

O-0101
IDENTIFY NATURAL HAZARDS

CONDITIONS

You are part of a ground team moving through the wilderness.

OBJECTIVES

Recognize and avoid the various types of natural hazards.

TRAINING AND EVALUATION

Training Outline

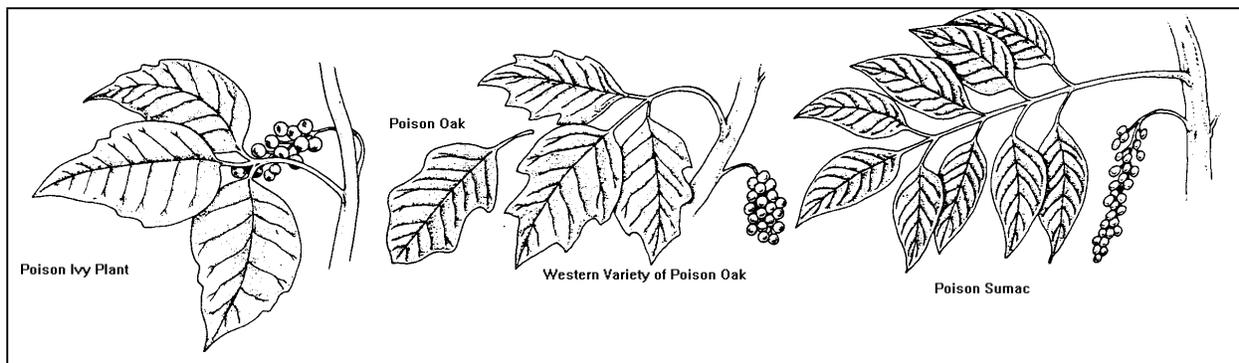
There are three categories of natural hazards: terrain, plants and animals.

1. Terrain

- a. Cliffs and steep terrain. These can often be identified on maps by closely spaced contour lines. Choose routes around these features. If you must search the area, search parallel to the slope, rather than climbing or descending it.
- b. Drainage and flood areas. These are sometimes marked on maps. Avoid moving through these areas. If the search requires you, ensure your team is properly dressed, and exercise extreme care.
- c. Rough terrain, such as boulder fields. You will often have to search through these areas. Slow your rate of movement to allow all team members to exercise proper caution.

2. Plants. Search teams can avoid most poisonous plants simply by not eating any berries or wild plants. There are, however, "irritant" plants that can affect team members who touch them. All three can cause an irritating rash that may take one to three days to develop.

a. There are three irritant plants -- poison ivy, poison oak, and poison sumac:



1) Poison ivy is an irritant vine that grows close to the ground and along the trunks of trees. The vine has green almond shaped leaves in sets of three, and is prevalent in the spring through the fall.

2) Poison oak is very similar to poison ivy, with green, three leafed vines. However the leaves are broader and flatter.

3) Poison sumac is a similar plant, but the leaves can come in sets of nine to ten or more and there are small red berries attached to the plants.

b. To avoid exposure to these plants:

1) Cover exposed skin when in the woods (long sleeves, gloves, etc.).

2) Do not handle any plants or vines unnecessarily.

3) To avoid poison ivy and oak, remember the adage “IF LEAVES ARE THREE, LET THIS PLANT BE.”

4) If you are exposed to one of these plants, wash the affected area thoroughly to remove any resin from the plant on the skin. If you have resin on your clothes, change them as well.

3. Animals. Ground teams avoid any animals in wilderness areas.

a. There are certain animals that do represent a direct hazard to humans who disturb them.

1) Rodents. Raccoons, skunks, squirrels, rats and possums fall into this category. The main danger from these animals is that they carry rabies. In addition, skunks will use its scent sprayer if cornered.

a) Identification: All are four legged, small and furry. Skunks are black with a white stripe down the length of their backs.

b) Avoidance:

(1) Do not put you hands or feet under logs or into holes where these animals may have nests.

(2) Give all small, furry animals a wide berth. Do not attempt to pet, feed or provoke any animal in its own habitat.

2) Insects. Bees, wasps, mosquitoes, and fire ants are stinging insects that tend to plague searchers in the wilderness. To avoid these insects :

a) Be watchful for bees’ and wasps’ nests and fire ant hills, and do not disturb them.

b) Dispose of trash properly to avoid attracting insects.

c) If you are allergic to bees stings, carry your medication and ensure everyone on your team is aware of your condition and where your medication is.

d) The only way to avoid mosquitoes is with an appropriate insect repellent. Apply repellent to all areas of exposed skin, especially around wrists, ankles, arms, legs and neck. Do not spray repellent directly on your face; instead spray it on your hands and rub it on your face. Be careful with repellent on your forehead - sweat can make it drip into your eyes. You can spray repellent to the brim of your hat instead of your forehead.



