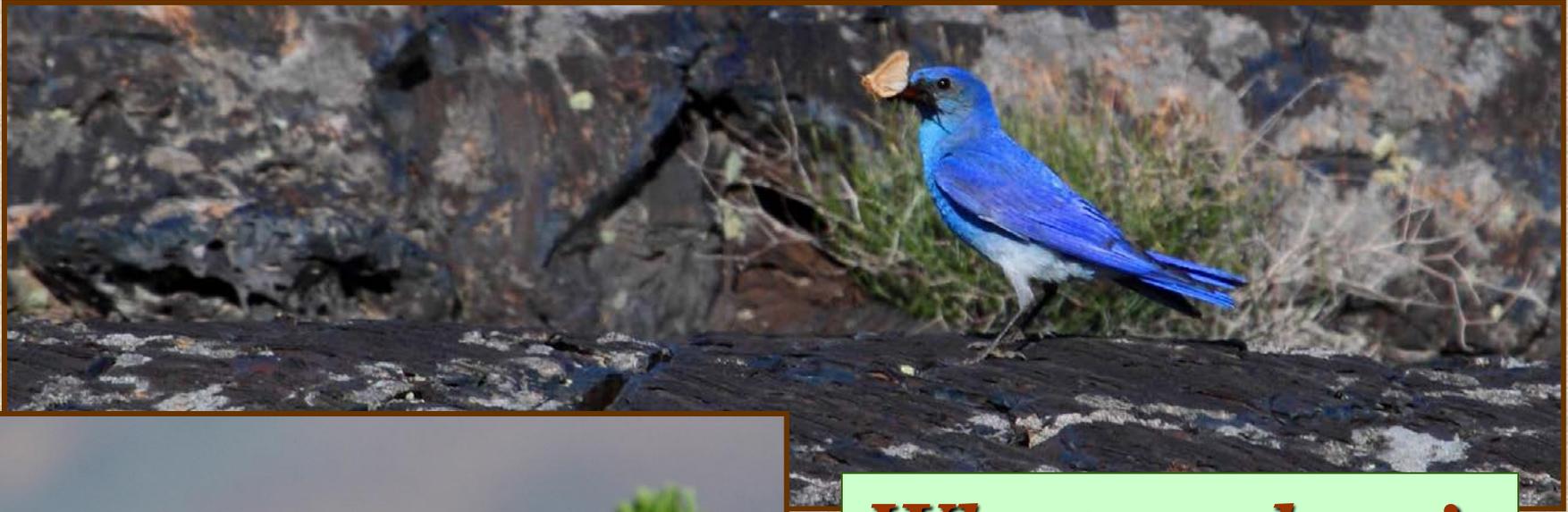


Life on the Lava



*What makes it
so difficult for
life to survive
in Craters of
the Moon?*



*Craters is a very young area geologically and mostly covered with lava with little soil. Most of what little soil there is has been brought in by the wind. **Note where is life getting started???***



Areas at Craters sheltered from the wind or that get less sun are kinder to plant life.

What is the climate like at Craters of the Moon?

Climate & Weather at Craters of the Moon

Temperature Range for Life at Craters

- *Winter can be minus 30°F or below*
- *Summer air temperatures can be greater than 100°F*
- *Soil and rock temperatures because of solar heating are often over 150°F and the maximum ever measured was 178°F*

Moisture available in Summer

In a normal year less than 3 inches of rain falls in June, July, and August combined--Craters is a high desert.

So, how much life do you think Craters has?

- *How many different mammals?*
- *How many different birds?*
- *How many different reptiles?*
- *How many different amphibians?*
- *How many different plants?*



How did the landscape form that make up Craters of the Moon?



Molten rock (magma) that came to the surface with a lot of dissolved gasses got shot high in the air and rained down to form cinder cones.

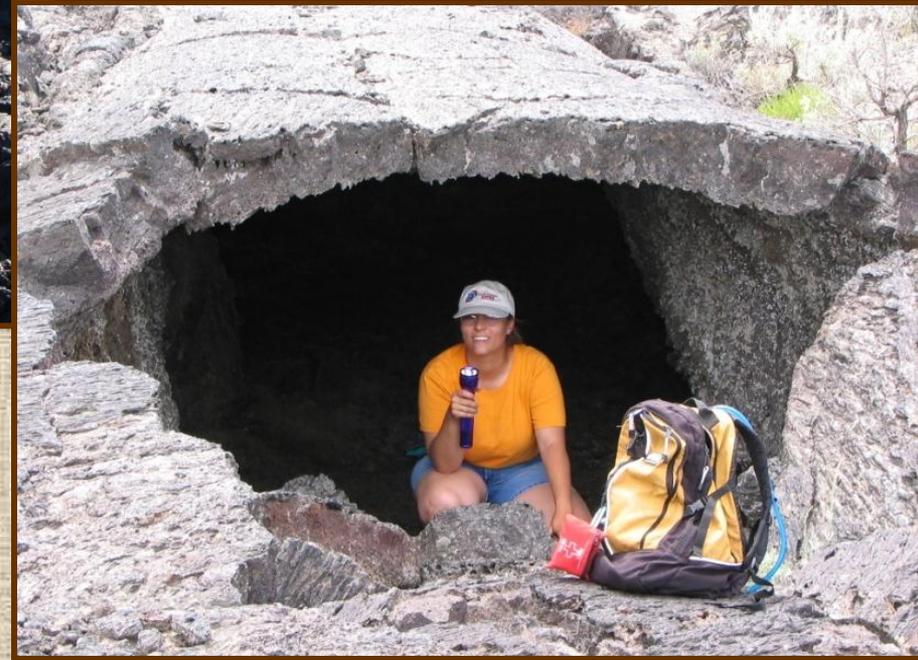
It is like opening a giant shaken pop can whose contents are over 2,000° F!



