

Title" _____

Date

▣ Aim:

- How do I read the abstract and introduction of a PRJA?
- Instructions:
- In today's class I will go over some theory and then you will hand in a summary of the *introduction* of a source using some of the skills you learned today like: inspectional or analytical reading, Harvard or Yale style outlining.

▣ Home work:

- Summarize Intro of 1st article.
- Bring a journal article you found in the bibliography of your first article.

▣ Announcements:

CW - HW

- ▣ 6 General Article Summaries due first day of next school week.
- ▣ Summarize the Introduction to your 1st journal article.
- ▣ PRJA presentation draft due second day of next school week.

HOW DO I READ THE ABSTRACT AND INTRODUCTION OF A PRJA?

Mr. M. Gonzalez

How do I read the abstract and
introduction of a PRJA?

Objectives

- ▣ I can determine the reading strategies I will use to read a journal article.
- ▣ I can identify and describe the Introduction chapter of a journal article.
- ▣ I can use the Introduction to look for new leads in my research project.

REMEMBER **A**CTIVE **N**OTE **T**AKING!

How do I read the abstract and
introduction of a PRJA?

Identify physical conditions...

- ▣ Identify where and how you like to read:
 - Music or no music in the background?
 - Absolute quiet?
 - Comfortable chair?
 - Chair doesn't matter?
 - Library? Home?
 - While snacking?
 - Day or night?
- ▣ Identify and practice the conditions that optimize your concentration

What strategy will you choose?

1. Asking directed questions?
2. Answering these questions as you read?
3. Outlining with a format?
4. Summarizing?
5. Finding your comfort zone?
6. Keeping track of what you read and why?
7. Hybrid system?
8. Discussing what you read with others

30 Minute Rule

- ▣ Thirty minutes to digest *three lines* of a mathematical or technical article.
- ▣ Pausing for regular breaks between paragraphs allows the brain to digest details and make connections.
- ▣ (Simonson & Gouveau in Lindquist, 2005)."

Title Page

Journal of Experimental Marine Biology and Ecology 369 (2009) 148–154



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Life in the Supralittoral Fringe: Microhabitat Choice, Mobility and Growth in the Tropical Periwinkle *Cenchritis (=Tectarius) muricatus* (Linnaeus, 1758)

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ABSTRACT

The littorinid snail, *Cenchritis muricatus*, inhabits supralittoral vertical rocky walls along Caribbean shores, at times surpassing 14 meters above mean sea level. As the sole macrofaunal representative of this habitat, this marine gastropod presumably experiences extraordinary conditions of thermal load and desiccation. In order to understand the effect of behavioral choices on periwinkle survivorship and growth, snail distribution, microhabitat utilization, and crawling speed were documented in St John (US Virgin Islands). In general, snails rarely inhabited open surfaces; instead, periwinkles were commonly observed in microhabitats that may reduce water and heat stresses (e.g., >75% in crevices and depressions). Snails found on occasional buttonwood trees (*Conocarpus erectus*) were larger than elsewhere. Although typically found in repose, *C. muricatus* crawling speed on moist, shaded, and smooth substrata averaged more than 3 cm min⁻¹, but did not vary with slope. Repeated mark-recapture of tagged periwinkles exhibited high recovery rates (ca. 35% after 4 yr), absence of mortality, and a projected cessation of growth at 16.5 mm (shell height). Nearly 10% of marked individuals were recaptured every year. Dead, tagged snails were never noted; indeed, seven individuals were only recovered once, a full 4 yrs after release. Site-specific growth rates were absent. Projections using von Bertalanffy growth functions (VBGF) suggest that periwinkles will require 15+ years to achieve the maximum shell height. These VBGF models cannot address extraordinary individuals reaching 22 mm. *C. muricatus*'s remarkable supralittoral distribution may be explained by physiological tolerance, selection of microhabitats, lack of predators and long lifespan.

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What is an abstract?

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Read the abstract w/ ANT (5 min.)

