

# PROTECTING OLIPHANT'S COAST

Fall 2009

## Coastal Stewardship

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### Fen Facts

- Great Lakes coastal fens are a globally imperiled ecosystem.
- Coastal fens are wetlands that help to purify water by filtering pollutants.
- Oliphant's coastal fens are vulnerable to human impacts.
- Oliphant's fen beaches are habitat for several Species at Risk.

Oliphant's coastline is a unique environment that is significant because of its physical and biological character.

Oliphant's beaches (the area west of the Shore Road) is a gently sloping beach that is composed of a wetland type known as a coastal fen, as well as dune ridges supporting dune grassland species.

Coastal fens are rare both from a global and provincial perspective. Recent studies of rare vegetation communities by The Nature Conservancy, in the Great Lakes basin, have identified them as **globally imperiled** communities (G2). In Ontario, coastal fen types are ranked as **extremely rare** (S1). This rank is based upon considerations such as the estimated number of occurrences, the total area of the occurrences, and the range of the community within the province, along with considerations such as protected sites and threats. (Natural Heritage Information Centre, 1995; Ontario Great Lakes Coastal Wetland Atlas, 2003).

These wetlands have important ecological, economic and social functions and values. They are an important part of the biodiversity of coastal Lake Huron. About eighty

percent of fish species are found in nearshore areas for some part of the year and depend directly on coastal wetlands for some part of their life cycle (eg. feeding, shelter, spawning, nursery, and dispersal of young).

Lake Huron coastal fens also provide nesting and staging areas for migratory and nesting birdlife, including wading and shorebirds.

In addition, Lake Huron wetlands also provide important habitat for amphibians and reptiles. The amphibians use them for breeding, nursery and feeding. Reptiles nest on uplands, but many species spend the remainder of their life cycle in these wetlands.

Coastal fens also provide crucial societal values including, improvement to water quality, flood reduction and shoreline protection, recreational use, landscape diversity and carbon storage.

If we manage our activities wisely, we can ensure that the ecology of the beaches at Oliphant remain intact for future generations, and the special habitat they provide for rare and at-risk species can continue to be sustained.



*Aerial of the Oliphant coast—2006  
(source Bruce County)*

# Beach Processes

The changing physical processes responsible for the ecological character of Oliphant's coast needs to be recognized in stewardship planning efforts.

Coastal fens are dynamic environments. Since they can experience fluctuating lake levels on Lake Huron of as much as 1-2 metres, their size and extent can change, increasing in extent during low water years, and shrinking during periods of high water.

Additionally, high water years kill woody plants which become established in low water years. This 'flooding' during high lake

levels is a primary factor in maintaining the open, meadow-like conditions.

In addition to fluctuating water levels, coastal fens are also subjected to wave energy. This washes away organic accumulations, and deposits new layers of sand. Although impacted by this deposition, these coastal fens contain extremely dense seed-banks. These seedbanks allow the vegetation to

replace itself during low water periods.

Lakeward flowing ground-water is another part of the beach hydrology that can be altered by human activity, affecting local ecology.

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# Plants and Animals at Risk



**Tuberous Indian-plantain**  
(*Arnoglossum plantagineum*)  
Status: Special Concern  
Provincially and Nationally

Oliphant's coastal fen has an enormous diversity of plants and animals. The physical characteristics of this environment provides the ideal habitat for some of Ontario's rarest species, some of which have been designated as Species at Risk.

A "species at risk" is any naturally-occurring plant or animal in danger of extinction or of disappearing from the province.

Several Species at Risk occur on the beaches at Oliphant, including plants like Dwarf Lake Iris, Tuberous Indian Plantain, and animals like the Piping Plover, Eastern Massasauga Rattler and Monarch Butterfly.

The main threat to these species is human disturbance, including trampling, destruction from motorized vehicles, and habitat alteration from development and building structures in beach areas.



**Dwarf Lake Iris**  
(*Iris lacustris*)  
Status: Threatened  
Provincially and Nationally

**Piping Plover**  
(*Charadrius melodus*)  
Status: Endangered  
Provincially and Nationally



## Threats to Oliphant's Coast

Since coastal fens occur in prime areas along shorelines, they are under intense pressure, primarily from cottage development and related recreational uses. However, municipal road and drainage improvements can also impact these sensitive areas.