*With less dissolved gas
lava flows away from the
vent like a river of thick
mud.*



***Rivers
of
Molten
Rock***



*Like a river in winter the top of a lava flow can
freeze and still have liquid flowing beneath the
crust.*

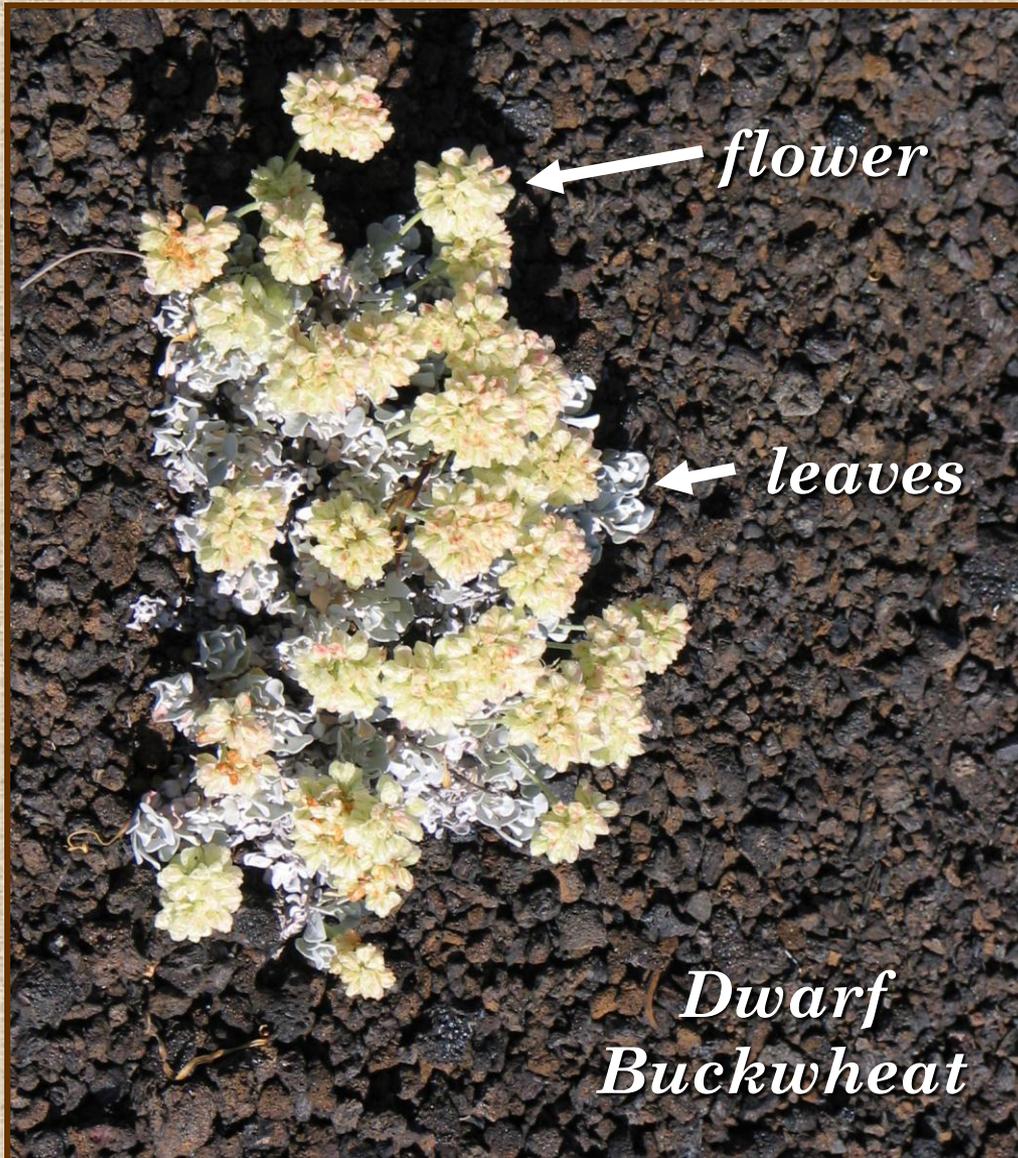


Even though lava has low enough gas not to fountain and is flowing, it still has dissolved gas and often looks like a giant piece of Swiss cheese.