- ▣ Add unknown words to left side
- ▣ Define unknown words on right
- ▣ Write inquiry questions on left
- ▣ Answer inquiry questions on right as you read, have group discussion, or research answers

Small Group Discussion

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Whole Class Discussion

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Vocabulary Review

- ▣ Periwinkles
- ▣ Microhabitat choice.
- ▣ Habitat (supra-littoral)
- ▣ Mobility
- ▣ Growth

Read the Introduction (5 min.)

- ▣ What can an introduction include?
- ▣ Can you list main elements of an introduction?

1. Introduction

Vertical patterns of species abundances on rocky shores have a long history of study. The world-wide consistency of biological response to the intertidal gradient between the land and sea is manifested in distinct bands of abundance. Stephenson and Stephenson (1949) and Lewis (1964) sought a universal zonation scheme to facilitate comparison among rocky shores. At the high-shore area (supralittoral fringe, *sensu* Stephenson and Stephenson, 1949), marine organisms ought to experience the greatest physical stresses attributable to a highly variable terrestrial environment (Connell, 1961).

Herbivorous gastropods are the predominant animal at highest shore levels throughout the world (Underwood, 1979). The effect of desiccation and heat stresses on snail behaviors are the greatest during low tides (Moore, 1972). While some evaporative cooling may be possible in the eulittoral zone (McMahon, 1990; Lang et al., 1998), the low likelihood of water replenishment in the supralittoral makes this method impractical. Instead, snails at the highest levels stay in

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Introduction

▣ Introduction can include:

1. Big picture statement
2. Scientific problem
3. Background facts
4. Main procedure, and
5. Hypothesis,
 - References to other authors.

1. Introduction

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Introduction

▣ Can you identify these in Judge's work?

1. Introduction

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Big Picture

▣ Did you notice the BIG PICTURE?

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Problems

▣ Did you notice the Problems?

1. Introduction

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Background Information

1. At high shore area marine organisms experience the greatest physical stresses.

1. Introduction

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ANT: Inquiry Questions

1. Why are herbivorous gastropods the predominant animal at highest shore levels throughout the world?

1. Introduction

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ANT: Vocabulary words?

1. Herbivorous,
2. Gastropods,
3. Predominant,
4. Abundance,
5. Zonation,
6. Etc...

1. Introduction

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What were the scientific problems?

(Britton, 1992). Knobby periwinkles are generally inactive by day and dry nights, but can move up to 4 m overnight under favorable conditions (Emson et al., 2002). These snails are opportunistic grazers and adults may exhibit growth pulses during the rainy season (Burgett et al., 1987).

In order to evaluate the unique supralittoral distribution of the knobby periwinkle, we sought to address three biological responses to sustained aerial exposure: microhabitat utilization, crawling speed, and individual growth rate. First, is *Cenchritis muricatus* more commonly found in microhabitats that provide a spatial refuge from desiccation and thermal stresses? Second, is snail mobility sufficient to grant a temporal refuge via diurnal migrations to the sea? Third, are the consequences of behavioral choices manifested in snail growth and survivorship differences among rock wall sites? In this study, we show that the knobby periwinkle's persistence in the high-shore area may lie in its longevity.

2. Materials and methods

2.1. Study site

The study site was located along the southern shore of St John (United States Virgin Islands) within the Virgin Islands National Park

Scientific Problems

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- General:
- What is the supralittoral distribution of the periwinkle.

Scientific Problems

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- ▣ There are more specific problems.
- ▣ What are they?
- ▣ Notice the lists.

Hypothesis

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Reference to other authors.

- ▣ If you don't find an answer to your inquiry question or you are very interested in pursuing your inquiry question as a problem...

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- ▣ ...you should look up the authors that are cited in the text.
 - Why are herbivorous gastropods predominant at highest shore levels?

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More Journal Articles?

- ▣ By looking up the cited authors in your article introduction you can find more journal articles that will help you with your project.
- ▣ Remember, the limit to how much you read is a personal choice.

* Cutting Edge Research *

- ▣ Reading PRJAs + reading cited works = determining what's cutting edge in your field of interest
- ▣ Once you know this you may get new ideas for cutting edge research projects.

References

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