



## COASTAL FUND MINUTES

Associated Students

Tuesday, 1/28/20, Nati Conference Room

**CALL TO ORDER: 6:03**, minutes recorded by Carissa

### A. ATTENDANCE

Name	Note: absent (excused/not excused) arrived late (time) departed early (time)	Name	Note: absent (excused/not excused) arrived late (time) departed early (time)
Jeremy Francoeur Chair	present	Anushna Patel Outreach Coordinator	present
Mike Martin Co-Chair	present	Katherine Fukuda Outreach Coordinator	present
Jackie Rigley Undergraduate Rep	present	Sarah Siedschlag Advisor	present
Karen Thornton Undergraduate Rep	present	Carissa Stewart Administrative Assist	present
Ethan Estrada Undergraduate Rep	present	Kevin Sway Senate Liaison	absent
Phoebe Racine Graduate Student Rep	present	Emma Swanson Senate Liaison	present
Laura Ingulsrud Graduate Student Rep	present		

### B. COMMITTEE BUSINESS

#### 1. Approval of Attendance and Proxies

**MOTION/SECOND:** Jeremy/Mike

*Motion language: Motion to approve attendance and proxies.*

**ACTION:** consent

*Additional approval required: YES (Senate)*

#### 2. Approval of Minutes

**MOTION/SECOND:** Jerermy/ Ethn

*Motion language: Motion to approve minutes from last week*

**ACTION:** Consent

*Additional approval required: YES (Senate)*

### **C. PUBLIC FORUM**

(Announcements, appreciations, concerns, requests to have items added to agenda)

- Environmental Justice Alliance asked Laura about submitting a minor grant again

### **D. REPORTS**

1. **Advisor Report: Siedschlag**
  - i. Please read the application and add notes or questions in the notes file
2. **Chair Report: Francoeur**
  - i. set a date for NRS advisor meeting
3. **Vice Chair Report: Martin**
  - i. meeting tomorrow for the two sub-committees to merge
4. **Senate Report: Sway and Swanson**
  - i. Budget hearing on February 7th on 8 AM to 4 PM probably in Pardall
  - ii. Sign up sheet in as main office
  - iii. makeup one a some point
  - iv. form is due Wednesday February 5th at noon
5. **Administrative Report: Stewart**
  - i. all the presentations were confirmed
6. **Coastal Service Program Report: Stewart**
  - i. Restoration with Girl UP mishap
7. **Outreach and Education Report: Patel and Fukuda**
  - i. Started marine organism of the week
  - ii. this week's seelight spotlight is moonglow anemone
    1. suggestions: mantis shrimp,
8. **Sub-Committee Reports**
  - i. NRS scholarships
    1. fixed up the application, not sure how to advertise that
    2. have to attach a sample budget
  - ii. Long-term funding/Pre-screening application
    1. meeting tomorrow

### **E. AGENDA**

#### **1. Approval of Agenda/Additions to Agenda**

*MOTION/SECOND: motion to approve agenda and additions to agenda*

*Motion language: Jeremy/Laura*

*ACTION:consent*

*Additional approval required: YES (Senate)*

## **F. OLD BUSINESS**

## **G. NEW BUSINESS**

## **H. DISCUSSION**

## **I. PROJECT REVIEW**

Project Title: WIN 20-04: Predicting oak stress in Santa Barbara: a look underground

Sponsoring Organization: UC Santa Barbara EEMB

Presenter Name: Gabe Runte

Summary:

Oak trees are some of the most iconic California plants, up there with poppies and redwoods. These sturdy staples dot pastures and hillslopes from the coast to the Sierra, with wide diversity right here in Santa Barbara. Unfortunately, regeneration of these woodlands is lagging behind their die-off for reasons poorly understood to us. This project aims to study the ways in which soil fungal communities vary across landscapes and between oak species to predict their function and vulnerability to climatic stress. One of the most critical contributors to soil function is a group of fungi known as mycorrhizal fungi. These fungi live in symbiosis with plant roots, exchanging vital plant nutrients for the sugars plants produce in photosynthesis. But not all mycorrhizal fungi are created equal. Mapping potential benefit or detriment across ecosystem gradients is a crucial missing link in understanding how oaks, and trees more broadly, will respond to stressors.

