



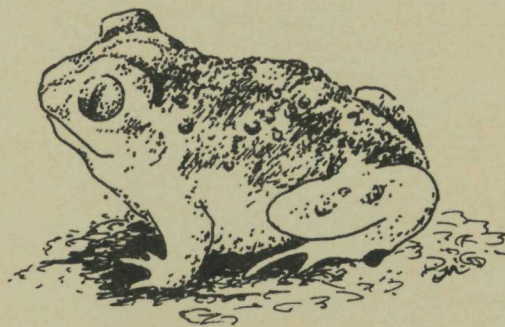
### Pothole "Gardens"

Potholes trap sand and particles of organic matter as well as moisture. Eventually enough soil may fill a pothole to enable plants to grow. Often the first plant growth to appear is "cryptogamic soil," a lumpy dark brown crust which is actually a living community of simple plants (algae, fungus, and moss) and bacteria. This crust helps keep the soil from eroding and enriches it with nitrogen. As the amount and quality of the soil increases, grasses, herbs, and eventually larger plants such as yucca and small trees can grow creating lovely little "gardens" on the slickrock.

### Pothole Etiquette

Discovering a pothole after many miles of hot, dry hiking can be a real delight, or even a life-saving find. However, in using the water, consider that others, both human and animal, may depend on this same water for life. Therefore:

- Use only what you absolutely need. Potholes do not replenish their water supply, and any water used will make the pothole dry up faster.
- Never pollute a pothole. Dip water out of it with a clean cup or pot. Do not wash, wade or bathe in it.



Great Basin Spadefoot Toad  
(*Scaphiopus intermontanus*)



**POTHOLE  
POINT**

**A SHORT WALK**



# Pothole Point

## What is a Pothole?

The rock surface across which you will be walking is composed of sand grains deposited by oceans and wind. Over millions of years these sand grains became cemented together to form the Cedar Mesa Sandstone. Because this rock is not uniform in the way it was laid down and in the strength of its cementing material, it hasn't eroded evenly. Depressions called "potholes" have formed.

A pothole, once started, continues to grow larger. It becomes a trap for windblown sand grains and pebbles which scour the surface deeper. Rain water, which normally contains a weak carbonic acid, collects in the depression and continues to dissolve the cementing material.

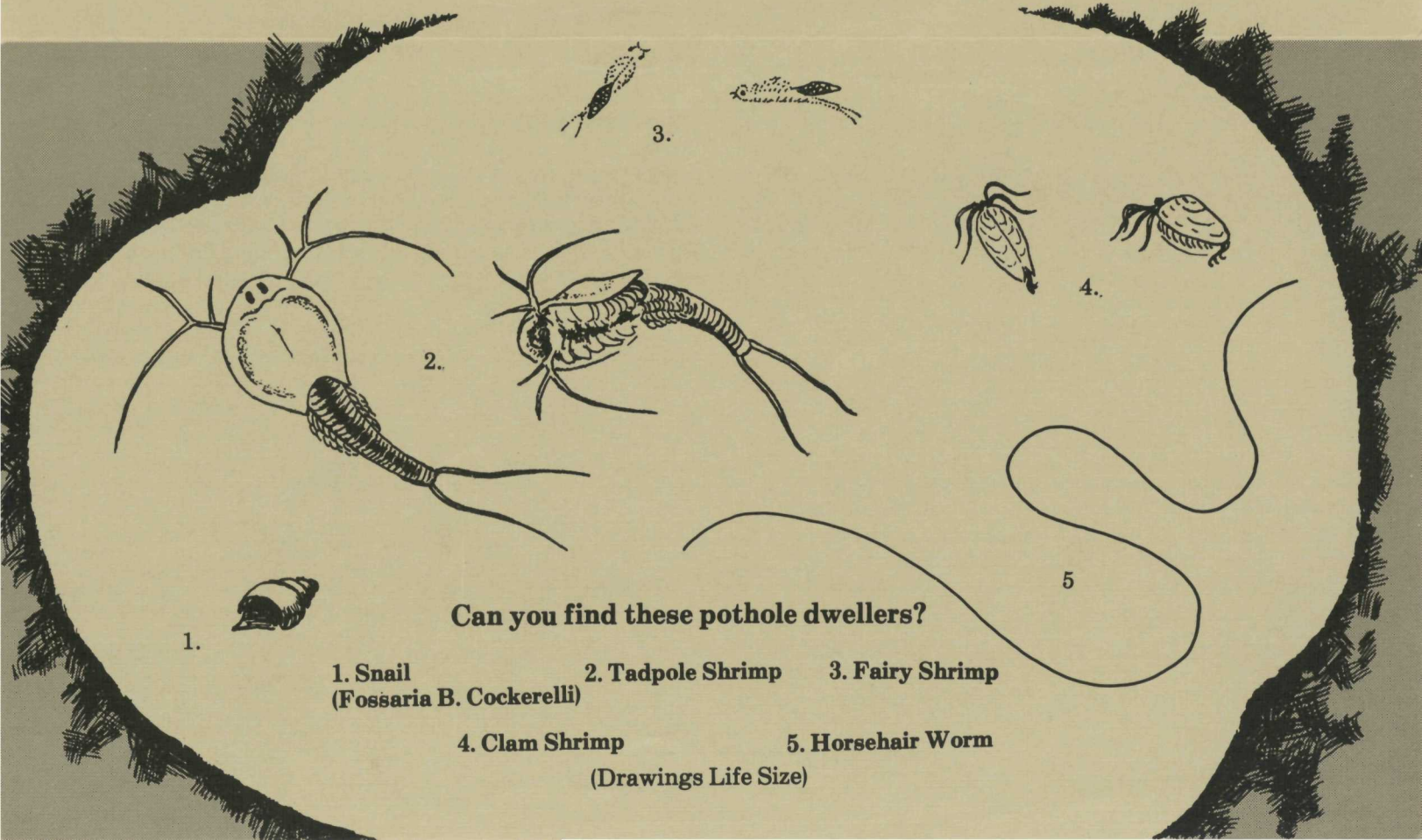
The pools created by potholes are welcomed by birds, bats, and other small mammals, not to mention thirsty hikers. But other less obvious forms of life depend on this water too. If you look closely you will discover a number of tiny creatures that live their entire lives in these miniature reservoirs.

## Pothole Life

During the summer months the potholes are dry. Ground surface temperatures can reach up to 140°F. (60°C.) day after day. Yet within the cracked mud crusting the bottom of a dry pothole hundreds of microscopic eggs may lie dormant, protected from the heat and dryness by their tough shells.

Late fall, winter, and early spring bring rain and snow. The pothole fills and becomes green with algae. Within several days the eggs hatch and the pothole teems with tiny crustaceans, snails, tadpoles, worms, larvae, and insects. These may seem to be odd creatures to find in the middle of a desert, but they have adapted well to their uncertain world.

Water in a pothole is a very temporary thing, so living things depending on it must hasten to reproduce before it evaporates under the blazing sun. Pothole dwellers have evolved very rapid reproductive cycles compared to related species that live in places with more abundant water. In a dry year many die before completing their cycles, but usually enough survive to ensure continuation of their species.



Can you find these pothole dwellers?

1. Snail  
(*Fossaria B. Cockerelli*)

2. Tadpole Shrimp

3. Fairy Shrimp

4. Clam Shrimp

5. Horsehair Worm

(Drawings Life Size)