

# COBBLE SHORELINES

Cobble beaches are rare on the shores of Lake Huron, consisting of rounded rocks and stones larger than 5cm in diameter. These cobbles, made of Silurian, Ordovician, and Devonian limestone, exist only in Georgian Bay, Lake Huron and Lake Michigan. Storm waves re-shape cobble shorelines, creating terraced beach areas, devoid of vegetation (<5%) but teeming with animal life. Invertebrates like Crayfish, Mayfly, and Stonefly species support rare and sensitive predatory animals like Gulls, Terns, and Killdeer, Blanding's Turtle, and Eastern Massasauga Rattlesnake. Cobble shores are critical seasonal spawning areas for predator fish (e.g. Whitefish and Lake Trout). Cobble shores support these important species, holding up the Lake Huron food-web. The steep, rocky shorelines are often used for recreation, but their ecology is largely misunderstood, causing an influx of stressors and threats.

## ECOLOGICAL SERVICES PROVIDED BY COBBLE SHORES:

- 💧 Cobble beaches are valuable seasonal spawning and migration areas for fish (e.g. Whitefish, Lake Trout) and nesting areas for birds (e.g. Sandpipers, Killdeer, Piping Plover).
- 💧 Cobble shores are flood mitigation areas, absorbing wave energy and protecting inland habitats from erosion.

## STRESSORS AND THREATS AFFECTING ECOSYSTEM HEALTH:

- 💧 Invasive species (e.g. Spotted Knapweed, Common Reed).
- 💧 Vehicular use (e.g. ATV's) compact cobbles and can introduce invasive species.
- 💧 Development reduces habitat area or removes shoreline material (cobbles).
- 💧 Vegetation removal causes reduction in habitat for animals (e.g. pollinator habitat, cover from predators).
- 💧 Plastic pollution and garbage litter resides between cobbles much longer than other environments, compounding toxins and chemicals.





## WHAT CAN YOU DO?

- Beach clean-ups are a great way to ensure garbage is removed which can pose an entanglement or ingestion threat to wildlife.
- Relocate structures off cobble beaches to reduce ground compaction and potential for structures to wash into the lake during storms.
- Protect vegetation on cobble shores, as it provides habitat for native species.
- Remove any invasive species from cobble shores, including *Phragmites australis*, Spotted Knapweed, Sweet White Clover, and others. Learn to identify these invasive species.
- Keep turf grass away from cobble beaches. It attracts geese, adding excess nutrients to the beach from their feces.

### FUN FACTS

On cobble beaches, you can find fossils from ancient sea life pressed into the stone!

Cobble beaches have some of the highest density of midges, stoneflies, mayflies, and other invertebrates, creating essential feeding areas for spring migrations of warblers and other bird species.

Cobble shores are popular areas for Crayfish. There are 10 species of Crayfish in Ontario, with only 1 being non-native (Rusty Crayfish).

## OTHER RESOURCES:

The Lake Huron Centre for Coastal Conservation

[www.lakehuron.ca](http://www.lakehuron.ca)

Social @coastalcentre

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The Lake Huron Centre for Coastal Conservation

## LIVE AND LEARN:

There is a lack of awareness of the value of cobble beaches, and a lack of appreciation for the role they play on Lake Huron's coast. Visit a cobble beach near you and take time to watch the wildlife using the shore!

## PROTECT ME, PROTECT YOU:

Cobble beaches naturally armour the shore against erosion. Don't remove or alter cobbles on the beach or in the nearshore waters.

## PICK ANOTHER PLANT:

Native vegetation growing on cobble beaches are often rare plants relied upon for feeding and protection by other animals. Don't remove plants from cobble shores.

## NO PLACE FOR WASTE:

Garbage tucked between cobbles can potentially stay that way for many years, leaching any toxins or chemicals into nearshore waters, posing a risk of entanglement and ingestion for animals. Make sure to take garbage with you when you leave cobble shores, or doing regular beach clean-ups help keep nearshore waters free from plastic and inorganic waste.

