LAKE HURON CENTRE FOR COASTAL CONSERVATION

ALVARS & BEDROCK

An Alvar is an area of 0-20 cm-deep soil grasslands atop flat, limestone bedrock with less than 60% tree canopy cover. Alvars on Lake Huron are internationally-recognized for their rarity, distinct ecological character, and exceptional variety of globally and provincially rare vegetation communities and species. Alvar ecosystems vary by season; in spring, most alvars collect water in shallow pools and bedrock pockets, some areas remaining flooded for weeks; By early summer, these pools evaporate, leaving shallow soils dry, many of the flowering plants turn brown. Within the southeastern coastal corridor of Lake Huron there are approximately 179 identified alvar sites. Some rare animals found in alvars include Eastern Massassauga Rattlesnake, Eastern Fox Snake, Mottled Duskywing and several endemic land snails.

ECOLOGICAL SERVICES PROVIDED BY ALVARS & BEDROCK:

- Feeding and breeding area for many endemic, at risk species, including Bobolink, Massassauga Rattlesnake, and land snails.
- Seasonally flooded pools lie adjacent to coastal wetlands, providing spawning habitat for amphibians.
- Deep cervices and cracks in alvars are used by snakes, bats, and rodents for foraging and nesting, often used for hibernaculum in winter months.

STRESSORS AND THREATS AFFECTING ECOSYSTEM HEALTH:

- Over-grazing from pastured animals crush rare vegetation.
- Motorized vehicles (e.g. ATV's) using alvars and bedrock can crush and kill native rare species of plant and animal, as well as disrupting shallow soils and critical water flow patterns.
- Removal of shallow soil overlay and rock extraction for mining purposes.
- Land-use changes to development for residential areas and transportation corridors.
- Invasive species establishing populations on alvars and bedrock threaten the delicate balance of endemic and rare species.
- Nutrients and pathogens from nearby septic systems, roadways, and developments toxify and artificially enrich water entering alvars during the spring freshet, causing enhanced plant and algae growth.

WHAT CAN YOU DO?

- Visit public alvar sites in your area to learn more about them, their seasonal fluctuations, and view wildlife and plants that inhabit these areas.
- Alvar sites degraded by invasive species could be rehabilitated by delicately removing non-native plants.
- Be aware and mindful when travelling on roads adjacent to alvar sites. These roads may be frequently crossed by endangered species that need protection.
- Habitat clean-ups will ensure garbage is removed which pose an entanglement or ingestion threat to wildlife.

FUN FACTS

443.5 hectares of Alvar and bedrock exist in the southeastern coastal corridor.

There are at least 22 vascular plant species, 4 species of lichens, 5 mosses, 4 reptiles, 7 molluscs and numerous insects found on the alvars of the Bruce Peninsula that are globally or provincially rare.

OTHER RESOURCES:

The Lake Huron Centre for Coastal Conservation

www.lakehuron.ca

Social @coastalcentre

the Coastal Centre

The Lake Huron Centre for Coastal Conservation

Fact sheets produced as part of the Coastal Action Plan for the Southeastern Shores of Lake Huron

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TAKE ONLY PICTURES...

Alvars and bedrock shores are beautiful places worthy of a visit. If you are visiting an alvar, stay on paths or boardwalks, and leave all plants and animals alone. Do not remove any plants, animals, or rocks from the alvar site. Many species on alvars are rare and endemic to the area, and require protection.

PULL A WHEELIE:

ATV's and motorized vehicles are fun to use, but harm the shallow soils on alvars and bedrock. Close any current trails through alvar and bedrock sites by rerouting them to less-sensitive areas.

GENTLE PROTECTION:

Invasive species can disrupt the delicate balance of flora and fauna on alvars. Carefully removing non-native species, such as Spotted Knapweed, will help keep native populations of plant and animal safe from being out-competed.

THE MORE YOU KNOW:

Alvar and bedrock areas are largely misunderstood, or are unknown to passers-by. Raising awareness about sensitive alvar ecosystems will improve our understanding of their ecosystem services and the plants and animals that live here.