Bureau of Land Management

Junior Explorer

As a Bureau of Land Management Junior Explorer, I promise to:

- do all I can to help preserve and protect the natural and cultural resources on our public lands,
- be aware of how my actions can affect other living things and the evidence of our past,
- keep learning about the importance of nature and our heritage, and
- share what I have learned with others!

_____ Date

_____ Explorer Signature

Dominguez-Escalante Gunnison River Jr. Explorer Journal

How to Use this Jr. Explorer Guide

BLM's Junior Explorer program helps introduce young explorers like you to the lands and resources that the BLM manages. This "Dominguez-Escalante Jr. Explorer Journal" focuses on the Gunnison River and it's resources.

You can work through the activities on your own or invite a parent or an adult you know to join you. Many blank pages are provided for you to write your thoughts or draw what you are seeing so you can share your experiences with others later.

Finally, say the Junior Explorer pledge, sign the certificate, and you're on your way to exploring and protecting America's public lands.

How clean is the Gunnison River?

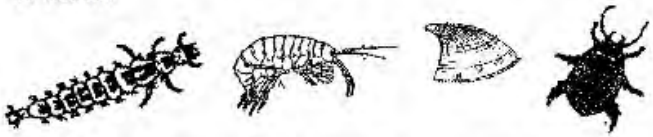
Use this "Recording Sheet" to help you answer the questions below.

1. Did you find stonefly nymphs, cased caddis fly larvae, or mayfly nymphs?

YES → The water in the Gunnison River is probably GOOD quality.

NO ↓ Go to Question 2

2. Did you find caseless caddis fly larvae, freshwater shrimps, freshwater limpets or beetles?



YES → The water in the Gunnison River is probably MEDIUM quality.

NO ↓ Go to Question 3

3. Did you find snails, leeches, midge larvae, worms or freshwater hoglice?

YES → The water in the Gunnison River is probably POOR quality.

NO → Perhaps you didn't find many bugs.
Ask someone in the group if they want to partner with you and work together to look for bugs again.

Draw four animals that you saw or would like to see on the river.
Below each animal, write its name and one reason it lives on the river.

Public Lands Belong to You!

The Bureau of Land Management (BLM) is a federal government agency that takes care of more than 245 million acres of land. Most of these lands are in the western part of the United States. These lands are America's public lands, and they belong to all Americans. These public lands are almost equal in area to all the land in the states of Texas and California put together.

The BLM manages public lands for many uses. The lands supply natural resources, such as coal, oil, natural gas, and other minerals. The lands provide habitats for plants and animals. People enjoy the big open spaces on the lands. The lands also contain evidence of our country's past, ranging from fossils to Indian artifacts to ghost towns.

