

Have a Nature Question?

ASK AL

Al Grass has worked as a career park naturalist and ranger throughout BC. Now he is a well-known nature tour leader and photographer. Al especially likes birds, insects and spiders.



Dear Al - What can we do on a winter day?

Here's my idea - **FROZEN MUD PUDDLE FUN**

Why not bundle up in warm clothes and boots, take a friend and go out to look for frozen mud puddles. You will find that the ice has often formed beautiful patterns. Some of the patterns will be long wavy lines, as if someone has taken a pen and drawn it into the ice. Watch, too, for circles in the ice - sometimes one or two big ones; at other times "swarms" of little ones. The most beautiful patterns are long lines that form triangles on the ice.

If you find a place where it is hollow below the ice and there are holes for air to get in and out, you may find wonderful ice crystals. These are hoar frost, a sort of 'frozen fog'. Crystals can look like feathers, needles and many other fantastic shapes. If the sun is shining, you might even catch glimpses of bright colours, such as blue or red. Ice crystals act like tiny prisms, breaking up white light into its colours (red, blue, green, etc.). Hoar frost is also the jewel-like coating that can form on top of the snow.

Here's how to enjoy frozen mud puddles:

- use a magnifying glass to look at hoar frost crystals.
- take some photos
- draw pictures of the fabulous shapes and lines

Ask yourself:

- how are lines and circles formed in ice?
- what is hoar frost?
- what are the triangles on the ice?
- why do some crystals flash red or blue?

Check in your library for books about:

- weather - ice, snow
- water - what in the world is water?
- nature in winter
- winter travel - how to dress, hypothermia.

If you think you know why the triangles are formed on ice send me a note, I'd like to hear from you.

Your friend, Al Grass



Ask Al: Concentric: quinet, CC • Frozen puddle at snow's edge: withrow, CC • 40: verrant.james, CC

Puzzle p3: Beaver: cweed, CC • Bat: USDAgov, CC • Black Bear: Rosemary Taylor, B.C. • Black-capped Chickadee: Rob Alexander, B.C. • Douglas Squirrel: Jude Grass, B.C. • Garter snake: Connie Ho, B.C. • Frog: Road Travel America, CC • Grey Wolf: USFWS Pacific, CC • Lynx: hehaden, CC • Yellow-bellied marmots: scostello22, CC • Moose: wikipedia • Northwestern Salamander: wikipedia • Queen wasp: gailhampshire, CC • Raven: Mick Thompson1, CC • Snowshoe Hare: davejdoe, CC • Painted Turtle: Just chaos, CC • Western Toad: K Schneider, CC • Young Salmon: Roger Tabor USFWS, CC