**A Risky Strategy**

Though annual drying keeps the eggs of amphibians safe from fish predators, reproducing in a vernal pool is risky. Frogs and salamanders that lay their eggs in vernal pools depend on certain weather-related signals to tell them when to make the journey. Spotted salamanders and wood frogs are cued by the first relatively warm and rainy night in early spring—in northern Virginia, typically in March. However, if warm rains come early, the eggs might get a false start. Egg masses laid in January or February are at risk of freezing solid if the warm spell doesn’t last.

If the eggs do hatch into larvae who make it past the cold of winter, they are then in a race against time to grow and metamorphose into terrestrial juveniles, complete with lungs to live on land. If there isn’t enough rain, the pools might dry up too early. Spotted salamanders deal with this risk by being long-lived—they have up to 20 years to get it right and pass on their genes. However, as climate becomes less predictable and rainfall patterns change, this strategy gets riskier. This is why long-term monitoring is essential to maintain the health of vernal pools and their dependents.

Submitted by Hannah Bement