

Like it or leave it:  
An ant story

Rich Patrock  
Brackenridge Field Laboratories

Fast Feast



## You are how you eat

- The difficult takes time, the obvious longer
- Steps in eating
  - Find it
  - Fondle it
  - Fork it
  - Fu-fu it

## Food becomes you

- Digestion
  - Let's break it down
- Pre to post digestion
- Eating requires digestion
- Learning requires pre-post digestion

## Ants as Us

- Ants live as families (single or multiple moms)
- Ants share food
- Ants seldom have sibling rivalries
- Ants like fast food
- Ants have long range goals (fitness)
- Ants work hard (they are all female)
- Ants modify their world
- Ants kick new mothers out of the house

## The Ant Approach to Food

- “If you cut me, will I bleed?”
  - They need all the main food groups
- There is no HEB
  - Only a few are farmers
- Take it when you can
  - Hunter-gather lifestyle
- Sugar is the fuel to the next ‘real meal’
- They taste like ants

## Got to have it!

- Food Qualities
  - Nutritional quality
  - Taste
  - Processing effort
    - Can you eat it with a straw?
    - Toughness
    - Size

## We Can Get it!

- Benefits to Group Living
  - More to share the work
  - More to carry the burden
  - You want a piece of me..... And Joanny And.....
- Drawbacks to Group Living
  - More to share the food
- Situational thinking
  - How many in the group, in colony?
  - Where are they?

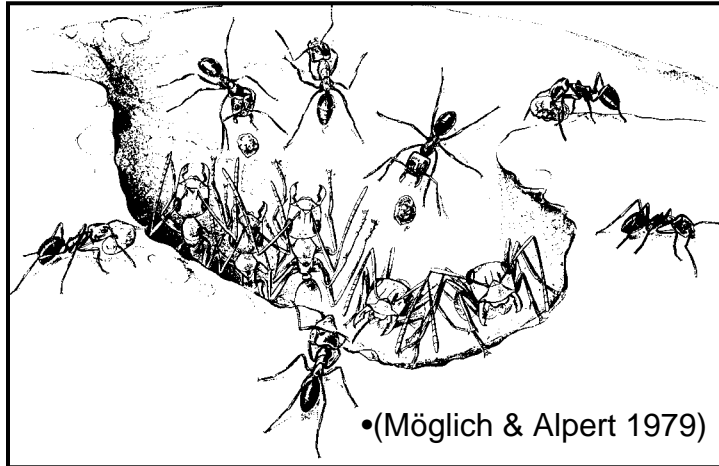
## Can I get it?

- Obstacles-De-Motivational Factors
- The Scrim
  - Who and how many
- Avoid phor-ocious headaches
- It's right around the corner (yeah, sure)
- Does it feel hot to you?
- Muggers

## Can I get it?



## Nest plugging by *Dorymyrmex*



## Covering of foodstuffs

- Formicinae
  - *Formica*
- Myrmecinae
  - *Aphaenogaster*
  - *Pogonomyrmex*
  - *Solenopsis*
  - *Crematogaster*



## Not again!

- I could eat pop-corn forever (hold the butter)
- My family wouldn't let me
- They prefer a richer diet
- They prefer a complete diet
- Ergo: I switched to peanut butter avocado mayo-banana egg sandwiches (the peabut avomayo banaegg Delite)

## Seasonal taste changes

- More children
    - Need more protein for bigger brains
    - Baits with protein attractants
  - Children have grown up
    - Party time: forget the fast, let's fast food
    - Baits with sugars and fried anything
- Children have grown up

## Bait theory

- Warning: It's only a theory and not the law
- Ants may have a plentiful and varied diet available to them in natural areas
  - Not interested in 'gifts'
  - Satiation
  - Bait testing (different reasons than for mice)
- Ants need to bring it back to MOM

## Food as tracers

- Tropholaxis
- Transmission
- Reception
- Trace what?
- Trace where?



*Polyrhachis schistacea* +

## Tracers



## HONEY I SWELLED THE KIDS



[www.sasionline.org/antsfiles](http://www.sasionline.org/antsfiles)



Ants can store food within  
'Repletes'

## We are our choices

- Choices are based on:
  - What's there?
    - Can we reach it?
  - Comparisons
    - Apples, apples / Apples and oranges
    - Paradox of choice
  - Motivation

## Choose your meter

- Measurement of choices
  - Acceptance/Rejection
    - Yes/No
  - Maintenance of choice
  - Choice as a dynamic
    - Continued or increased levels of foraging
    - Satiation points

## We are our choices

- Election
  - What is chosen relative to something else
  - The amount chosen relative to something else
- Preference
  - To take something over an alternative
  - To promote something over an alternative

## You sure are choosy

- Election
  - Example 1
    - Election results: 25% eggs, 75% bacon
    - You eat 1 egg and 3 bacon slices
    - You were offered 2 Eggs and 6 bacon slices
  - Example 2
    - Election results: 10 bacon slices and 300 eggs
    - Eggs win by a landslide
    - Ten people eat bacon, 5 eat eggs
    - Individual eats 1 bacon slice
    - Cool Hand Luke Oviraptors

## How to Interpret an election

“Democracy is two wolves and a lamb voting on what to have for lunch” *Benjamin Franklin*

"It's not the people who vote that count. It's the people who count the votes." *'Uncle' Joe Stalin*

“The election had its flaws, but it's a damn sight better than what we had before!” *Unknown*

## You know what you like

- Preference
  - Example 1
    - You are offered eggs and then bacon
    - You eat the bacon first and then the eggs
    - Preference: bacon
  - Example 2
    - Ten people eat bacon, 5 eat eggs, 5 eat both first
    - Population Preference: Mixed with a bacon topping