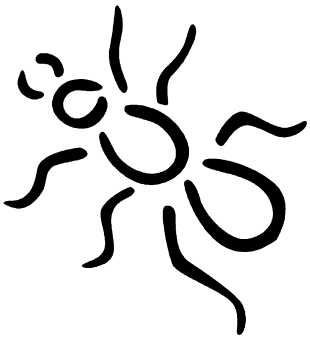
Unit 8 - Insect Sociality
Study Guide

Unit objectives:
1. Describe the difference between subsocial, parasocial and Eusocial insect behavior.
2. Describe the difference in the life histories of ants and termites.
3. Define trophallaxis, pseudergate,
4. Explain superorganism and how social insects are so successful.



Introduction

What are the duties of the ant workers?

Why is an ant colony more successful since the worker ants tend their sisters rather than have their own offspring?

What ensures long-term continuity for the ant colony? Explain this.

When do the Harvester ant colonies in Arizona release their reproductives (winged males and future queens)?

Who encourages the reproductives to fly away from the ant nest?

What do the female reproductives release to attract males?

Does the male or female live after he/she has mated or do they both live and found a new colony together? If not, which sex gets to found a new colony?

Who is the mother of the entire termite society?

How many eggs can she lay a day? How long can she live?

Who feeds her?

Does the male reproductive (a.k.a. the King) live in the colony? Is this different than the ant colony, if so, how?

Besides the reproductive(s), why are the rest of the termite colony members sterile?

What are the duties of the soldier termites?

What are the duties of the worker termites?

Why are social insects usually more successful than solitary insects?

Are the majority of insects social or solitary?

What is subsocial behavior?

What is parasocial behavior? Which insects exhibit this behavior?

Name the three traits that distinguish eusocial insects:

What is **trophallaxis**?

What is **kin recognition**, and how do eusocial insects accomplish this?

What extraordinary abilities have highly eusocial insects evolved?

Why are highly social insects sometimes considered a **superorganism** rather than a colony with individual insects?

Why do eusocial insects tend to dominate the ecosystem they live in?

The main objective of this section is to help you learn the differences between termite biology and ant biology.

Look for the answers to these questions about **termite** biology:

Which sex makes up the worker caste?

Does the male reproductive (aka the King) get to live in the colony? If not, what happens to him?

What are **pseudergates**? Which castes can they become later in life?

Look for the answers to these questions about **ant** biology:

Which sex makes up the worker caste? Is this different than termites? How?

The workers take care of the ant egg, larvae and pupae present in the colony. List 5 things the workers do to take care of them:

Does the male reproductive (aka the King) get to live in the colony? If not, what happens to him?

Notes: