



# Aquatic Macroinvertebrate Monitoring

## Importance

Macroinvertebrates play key ecological roles in aquatic ecosystems. They are an important food source for fish, amphibians, and birds, and are consumers of algae, leaves, and other macroinvertebrates. In addition to their ties to the biotic environment, macroinvertebrates are also sensitive to chemical changes in the water and physical habitat surrounding them. Monitoring the physical habitat of aquatic macroinvertebrates provides clues about what might be happening in the ecosystem to affect macroinvertebrate populations.

## Management Applications

When implemented, information gathered from aquatic macroinvertebrate monitoring will be used to:

- Establish regional distribution and function of aquatic macroinvertebrates in the Colorado Plateau;
- Improve understanding of park aquatic ecology;
- Identify biologically impaired aquatic habitats;
- Track changes in trends over time; and
- Identify priority aquatic restoration needs.

## Current Status of Protocol

Although aquatic macroinvertebrates were identified as a high-priority vital sign in the NCPN's Phase III Monitoring Plan, the development of this protocol is currently postponed. At a programmatic review of the network in January 2008, it was determined that the NCPN needed to focus its efforts on developing and implementing 10 other protocols across 16 network parks for the near future. At this time, we do not anticipate beginning development of the aquatic macroinvertebrates protocol until at least 2013, when the network's next program review is scheduled to occur. At that time, the NCPN will examine all protocols and determine if there are efficiencies in other protocols that will allow us to initiate the development of this protocol.

## Contact

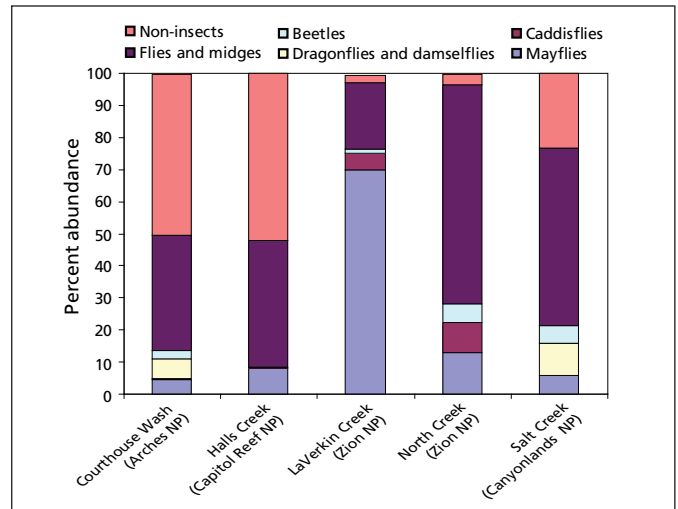
Dusty Perkins, [dustin\\_w\\_perkins@nps.gov](mailto:dustin_w_perkins@nps.gov)

Mayfly larvae (left) and adult (right).



NPS/D. THOMA

Measuring flow and collecting aquatic macroinvertebrates on La Verkin Creek, Zion National Park.



Number of macroinvertebrate taxa in selected Northern Colorado Plateau Network creeks.



BOTH PHOTOS ©MARK VINSON