Dominguez-Escalante Na

Designated M

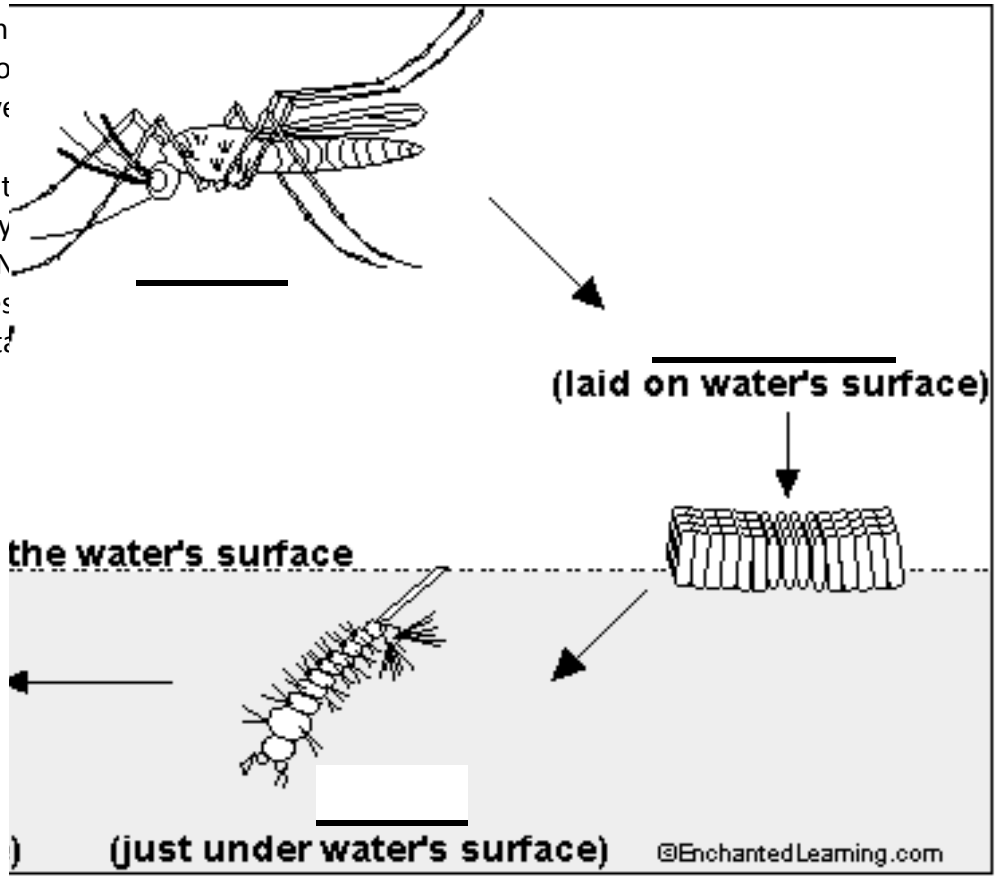
The Dominguez-Escalante National Conservation Area (D-E NCA) encor
Montrose counties in western Colorado. Within the D-E NCA, 66,280 a
once part of the Dominguez Canyon Wilderness Study Area.

Known for their scenic value, these lands are popular for those wantin
Red-rock canyons and sandstone bluffs hold geological and paleontolo
and historic sites. Ute Tribes today consider these pinyon-juniper cove

The Escalante, Cottonwood, Little and Big Dominguez Creeks cascade t
Plateau. Unaweep Canyon, a scenic canyon on the northern boundary
sources. Nearly 30 miles of the Gunnison River flow through the D-E N
Spanish National Historic Trail, a 19th Century land trade route, passes
ing desert bighorn sheep, mule deer, golden eagle, turkey, elk, mounta

Department of the Interior Secretary Salazar at the official dedication ceremony for the Dominguez-Escalante National Conservation Area.

Label the life-cycle stages of the mosquito on the diagram.



Purpose for the establishment of the Dominguez-Escalante National Conservation Area

To conserve and protect the area's unique and important geological, cultural, archaeological, paleontological, natural, scientific, recreational, wilderness, wildlife, riparian, historical, educational, scenic and water resources.

Lifecycle of a Mosquito

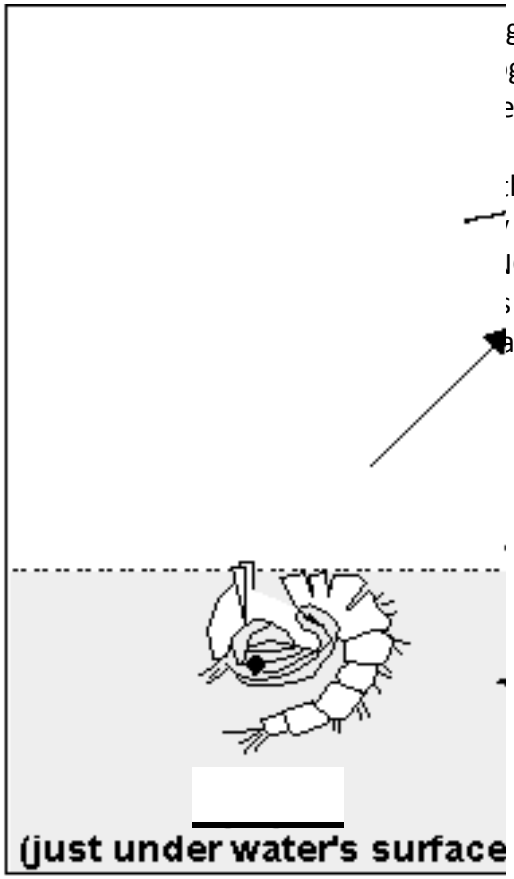
Mosquitoes undergo complete metamorphosis; they go through four distinct stages of development during a life-time. The four stages are egg, pupa, larva, and adult. The full life-cycle of a mosquito takes about a month.