Much of this vegetation has already been lost in Ontario to these human factors. (Natural Heritage Information Centre, 1995). At Oliphant, the wide flat expanses of the coastal fen

appears to have been mistaken as grassy fields that people would drive across to reach the shoreline. As a result, serious impacts to the fen and dunes has occurred. Much of this has happened as the result of a lack of awareness of how significant this ecosystem is, and how sensitive it is to human disturbances.

But human disturbance has occurred before...what's changed? The use of Lake Huron's coast has intensified in recent years, includ-

ing at Oliphant. More users coming for recreation and tourism purposes. Most are unaware of the vulnerabilities of Oliphant's coast. A changing, warmer climate, expected for our area, will increase the beach season, imposing greater demands on the coastal environment in the future.

In addition, invasive plants, like *Phragmites australis* (Common Reed) have appeared in and around

Oliphant's coast. Vehicle use in natural areas, with *Phragmites* seeds and root fragments getting caught in treads and transported to other areas, is one of the ways this plant is spreading.

You can help by protecting coastal vegetation by limiting access to designated beach access routes designed to minimize disturbance. Remember that this shore provides natural shore protection and is habitat for unique flora and fauna.



Access to the shore by driving across the fen can result in long term damage, destroy Species at Risk, and contribute to the spread of invasive species.



The invasive plant *Phragmites australis* grows in thick monocultures, overtaking native species. Its rapid grow rate can become hard to control once it becomes established.

Uncontrolled use of vehicles at Oliphant's beaches have been responsible for much of the degradation of the coastal fen and dunes.

Disturbance to native plants and soil provides an opportunity for invasive species like *Phragmites australis* to take over.



Tire ruts can fragment the fen ecosystem displacing plant species and changing local hydrology.



All-terrain vehicles can be very destructive to the coastal fen, and to Species at Risk. These vehicles are also responsible for the spread of *Phragmites*.



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## Community Stewardship

Friends of Oliphant Coastal Environments (FOOCE) seek to preserve the unique fen, alvars and dune grassland ecosystems of the Oliphant mainland community and adjacent Fishing Islands. FOOCE volunteers have been dedicating their talents, time and energy to ensure that the coastal environments of the Oliphant community are preserved so they will be here for future generations to appreciate and enjoy.

FOOCE requested the services of the Coastal Centre to assist in the development of a Stewardship Plan for the Oliphant coast. The Centre employs a science-based approach to conservation planning that takes an ecosystem perspective.

Development of a stewardship plan will:

- Conduct an ecosystem survey of the Oliphant coast;
- Seek community involvement;
- Develop recommendations for future stewardship efforts at Oliphant.

Updates on this plan will be posted on the FOOCE and Coastal Centre websites (see below).

## What Can You Do?

*People who enjoy Oliphant's coast play an important role in beach conservation:*

- Make sure you use the established pathways so that your impact is kept to a minimum.
- Take special care not to damage any beach vegetation.
- Learn to recognize species at risk. Don't disturb the plants, and don't pick their flowers.
- Recreational activity should be focused on the open, un-vegetated sandy parts of the beach, away from the beach vegetation.
- Keep your waterfront in a natural state. Nature has created a balanced equilibrium. Do not remove beach vegetation or alter the beach.
- Avoid driving vehicles onto the coastal fen or dunes. Vehicles can destroy vegetation and the habitat of numerous plants and animals that call the Oliphant beach their home.
- You are in a dynamic coastal system where natural shoreline change is normal. Interfering with this beach ecosystem can have damaging consequences.
- Make sure any garbage you create you take home with you. Animals can ingest, or become entangled in, plastics and other materials.

For more information on Oliphant Stewardship, visit:

**Friends of Oliphant Coastal Environments**  
website—[www.fooce.org](http://www.fooce.org)

Or

**Lake Huron Centre for Coastal Conservation**  
website—[www.lakehuron.ca](http://www.lakehuron.ca)

### References

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