Fire Ant



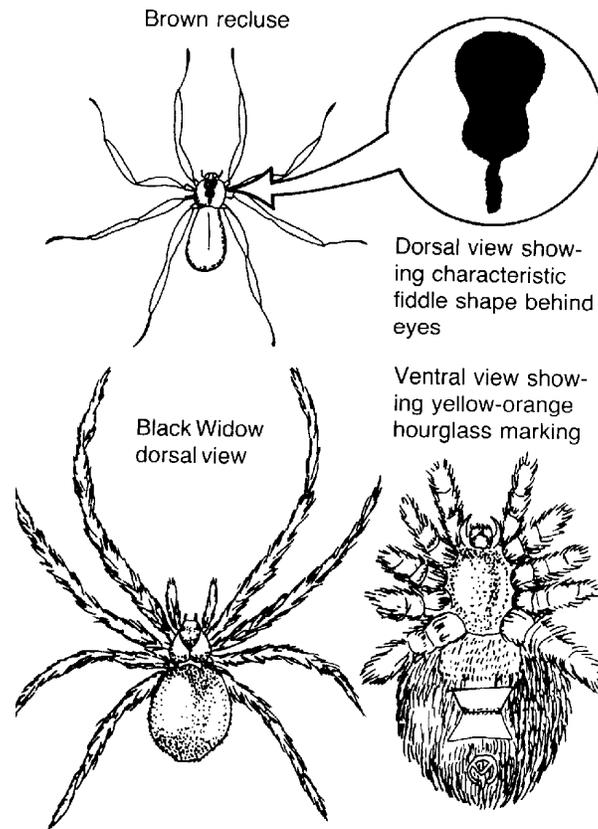
Honey/Bumble Bee



Wasp

3) Spiders. Spiders tend to be more of a nuisance than a danger. Only two spiders in North America are considered poisonous - the Black Widow and the Brown Recluse. The bite of either of these spiders is painful but rarely fatal. Approximately 5% of the population will have an allergic reaction to the bite and a few people may develop shock. Hypersensitive people will develop anaphylactic shock that can become life threatening.

a) Identification: The black widow is a ground dwelling spider found mostly in the Western United States. It is black with a yellow-orange hourglass marking on its underside. The brown recluse another ground dwelling spider. It is furry and brown, with a dark fiddle-shape mark on it's back right between the eyes.



Identification of Brown Recluse and Black Widow.

b) Avoidance:

(1) Don't put your hands anywhere you haven't looked first.

(2) Avoid contact with all spiders.

4) Snakes. Approximately 50,000 people per year are bitten by snakes in the US, with poisonous snakes accounting for 15% of these bites. Even with over 7,500 poisonous snake bites per year, fewer than 10 people die per year (less than the number from bee and wasp stings). There are two kinds of poisonous snakes in the US: pit vipers and neurotoxic snakes. Pit vipers are distinguished by the small pit in the snake's head directly between the eyes. This pit is essentially a heat sensor that the snake uses to find warm-blooded creatures. Pit vipers have long fangs, that are used to bite and inject poison into the victim. The poison is carried by the blood to other body tissues. Neurotoxic snakes are similar, but their poison affects the nervous system rather than the blood stream.

a) Identification. In the US, there are three common types of pit vipers (water moccasins, rattlesnakes, and copperheads) and one neurotoxic snake (coral snake):

(1) Water Moccasins. Water moccasins are dark snakes often called cottonmouths because of the bright white interior of their mouths when fully opened. They are usually found in lakes, ponds, swamps, and rivers.

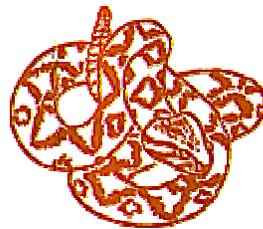


Cottonmouth / Water Moccasin

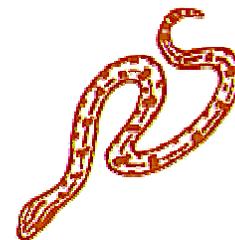
(2) Rattlesnakes. Rattlesnakes are usually dark or brown snakes noted for the rattle on the tail. The rattle is used to distract prey or as a warning when the snake is cornered. It can be easily heard when you get close to the snake. They are also known as diamondbacks because of the colored patterns formed on their backs.



Canebrake Rattlesnake



Eastern Diamondback Rattlesnake



Pigmy Rattlesnake

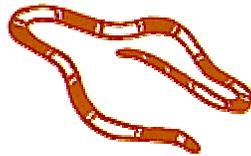
(3) Copperheads. Copperheads are brown-orange in color with alternating bands of color along their backs. Frequently, a strong "cucumber" smell is noted in the area.



Copperhead Snake



Copperhead Snake Closeup



(4) Coral Snakes. Coral snakes are small, with alternating black and red-orange bands along their length, separated by thin yellow bands. Its mouth is small, usually only wide enough to bite on a finger or a two.

Coral Snake

b) Avoidance:

(1) Avoid putting your hands and feet anywhere you haven't visually inspected, especially holes or under rocks and logs.

(2) Wear leather boots and gloves.

Additional Information

More detailed information on this topic is available in Chapter 4 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Obtain pictures (preferably color) of at least one hazardous plant, five hazardous animals, and a drawing/picture of a hazardous terrain feature.

Brief Student: Show the student the pictures, one at a time, and ask him to identify the hazard, and give two ways of avoiding it.

Evaluation

<u>Performance measures</u>	<u>Results</u>	
1. Correctly identifies 6 of the seven pictures	P	F
2. For at least 6 of the pictures, identifies two ways of avoiding each hazard	P	F

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.