Eggs: After drinking blood, adult females lay a raft of 40 to 400 tiny white eggs in standing water or very slow-moving water.

Larvae: Within a week, the eggs hatch into larvae (sometimes called wrigglers) that breathe air through tubes which they poke above the surface of the water. Larvae eat bits of floating organic matter and each other. Larvae molt four times as they grow; after the fourth molt, they are called pupae.

Pupae: Pupae (also called tumblers) also live near the surface of the water, breath-ing through two horn-like tubes (called siphons) on their back. Pupae do not eat.

Adult: An adult emerges from a pupa when the skin splits after a few days. The adult lives for only a few weeks.



tional Conservation Area

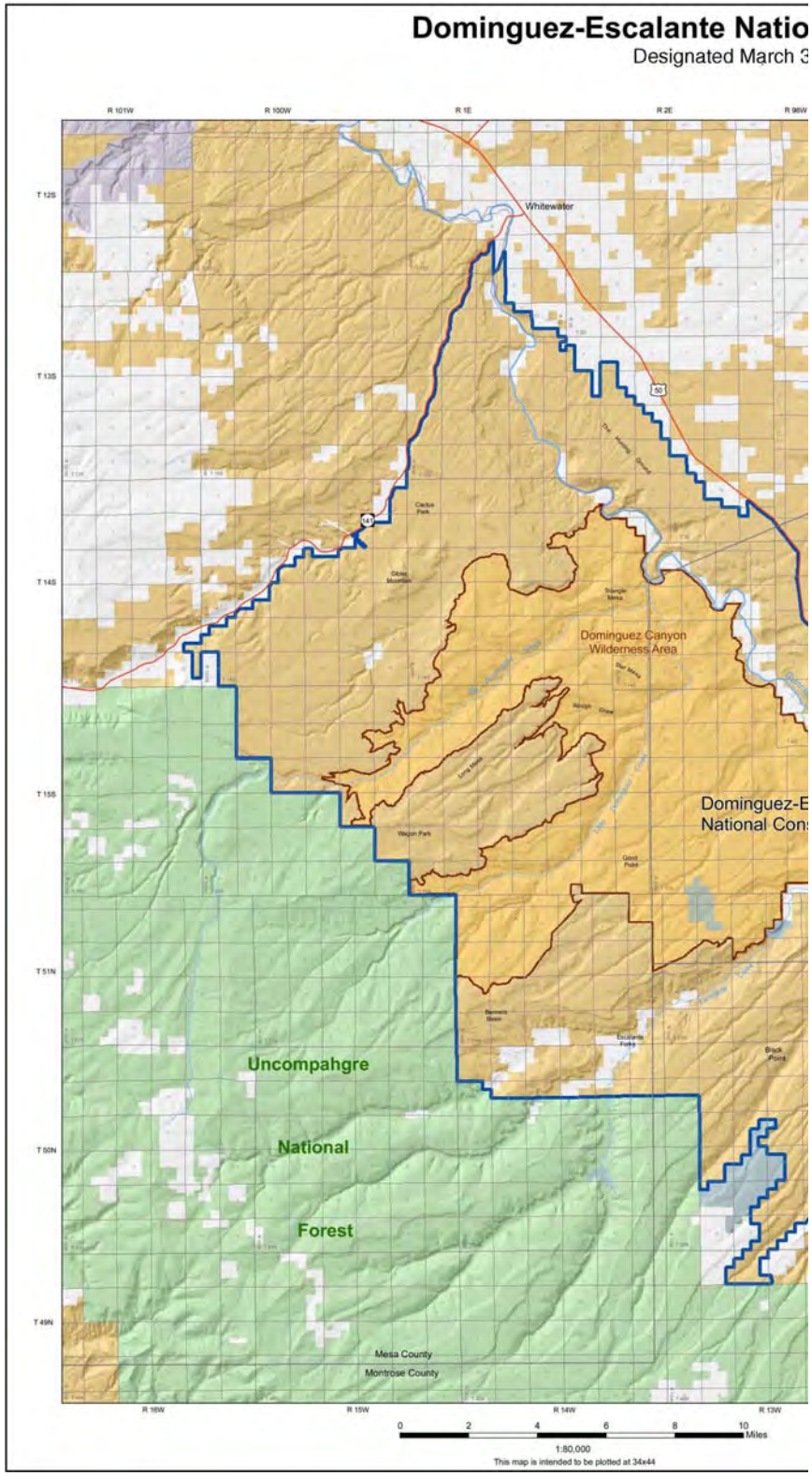
larch 30, 2009

mpasses 209,610 acres of BLM-managed land in Mesa, Delta and acres make up the Dominguez Canyon Wilderness Area, which was

