

Selective Pressures & Tropic Interactions Affecting Gall Size & Location on Goldenrod Stem

Luke Daniels

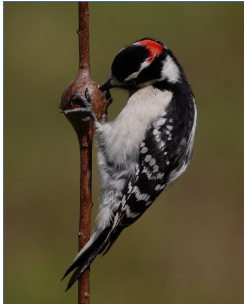
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Background

Selective
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- Galls existing on goldenrod are a model for understanding selection facing flies and plants
- Gall making flies use an ovipositor to stimulate chemical reactions that form a gall
- Parasitic wasps are limited to attacking small galls due to the length of their ovipositor
- Abrahamson W.G 1989 found directional selection towards the larger gall due to parasitic interactions.



Hypothesis (Sequential Bullets)

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- Galls would exhibit stabilizing selection and would be most prevalent in the middle of the stem to avoid abiotic factors and predation or parasitism from ground wasps and birds
- Galls would exhibit stabilizing selection and would be intermediate in size , large enough to inhibit wasp ovipositors and small enough to avoid bird predation

Results

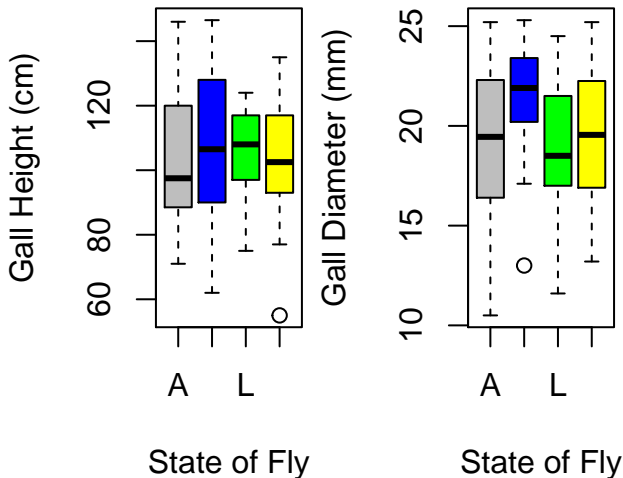


Figure 1. Heights where galls occur on goldenrod species for categories ($p = 0.807$).

Figure 2. Diameters of galls on goldenrod species separated by categories of larva fate. There was a significant difference between diameter ($p = 0.0252$). These differences occurred between B & A ($p = 0.037$) (*) and B & L ($p = 0.0327$) (**).

Text Overlay on Picture

