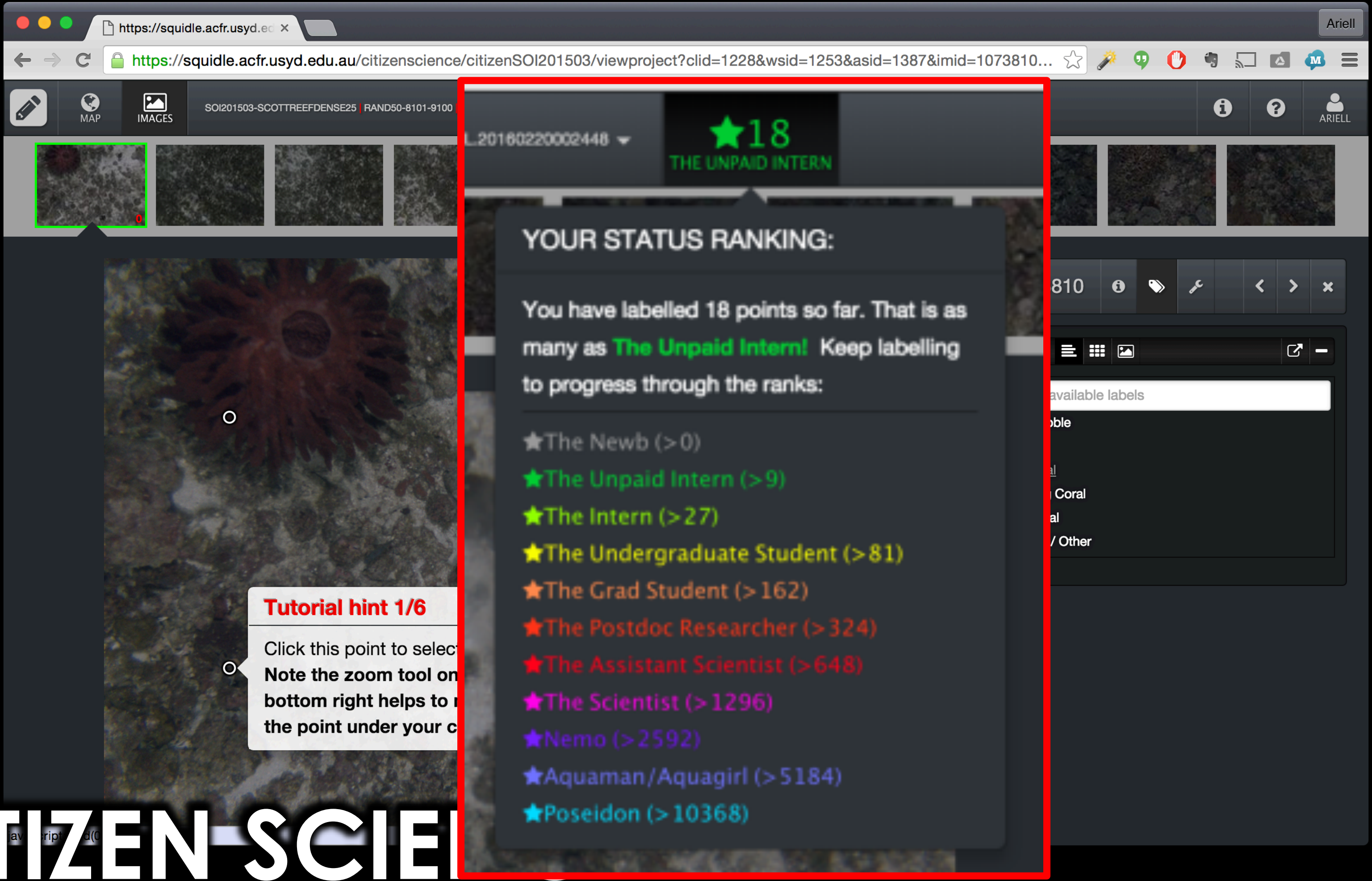
NEXT STEPS



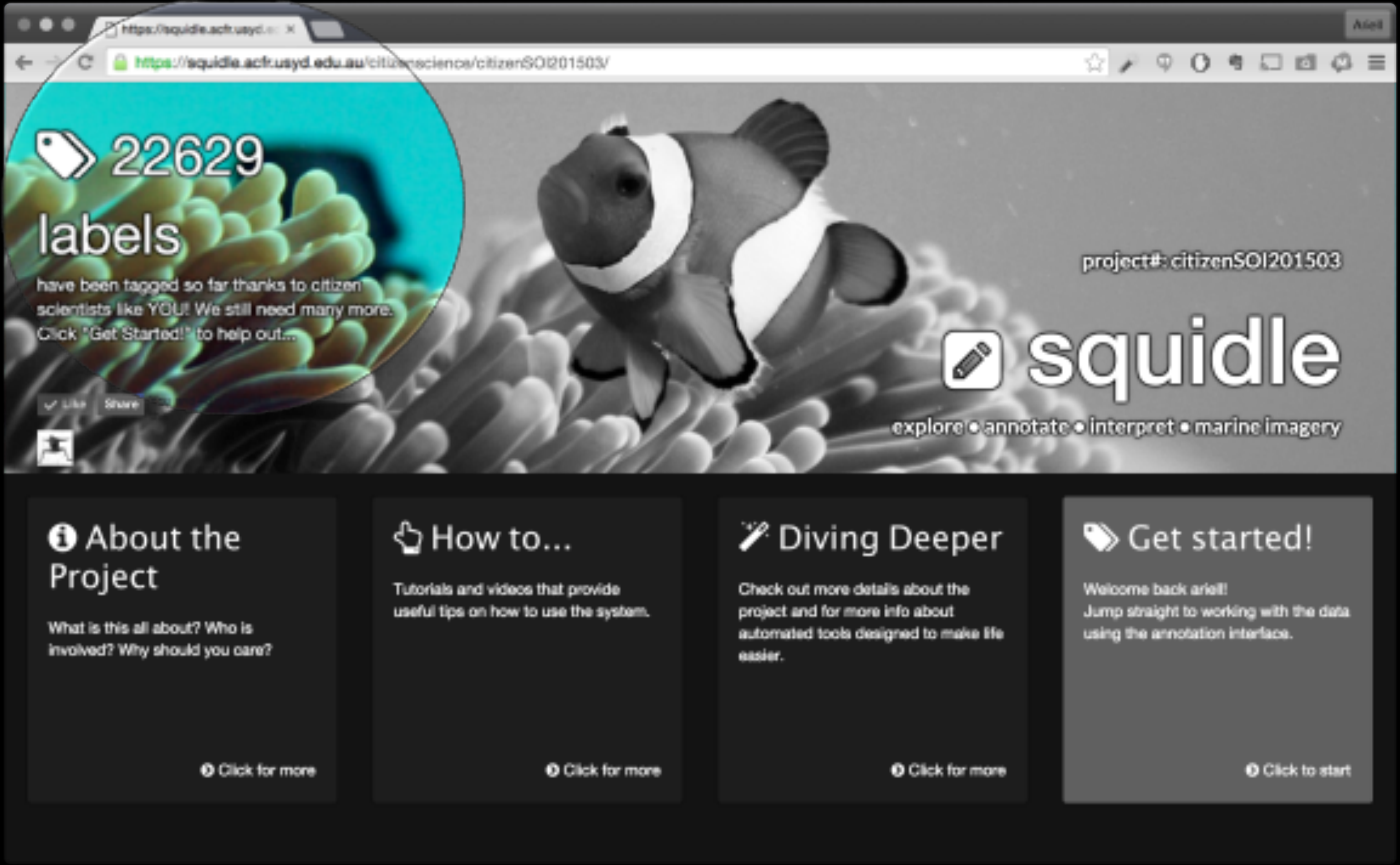
NEW BROWSER-BASED MOSAIC VISUALIZATION TOOLS

IN-FIELD/OFFLINE ANNOTATION

Photo of Jason Control Van by Carlos Sanchez



CITIZEN SCIE

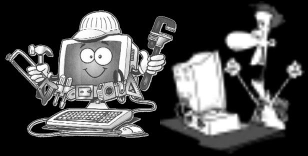

https://squidle.acfr.usyd.edu.au/citizenscience/citizenSOI201503/
22629
labels
have been tagged so far thanks to citizen scientists like YOU! We still need many more. Click "Get Started!" to help out...
Share
project#: citizenSOI201503
squidle
explore • annotate • interpret • marine imagery
About the Project
What is this all about? Who is involved? Why should you care?
Click for more
How to...
Tutorials and videos that provide useful tips on how to use the system.
Click for more
Diving Deeper
Check out more details about the project and for more info about automated tools designed to make life easier.
Click for more
Get started!
Welcome back ariell!
Jump straight to working with the data using the annotation interface.
Click to start