g to see the spectacular canyon country of the Uncompahgre Plateau. gical resources spanning 600 million years, as well as many cultural ered lands an important connection to their ancestral past.

through sandstone canyon walls that drain the eastern Uncompahgre of the Conservation Area, contains globally significant geological re-ICA, supporting fish, wildlife and recreational resources. The Old through the D-E NCA. A variety of wildlife call the area home, includ-ain lion, black bear, and the collared lizard.

The Gunnison River near Bridgeport.



Journaling Page

Think about the words habitat and ecosystem and your surroundings. What would happen if one part of the eco-system was destroyed? How can you use your Leave No Trace skills to make sure the ecosystem stays healthy? Use this space to journal your thoughts.

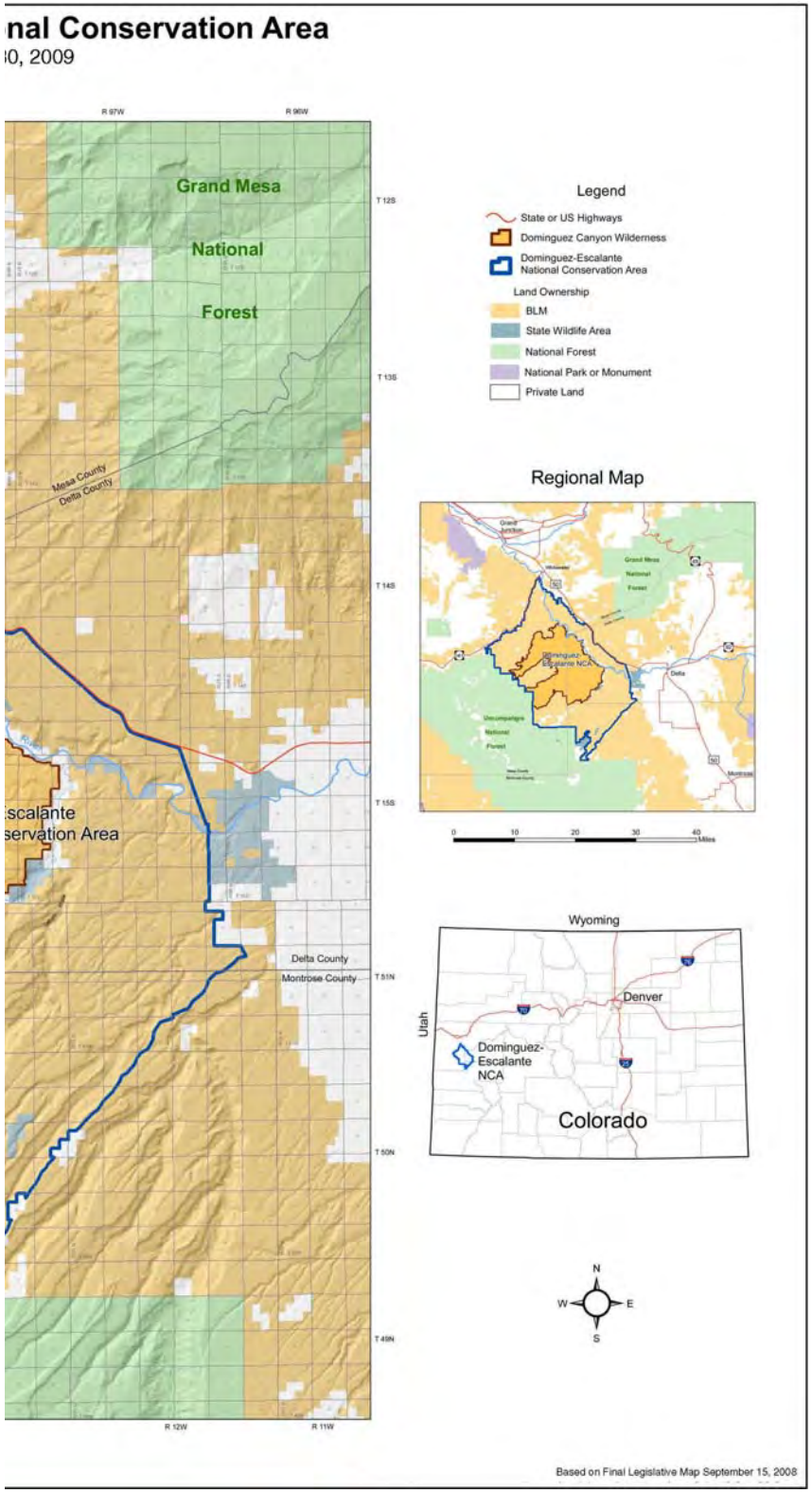
What is Habitat?