Pre meeting notes :

- What is the numbers are on this one, compared to the last one
- Wondering about engagement, output, and internship
- Talked a lot about the importance of research but less about how they were going to do the project, how they were going to recruit an intern, if an intern exists already
- Discrepancies on hours for interns
- Sceptical of how many things they are trying to do

#### Presentation Notes:

- Study how species interact to make an ecosystem
- Focuses on oaks as a study groups
- Oaks is important for california's ecosystem
- Helps with acorn feeding and cultural aspects
- Oaks are declining in california and lots of geographers and scientists are studying why they aren't coming back
- Why does fungal species affect the soil
- Study underground fungi which connect plants to nutrients that they normally don't have access to
- Wants to map how SB's diversity with oaks corresponds with the diversity of fungi
- Don't have data to compare yet
- Lakretz research center is a good place to go for sequencing the fungal communities
- Money for undergrad researcher
- Possibly from a broader pool
- Summer project 10 weeks at \$15.00 an hour- any other living wages is not a lot to live on

#### Board Questions:

- How much transportation will be spent
  - Sedjwick is about an hour from here
  - Hopefully it would be a mix of day trips and overnight trips
- Can you tell more info on internships and outreach and publication
  - Collaboration wasn't a first thought but if the intern wanted to do that he would
  - It depends on how much information they get about publication and a larger study and the intern would help with that
  - At the very least they want to present on campus
  - Would take into account wherever the intern wanted to meet
- Can you talk about day to day for the intern
  - Fieldwork is not a large part of the job, so a lot of the work would be molecular biology in the lab such as setting up sequencing
  - He is in the lab most of the time
  - Work with them one on one for the first couple of months and then they are on their own
  - Might get trouble shooting questions and he is in for that but they work mostly on their own
- How are you going to choose the intern
  - He is going to look at the volunteers that work with him and who would be interested
  - Then he would expand to his lab group if no one else wanted to and then out from there
- Are you looking for species present or how many, what are you trying to map

- Diversity is the first priority, abundance is hard to tell because of the way they grow
- They do rna sequencing to see whats active, but they look at the roots firsts, although they are hard to find
- What are your expectations for summer?
  - Fungi have a hard time being active when its dry and summer is dry
  - Two undergrads were out this weekend checking the soil this past weekend for season variety
  - Dna will be present in summer for sure, but rna might be less present
- What about the time discrepancy
  - The budget is correct, they want to give the intern as much time as possible
- How does the oak help the coast
  - Community ecology of oaks are important input to system into native birds and rodent system
  - Oaks are shade refugees

*MOTION/SECOND: Jeremy/Mike*

*Motion language: Motion to table discussion on WIN 20-04*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

Project Title: WIN 20-05: Photographic mark and recapture of giant sea bass (*Stereolepis gigas*) around Anacapa Island, utilizing remote observation techniques

Sponsoring Organization: UC Santa Barbara Marine Science Institute

Presenter Name: Katelin Seeto

Summary:

Giant sea bass are a crucial apex predator for kelp forest ecosystems in Southern California. Fishing effort drove the local population to near extinction in the early 1900s. GSB sightings have increased in frequency recently, but little has been done to quantify the current population size of GSB in California.

The object of this study is to improve our understanding of GSB distribution and abundance seasonally and increase sampling to depths outside the range that traditional SCUBA diving techniques allow. We will focus on GSB around Anacapa Island but observations can likely be applied to movement patterns of GSB in the greater Santa Barbara Channel, including those GSB that call the kelp forests near UCSB home.

We hope to contribute to the preservation, protection, and enhancement of our nearshore marine

ecosystems by combining a comprehensive approach to describing key species in kelp forests with the opportunity to equip emerging marine scientists with research experience.

#### Presentation Notes:

- Studying giant sea bass
- Large predatory fish that was a keystone species, feed on invertebrates and fish
- Go through a series of development
- Large as thumbnail to over 8 feet long over 800 pounds
- Vulnerable to overfishing
- 1980s nearly extinct locally, critically endangered
- 1981 stopped catching giant sea bass but now allowed to only have one sea bass by-catch
- Population has increased over recent years but not a lot of research done on that
- In 2015, they were coastal fund interns, worked on giant sea bass account which is a survey account
- People started sending photos and they realized they could tell the bass apart using the spots
- Starting using recognition software on computer to see that each bass has own individual fingerprint
- People can send photos to website and take photos and send to recognition database
- Over 200 fish in database
- No pictures past a certain depth because people do not dive that deep
- Seeing a lot of sea bass in caves
- Wanted to collect images of fish that they are missing currently in the deep water
- Wanted to get photos from down there
- Want to answer what the seasonal movement of sea bass in the water, during the winter its unclear what happens to them, expected they move into deeper water, but no research
- A little tagging project in catalina, but results were unclear
- Would like to estimate size of sea bass population near anacapa
- Only 20 fish at anacapa but over a hundred at catalina, bc less divers there
- Would create scientific literature, hope to do a year of sampling, every other month,
- Will bring back video and analyze, will use spotting recognition
- Wanted to bring two undergrad interns for help and so the interns get reasearch
- Intern responsibilities will be lab and field work
- Interns can be on boats gathering video
- Will be working with some statistical analysis and getting them proficient with software
- 50/50 lab field component
- Hoping to do press release through ucsb newspaper
- Also show a video
- And have social media and would send videos to coastal fund
- Would give coastal fund recognition

