



LEFT HAND watershed center

Catch the Hatch: a community science project on mayfly phenology

Project Overview

Mayflies are important indicators of watershed health and their life cycle is driven by watershed processes.

Climate variability in the Front Range may impact the phenology of aquatic insects.

Catch the Hatch aims to track mayfly emergence timing from year to year in relationship to creek flows and temperature.

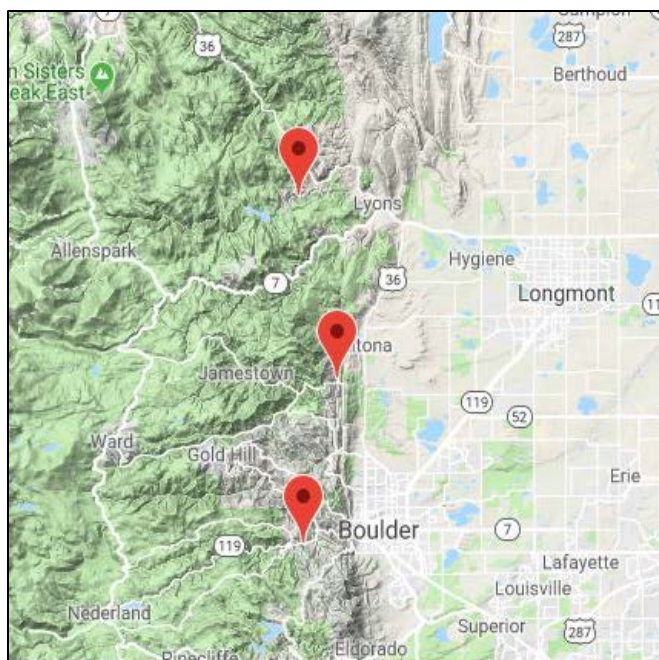


2019 Details

Volunteers tracked emergence of Pale Morning Duns (PMDs).

Collectively, volunteers visited three creek locations once per day from June 15- July 15 (PMD peak emergence).

Volunteers recorded time, weather, creek temperature, and presence or absence of PMDs. If possible, they also stored a PMD sample.



Catch the Hatch Front Range Creek Locations

- Boulder Creek- Memorial Park
- Left Hand Creek- Buckingham Park
- N. St. Vrain Creek- Button Rock



Photo caption: Buckingham Park on July 7, 2019 by J. Rutherford.

Catch the Hatch 2019

by the Numbers

Project Summary

Total Volunteers: 31
 Total Site Visits: 71
 Total PMD Sightings: 14
 Total Observation Hours: 102

Boulder Creek Summary

Site Visits: 21
 PMD Sightings: 6
 Observation Hours: 28.5

Left Hand Creek Summary

Site Visits: 26
 PMD Sightings: 2
 Observation Hours: 30

N. St. Vrain Summary

Site Visits: 24
 PMD Sightings: 6
 Observation Hours: 44.5

What did we learn?

1. PMDs were observed at all three sites. PMD samples were collected only from Boulder and N. St. Vrain sites.
2. PMDs were first observed at Left Hand Creek on June 21st. The majority of observations came after June 27th.
3. PMDs were observed throughout the 11 am to sundown timeframe.

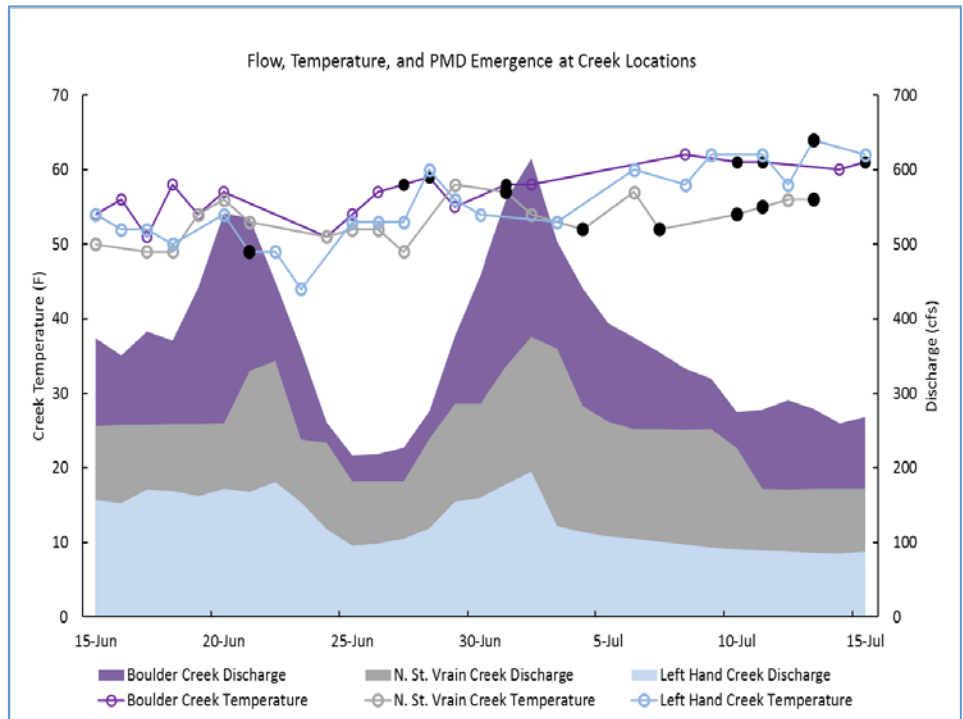


Figure 1. Creek temperature (F) readings and Pale Morning Dun (PMD) observations at Catch the Hatch creek locations from June 15- July 15, 2019. Hollow markers represent temperature & no PMD sighting. Black markers represent temperature & a PMD sighting. Corresponding daily average discharge (cfs) data from Division of Water Resources flow gages. Colors of line and flow graphs match by creek location.

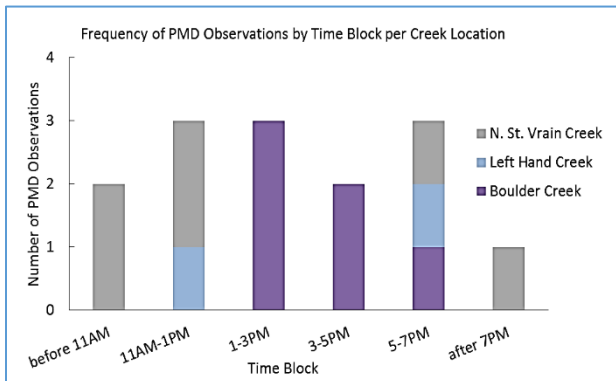


Figure 2. Frequency of PMD observations by time block and creek location from June 15- July 15, 2019.



Photo Caption: sample of a PMD (right) and an unidentified mayfly (left). Collected by citizen scientist, L. Nolan, on July 1, 2019 at Boulder Creek- Memorial Park location.

What's next?

1. Gather volunteer feedback on methods and protocols.
2. Cross-check accuracy of identification from collected PMD samples.
3. Revise volunteer methods and protocols.
4. Determine sampling timeline and locations for next year!

Huge thank you to the 2019 volunteers and partners!



Interested in joining the 2020 Catch the Hatch project? Email Deb and dhummel@lwog.org to be added to the email list.

Left Hand Watershed Center's Community Science Program aims to engage Front Range communities in place-based learning and scientific data collection about watershed resilience and health. Please learn more about our [Community Science Plan](#) or help [support future projects](#)!



**LEFT HAND
watershed center**

Protecting and restoring our
watersheds for people and the
environment using a science-based
approach