Slugs and Snails

Class: Gastropoda
Milky Garden Slug

Arion subfuscus
How do slugs feed on plants?
Slug injuries
Chewed up hosta?
You can bet it is slugs
Diagnostic slug “leaving”

Slime trails of mucus
Slugs become most active after dark
There is a lot of action in the garden at night – *don’t miss it!*

Slugs and snails are out and about.

Root weevils are doing their leaf notching.

Earwigs come out of hiding to feed on leaves, flowers...and insects.
Slugs and snails lay eggs in soil cracks.
Slug eggs
Management of Slugs in a Garden

• Reduce humidity in the planting
• Encourage natural enemies
• Slug baits
• Contact sprays
• Repellents
• Traps
Some Vertebrate Predators of Slugs and Snails
A common predator of slugs in backyards
Fireflies are predators. Larvae feed on slugs, snails and other soft-bodied animals in moist soils.
Molluscicides

- Metaldehyde
- Iron Phosphate

Photo by Bob Hammon
Some Metaldehyde-based Slug Baits
Iron Phosphate Slug Baits

KILLS SNAILS & SLUGS
Use around pets and wildlife

Active Ingredient:
Iron Phosphate .......... 1.0%
Inert Ingredients: ......... 99.0%
TOTAL ............. 100.0%

Can Be Used Around Pets and Wildlife

ACTIVE INGREDIENT:
Iron phosphate .......... 1.0%
INERT INGREDIENTS: ......... 99.0%
TOTAL ............. 100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION
(See Back Panel for Additional Precautionary Statements)

Net Weight 1 1/2 lb. (.68 kg)
When Using Slug Baits….

• Conditions should not be highly moist
  – Moist conditions allow recovery from metaldehyde poisoning

• Make applications late in the day
  – Slug baits degrade in sunlight
Proposed Barriers/Repellents

- Copper
- Salt
- Wood ashes
- Some soaps
- Diatomaceous earth
- Ground egg shells
Copper as a repellent/barrier for slugs and snails
Effective Barriers/Repellents

- Copper
- Salt
- Wood ashes
- Some soaps
Management of Slugs in a Garden

• Reduce humidity in the planting
• Encourage natural enemies
• Slug baits
• Contact sprays
• Repellents
• Traps
Traps for Slugs

- Traps that provide for cover/protection sought by slugs
  - Moistened newspapers
  - Citrus rinds
- Traps that include attractant food-based baits
  - Beer
  - Some products of fermentation
Table 1a. Rankings of beverages for attractiveness to slugs, Ft. Collins, CO 1987. (Summary of 5 trials).

<table>
<thead>
<tr>
<th>Beverage</th>
<th>Attraction index*</th>
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</thead>
<tbody>
<tr>
<td>Kingsbury Malt Beverage</td>
<td>1.14</td>
</tr>
<tr>
<td>Michelob</td>
<td>1.04</td>
</tr>
<tr>
<td>Budweiser</td>
<td>1.00</td>
</tr>
<tr>
<td>Bud Light</td>
<td>0.89</td>
</tr>
<tr>
<td>Old Milwaukee</td>
<td>0.81</td>
</tr>
<tr>
<td>Coors Light</td>
<td>0.79</td>
</tr>
<tr>
<td>Schaefer</td>
<td>0.69</td>
</tr>
<tr>
<td>Miller</td>
<td>0.68</td>
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* Expressed as ratio of slug capture in comparison with Budweiser standard.
Table 1b. Rankings of beverages for attractiveness to slugs, Ft. Collins, CO 1987. (Summary of 5 trials).

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<tr>
<td>Strohs</td>
<td>0.67</td>
</tr>
<tr>
<td>Lite</td>
<td>0.57</td>
</tr>
<tr>
<td>Sugar water/yeast</td>
<td>0.57</td>
</tr>
<tr>
<td>Coors</td>
<td>0.56</td>
</tr>
<tr>
<td>Pabst Blue Ribbon</td>
<td>0.44</td>
</tr>
<tr>
<td>Rainier</td>
<td>0.36</td>
</tr>
<tr>
<td>Gallo Pink Chablis</td>
<td>0.09</td>
</tr>
<tr>
<td>Ft. Collins tap water</td>
<td>0.06</td>
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Constituents of beer identified as being attractive to slugs (Selim 1973)

diacetyl
acetoin
dihydroxyacetone
The Ugly Slug
by Allan G. Peterson

The slug is quite a loathsome creature;
It has not a single attractive feature;
So it becomes very depressed I fear,
And drowns its sorrows in stale beer!