Key features of SQUIDLE+

- Flexible data storage

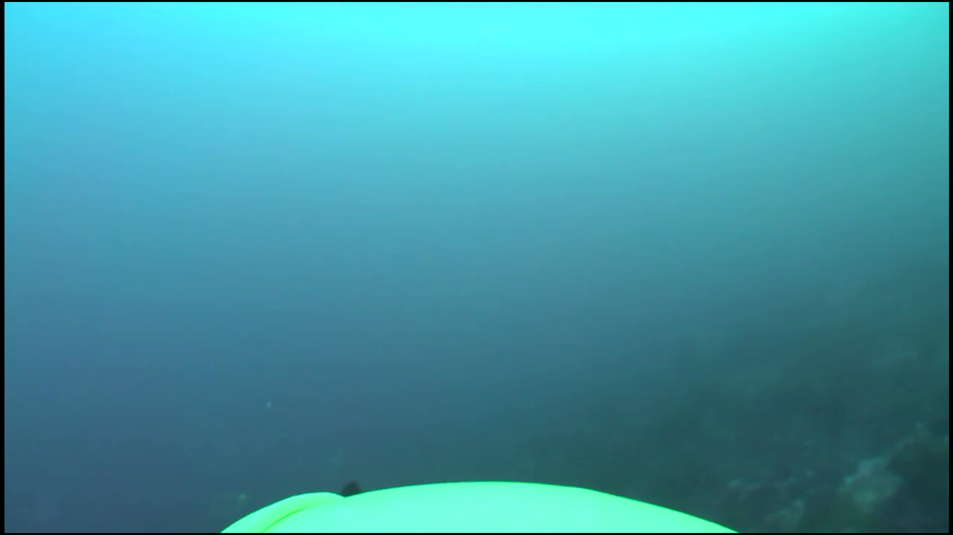
- Flexible, translatable annotation schemes

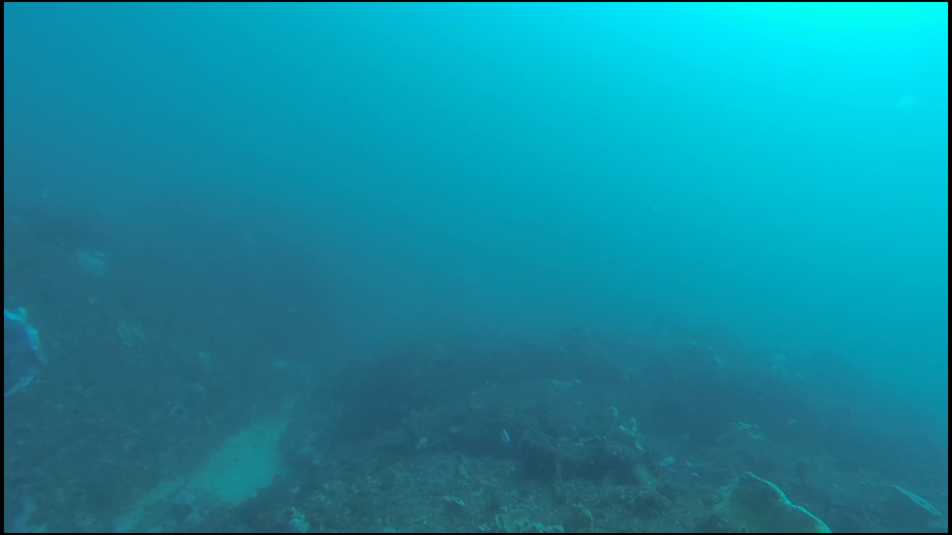
- "Media object" annotation



- Dataset sharing, collaboration & automated labeling

- Citizen science projects





Checkout our interactive session:

Friday 9:00 – 10:30

Room D (TLZ seminar room)

Thanks to:

SCHMIDT OCEAN INSTITUTE

INTEGRATED MARINE OBSERVING SYSTEM