Every living thing has a home and all living things interact with their environment (surroundings) and with each other. Almost everywhere in the world is a home to at least one type of living thing. The area where a plant or animal lives is called its habitat. Some habitats are large and are easy to think of such as the forest, the Arctic or the ocean. Others are quite small such as your backyard or a marshy area. The Gunnison River makes up a habitat.

If we look at a single plant or animal in its habitat we soon realize that its home is only a small part of the particular area. Within each large habitat, there are a lot of other species of living things and each lives in its own habitat. Very often, these plants and animals interact with each other in some way. Each organism is well-suited to live in a particular environment. For example the polar bear has a thick coat of fur to enable it to survive in the cold Arctic.

The organisms that live in a particular habitat and depend on each other make up an ecosystem. The study of the ecosystems of the world is called ecology. All the members of a species that live in a habitat make up its population and communities. Each one has a role to play in the ecosystem and destroying one type of organism in a habitat can disrupt the food chain. Ecosystems vary in size. They can be as small as a puddle or as large as the Earth itself. Any group of living and nonliving things that interact with each other can be considered an ecosystem.

Within each ecosystem, there are habitats that are also different sizes. A habitat is a place where a group of living things of the same kind live in the same place at the same time. The group of living things of the same species is called a population. When all of the different populations living in the same area interact, they form a community. A habitat supplies the needs of the organisms, such as food, water, temperature, oxygen and minerals. If these needs cannot be met in one habitat, the population will move to another habitat where their needs can be met. Each population has its own habitat and several populations may share a habitat. When this occurs, the populations are said to co-exist.



Use the 7 Principles

PLAN AHEAD AND PREPARE

Know the regulations and special concerns for the area you'll visit.
Prepare for extreme weather, hazards, and emergencies.
Schedule your trip to avoid times of high use.
Visit in small groups when possible. Consider splitting larger groups into smaller groups.
Repackage food to minimize waste.
Use a map and compass to eliminate the use of marking paint, rock cairns or flagging.

TRAVEL AND CAMP ON DURABLE SURFACES

Durable surfaces include established trails and campsites, rock, gravel, dry grasses or snow.
Protect riparian areas by camping at least 200 feet from lakes and streams.
Good campsites are found, not made. Altering a site is not necessary.
In popular areas:
Concentrate use on existing trails and campsites.
Walk single file in the middle of the trail, even when wet or muddy.
Keep campsites small. Focus activity in areas where vegetation is absent.

DISPOSE OF WASTE PROPERLY

Pack it in, pack it out. Inspect your campsite and rest areas for trash or spilled foods. Pack out all trash, leftover food, and litter.
Deposit solid human waste in catholes dug 6 to 8 inches deep at least 200 feet from water, camp, and trails. Cover and disguise the cathole when finished.
Pack out toilet paper and hygiene products.
To wash yourself or your dishes, carry water 200 feet away from streams or lakes and use small amounts of biodegradable soap. Scatter strained dishwater.

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Wilderness

What does Wilderness mean to you?

Draw or journal your thoughts.

s of Leave No Trace

LEAVE WHAT YOU FIND

Preserve the past: examine, but do not touch, cultural or historic structures and artifacts.
Leave rocks, plants and other natural objects as you find them.
Avoid introducing or transporting non-native species.
Do not build structures, furniture, or dig trenches.

