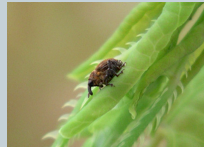


## Study and Comparison of 3 Monitoring Methods for *Rhinocomimus latipes*

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## Introduction

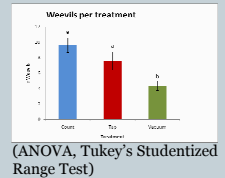
- **Purpose:** To determine the most effective method for the monitoring of *Rhinocomimus latipes* numbers.
- **Location of study:** White Clay Creek State Park, Newark, DE.
- **Time:** Tests were performed over a 6 week period (once a week).
- **Included the analysis of 3 treatments:**
  - 1) Count method
  - 2) Tap method
  - 3) Vacuum method
- **Hypothesis:**
  - The tap and vacuum methods would collect higher numbers of weevils than the current method.
  - The vacuum method would collect the highest number of weevils.

## Procedure

- **Data collected from 5 blocks**
  - Each block contained a quadrat (1m X .5m) for each of the 3 treatments
- **Data collected from each quadrat:**
  - Weevil numbers
  - Time
- **Treatment procedure:**
  - Count- count by sight
  - Tap- tap weevils off plant terminals
  - Vacuum- use reverse-leaf blower to collect weevils

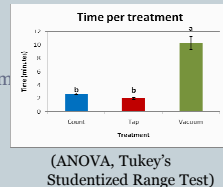
## Results: Weevils per treatment

- **When all three compared:**
  - Count and tap are not significantly different, but are greater than the vacuum treatment.
- **When count and tap compared:**
  - Count was significantly higher than tap.
  - Compared with paired t-test.
- **Why the differences?**



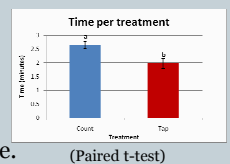
## Results: Time per treatment

- **When all three compared:**
  - Count and tap were not significantly different, but are lower than the vacuum treatment.
- **However..**
  - Count and tap times did not include walking time, whereas vacuum did.
  - Vacuum times were represented as a total time (due to vacuum difficulties).



## Count vs. Tap Time

- **Count and tap times alone were compared using a paired t-test.**
- **Count time was found to be significantly higher than tap time.**
- **Why the differences?**



## Conclusion

- In terms of weevil numbers, the current treatment, count, is the most effective.
- In terms of time, the tap treatment was the fastest.
- The vacuum treatment was the least efficient, with low weevil numbers and a long performance time.
- When choosing which method, consider which means the most; counting accuracy vs. time.
- Questions?