

Petrified Forest

For Kids!

At Home Activity



AZ Bark Scorpion

A Glowing Surprise!

Wilderness campers at Petrified Forest may want to bring a UV flashlight (blacklight) to check their sleeping bags for scorpions at night. It's a creepy thought to find a scorpion in your tent, and it probably doesn't happen often here since they are more common in southern AZ, but Arizona bark scorpions (*Centruroides exilicauda*) can live in Petrified Forest.

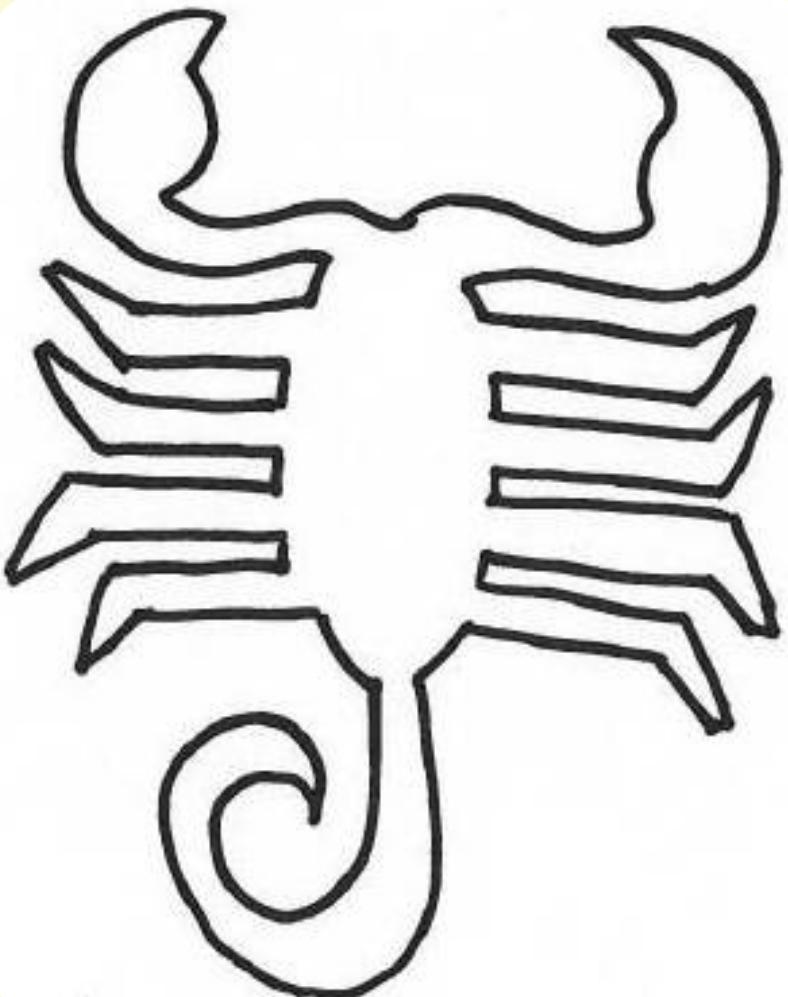
Why bring a blacklight though? Scorpions have chemicals in their exoskeletons that glow bright blue-green under the ultraviolet light emitted from a backlight. Scientists are not really sure why they glow but some new experiments suggest that scorpions can sense low levels of UV light from the moon in order to determine when it's a good time to go out and hunt at night or where to hide from predators.

You wouldn't want to tackle with an Arizona bark scorpion as they are the most dangerous scorpion species in the US but you can make your own glowing scorpions with this fun and safe activity.



What you need:

- black construction paper
- printed scorpion stencil
- scissors
- blacklight bulb and lamp
- yellow highlighter
- tonic water



Step 1:

Print the scorpion stencil to the left and cut around the outline to create your paper scorpion.

Step 2:

Make sure you are in a dark room with your blacklight and turn it on. Put the paper scorpion under the blacklight. Does it glow? White paper glows under UV light because it is treated with an optical brightener (a chemical) that absorbs UV radiation and re-emits blue light.



Step 3:

Trace your stencil onto the black construction paper with your highlighter. Remove the stencil and color in the rest of your paper scorpion with your highlighter. You can cut this scorpion out too.



What else glows under UV light?

Tonic water will also glow blue because it contains an alkaloid called quinine that reacts to UV light just like the chemicals in scorpions' armor. There are a lot of other natural things that will glow a different color when a UV light is shone on them. Many minerals like calcite and fluorite have a natural fluorescence and can glow red or blue. Your teeth and fingernails even do this! You can take your blacklight out into your yard at night to see what glows. Why do you think certain objects glow and others don't?

Step 4:

Place your highlighted scorpion under the blacklight to see it glow!