MINIMIZE CAMPFIRE IMPACTS

Campfires can cause lasting impacts to the backcountry. Use a lightweight stove for cooking and enjoy a candle lantern for light.
Where fires are permitted, use established fire rings, fire pans, or mound fires.
Keep fires small. Only use sticks from the ground that can be broken by hand.
Burn all wood and coals to ash, put out campfires completely, then scatter cool ashes.

RESPECT WILDLIFE

Observe wildlife from a distance. Do not follow or approach them.
Never feed animals. Feeding wildlife damages their health, alters natural behaviors, and exposes them to predators and other dangers.
Protect wildlife and your food by storing rations and trash securely.
Control pets at all times, or leave them at home.
Avoid wildlife during sensitive times: mating, nesting, raising young, or winter.

BE CONSIDERATE OF OTHER VISITORS

Respect other visitors and protect the quality of their experience.
Be courteous. Yield to other users on the trail.
Step to the downhill side of the trail when encountering pack stock.
Take breaks and camp away from trails and other visitors.
Let nature's sounds prevail. Avoid loud voices and noises.

River Saftey

Water is very powerful, and can be hazardous. Rivers, lakes, ponds, and irrigation canals are all places where we may have an incident. It is important to follow some basic rescue concepts when attempting to help victims in the water so that we do not become victims ourselves.

In the event of a swimmer or a wrapped boat -

Reach, Throw, Row, Go

REACH: The rescuer or the swimmer should first reach with their arms, a paddle, stick or something else (ie. log, board, that you can reach the swimmer with).

THROW: Throw a rope, throw bag, or flotation device to the victim.

ROW: Row the raft, paddle a kayak/duckie, or a rescue platform to the victim.

GO: In the event that none of the previous methods will work, a rescue swimmer will swim to the victim to assist with rescue. ***This is a very high risk option and should only be executed by a trained rescuer.***

A drowning person will not act reasonable. They will climb, grab, punch, or do whatever they must do to get their head above water!!

When Swimming

Keep your feet off the bottom of the river. Rocks, trees, and manmade debris can hook your foot and the river current will push you under the water. The best place for your feet is in front of you near the surface facing down river.

Journaling Page

Think about the following questions and write or draw your responses below.

Why are cryptobiotic soil crusts important?

How would you explain the importance of cryptobiotic soil crusts to your family and friends?

How would you suggest dealing with cryptobiotic soil crusts if your family and friends were to come across them?

Cryptobiotic Soil

Cryptobiotic soil is found throughout the world. In arid regions, these living soil crusts are dominated by cyanobacteria, but also include lichens, mosses, green algae, microfungi, and bacteria. These crusts play an important role in the ecosystems in which they occur. In the high deserts of the Colorado Plateau, these knobby crusts are extraordinarily well-developed and may represent 70 to 80 percent of the living ground cover.

Draw a patch of Cryptobiotic soil.

River Saftey

Communicating on the River

In the river environment verbal communication can be difficult due to river noise, distance, and other people talking. So we use hand signals and whistles to communicate with each other when needed.

Hand Signals

Signal	Meaning
Waving one hand above your head	I need help
Tapping one hand on your head	I am ok
Waving hand in a circle, then point right/left	Go right/left
Both arms crossed in front of chest	Need med kit and help

Whistle Signals

1 whistle blast	Stop and look
2 whistle blasts	Attention upstream
3 whistle blasts	Attention downstream
3 whistle blasts long and repeated	Emergency or Rescue

Rivers are places that renew our spirit, connect us with our past, and link us directly with the flow and rhythm of the natural world.

Ted Turner, *The Rivers of South Carolina*, *1999*

The river has great wisdom and whispers it's secrets to the hearts of men.

Mark Twain

Wild rivers are earth's renegades, defying gravity, dancing to their own tune, resisting the authority of humans, always chipping away, and eventually always winning.

Richard Bangs, *River Gods*

There’s nothing...absolutely nothing… half so much worth doing as simply messing around in boats.

Kenneth Grahame, *The Wind in the Willows* (River Rat to Mole)

The rivers are out brothers. They quench our thirst. They carry our canoes and feed our children. You must give to the rivers the kindness you would give to any brother.

Chief Seattle

The Sun shines not on us but in us. The Rivers flow not past, but through us...

John Muir

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