The bubble filled rock is a good insulator and acts like the insulation in the walls of your house.

Do Alka-Seltzer experiment.

What can you do to survive if you are a plant?



- *Light Color to reflect heat and light*
- *Shallow root system that covers a big area to capture small rain events*
- *Deep root system for when the surface dries out*



➤ *Go through whole life cycle quickly and come up from seed*

➤ *Photosynthesize early in season and store food in roots for next year*

*Ferns are
not usually
found in the
desert*



Lava cracks aid survival:

- *Limited light/heat (shade)*
- *Shelter from wind*
- *Natural traps for moisture and soil*



*What do you
put on your
skin to keep it
from drying
out?*

*Fernbush has oily
leaves that help hold
in moisture and that
Native Americans
found was a natural
insect repellent.*

What can animals do to survive here?



- *Hibernate/Estivate*
- *Insulate your den*
- *Live underground to avoid extremes of surface temperature*

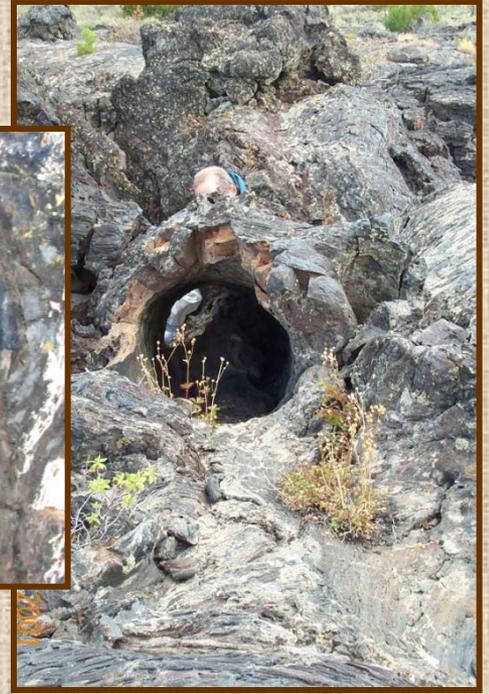
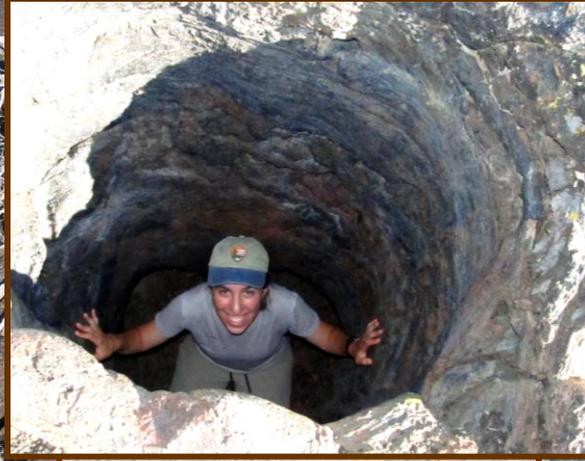
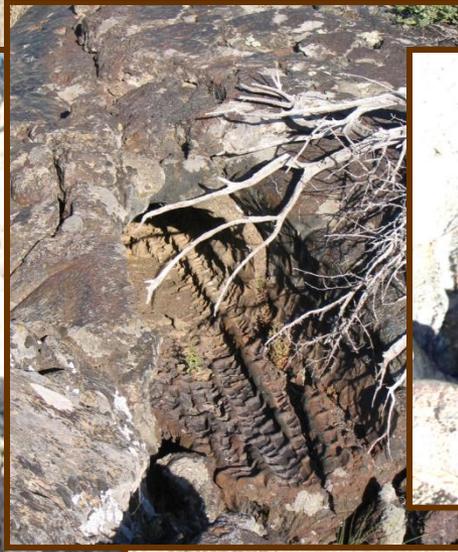




Lava provides an amazing variety of nesting sites in size, shape, and number.



Lava can preserve evidence of life being here from thousands of years ago.



**Tree
Molds**



Life and the physical environment are interconnected.

- ***Lava is a strange and fascinating habitat for life to cope with***
- ***Lava can be an amazing insulator***
- ***Lava creates many small (micro) environments like cracks and caves***
- ***Lava creates abundant den and nest sites from large creatures like bears to small things like birds and rodents***
- ***Our lava is dark colored and gets very hot in the sun requiring special adaptations for plants and animals to survive.***
- ***Lava preserves evidence of earlier life***



*Be wise as
an owl,
come
investigate
Craters of
the Moon
with your
family.*





*The
End*