



*Saving Up:  
Resource Storage  
in Stalked Kelp*

Marina Hernandez and Natasha Craft



# Introduction

Part 1  
Marina Hernandez

- Marine Science Major
- Third-year
- COAST Scholar-In-Training





# Introduction

Part 2  
Natasha Craft

- Marine Science
- Senior
- Class of 2019



# Introduction

Part 3

Silvia Vasquez

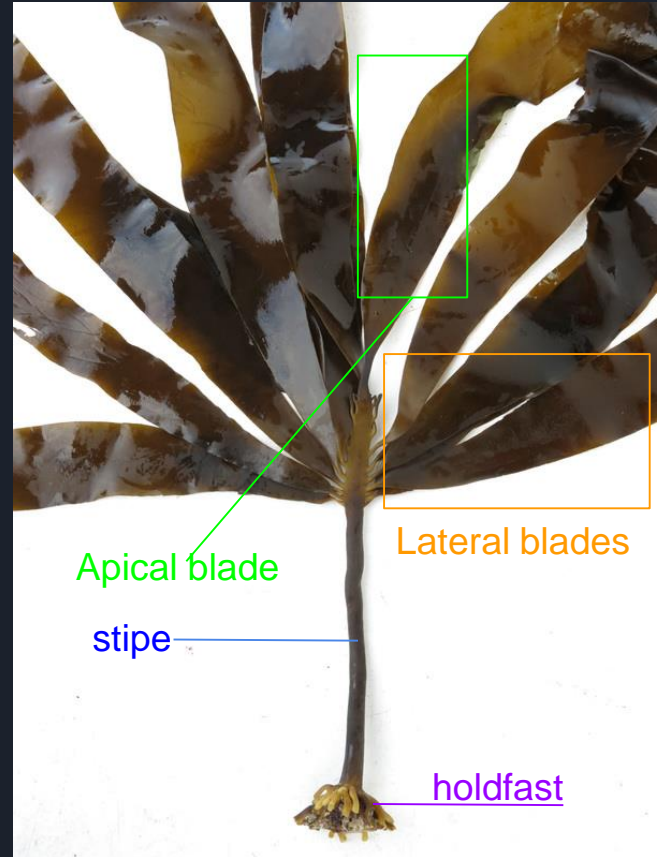
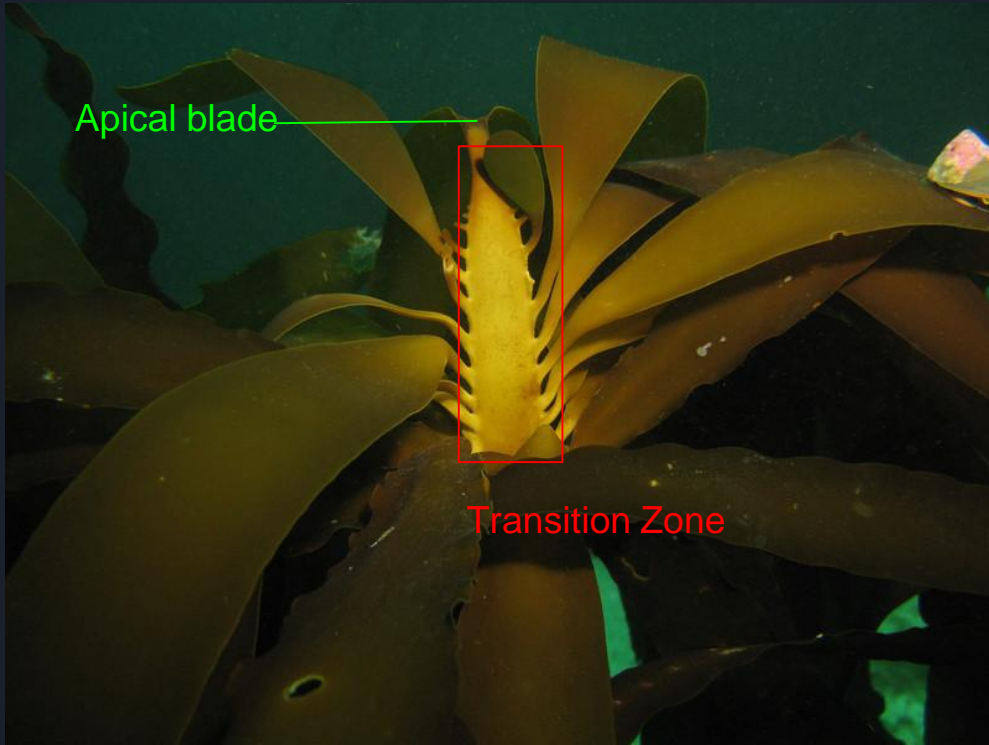
- Second year
- Marine Science
- CSU COAST Scholar-In-Training