#### Board Questions:

- Has your lab had experienced with the cameras before, how will you deal with clarity etc
  - Less species specific, one field season deploying the cameras
  - Lab has been doing those for a handful of years so they learned lessons easy
- Do fish respond to light at all

- There is some attraction to the light, not so much attraction that they are getting fish from a mile away, it draws fish from the immediate vicinity
  - But it is from the close by reef
- How long are cameras in the water for
  - Camera is in water for 45 minutes, fish will usually show up at about 20 minutes
- Are you deploying cameras at the same location
  - Hoping to spread cameras apart in order to increase possibility of finding fish
- If it came down to it, is there parts that coastal fund could cut
  - They would cut staff down time, have other funding right now but coastal fund would carry it through
  - Also could cut a gopro, because always looking for other funding for that
- Could you talk about role of sea bass as a keystone species
  - Start at such a small size, they enter in ecosystem as a source of food, adult sea bass are only eaten by orcas and great white sharks
  - They eat lobster, as this fish recovers, what effect will this have on local fisheries
  - New phenomenon in santa barbara channel where there is a large amount of white fish
  - White fish is probably becoming a big source of food
- Can you sell giant sea bass as bi-catch
  - You can sell them
  - Thats another concern, that people actually catch giant sea bass as “bi-catch” on purpose
- Is there going to be a major difference in five years if you do this project again
  - Some sea bass stay on the same reef year after year
  - SCMI has hydrophone studies on sea bass, the one they had in captivity, breeded and now they have like 800 babies
  - Plan on releasing the fish in the ocean
- How do they decide what age to release giant sea bass in captivity
  - This was a fluke and so normally they don't get released, but since it was a mistake, they get released
- Do the fish have tags
  - Just the spot pattern, a fish that large is not likely to survive if they are tagged
- How does the recognition work
  - They mark all the spot and it matches triangles as it goes through an algorithm
- Are there instances where you identify two sides of the same fish
  - Yes they check that
  - Do dive talks and do outreach
  -

*MOTION/SECOND: Jeremy/Laura*

*Motion language: Motion to table discussion on WIN 20-05*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

Project Title: FALL 20-06: Coastal Biodiversity and Restoration Research and Monitoring Internships  
Sponsoring Organization: UC Santa Barbara CCBER  
Presenter Name: Lisa Stratton

Summary:

Since 2016, CCBER has maintained a program of providing a wide variety of coastal biodiversity and restoration research and monitoring internships for many students in a broad range of majors at UCSB. The Coastal Fund has played a key role in the program's success, and we are requesting funding to continue the program through 2020 and into the first half of 2021. We were able to leverage the program to garner some donor support but still need a supplement to keep it viable over the next year.

Presentation Notes:

- Third time applying for restoration internships
- Programs been successful
- Been able to help sustain research
- Able to get \$50,000 and \$100,00 from donors for this project
- Recognition in the value of investing in students
- Funding would support student stipend to do projects, creative projects, and supplies
- Asking for five quarters worth of funding to reduce the amount of time they come to coastal fund for money
- Three students per quarter
- Couple of students are working on soil processing which has inspired grad students to do similar projects
- Several interns work on water quality
- Had a student work on data so that many people can compare data
- Few paid interns will bring in volunteers and stipend volunteers
- Constantly able to keep thinking of interesting projects and supporting people to do those research projects

Board Questions:

- Are the internships for new students, or are they the same interns from previous quarters
  - Mostly new people, some graduate, some move on to paid position
  - Some are longer term, in order to follow through with the project
- Can the interns pick the project
  - Putting recruitments to geography, zimmerman, etc and recruit for specific projects
  - Sometimes people say they want to do an internship and they make one around that idea
- Would the funding just supply interns until the funds run out
  - Only two interns are funded each quarter so they would just do the ones that can last
  - Some longer term, some done short term
- Is the endowment end coast specific
  - Mostly, worry about not having enough money to support monitoring guy for the end coast



- Are a lot of internships ending in publications
  - Mostly gray papers but working on getting them more officially published
- How often does ccber collaborate with classes
  - They teach classes, and use data for classes
  - Teachers use data to teach

Board Discussion:

*MOTION/SECOND: Jeremy/Mike*

*Motion language: Motion to table discussion for WIN 20-06*

*ACTION: Consent*

*Additional approval required: YES (Senate)*

**ADJOURNMENT AT 8:45 PM**

*MOTION/SECOND: Jeremy/Mike*

*Motion language: Motion to adjourn at 8:45 PM*

*ACTION: Consent*

*Additional approval required: NO*