# Moss Landing Marine Laboratories



- Moss Landing, California
- Phycology: Scientific Study of Algae
- Thesis research project- Saving Up: Resource Storage in Stalked Kelp (*Pterygophora Californica*)
- Tasks: Record data, dehydrate and grind ptery, organize data

# *Pterygophora californica*



Pleny #: \_\_\_\_\_

DATE: \_\_\_\_\_

Stipe length: \_\_\_\_\_

t.z. length: \_\_\_\_\_

veg. length: \_\_\_\_\_

Sporo length: (3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
(avg.)

reprod? : y/n

# spores: \_\_\_\_\_

stipe width: base - \_\_\_\_\_, mid - \_\_\_\_\_, upper - \_\_\_\_\_  
(cm)

total weight: \_\_\_\_\_  
(g)

h.f. weight: \_\_\_\_\_

veg. weight: \_\_\_\_\_

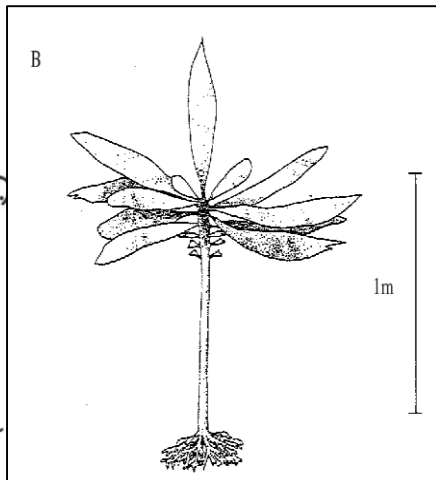
sporos. weight: \_\_\_\_\_

stipe weight: (w/t.z.) \_\_\_\_\_

t.z. weight: \_\_\_\_\_

Ⓐ = grazed blade

Ⓒ = complete blade



Pleny #: 5

DATE: 7/1/17

Stipe length: 58 cm

t.z. length: 9 cm

veg. length: 140 cm (Ⓐ)

Sporo length: (3) 43 cm (Ⓐ), 88 cm (Ⓐ), 15 cm (Ⓒ)  
(avg.)

reprod? : y/n

# spores: 31

stipe width: base - 1.7 cm, mid - 1.5 cm, upper - 1.6 cm  
(cm)

total weight: 832.8 g  
(g)

h.f. weight: 34.6 g

veg. weight: 38.9 g


sporos. weight: 659.2 g

stipe weight: (w/t.z.) 92.0 g

t.z. weight: 6.7 g

Ⓐ = grazed blade

Ⓒ = complete blade



# Research Site: Stillwater Cover, Pebble Beach CA





# Learning Outcomes



- Analyze samples of stalked kelp (*P. californica*)
- Categorize “control” or treated individuals of *ptery*.
- Conduct a series of chemical analysis using C, H, N Elemental-Analyzer/(LMS)
- Explain adaptive capabilities of stalked kelp; including key-nutrient storage localization
- Apply knowledge of growth cycles to resource storage habits

# Connections

- CSU-Council on Ocean Affairs, Science and Technology (COAST)
- Student Internship Program (SIP)
- Graduate student: Lindsay Cooper



Thank you

