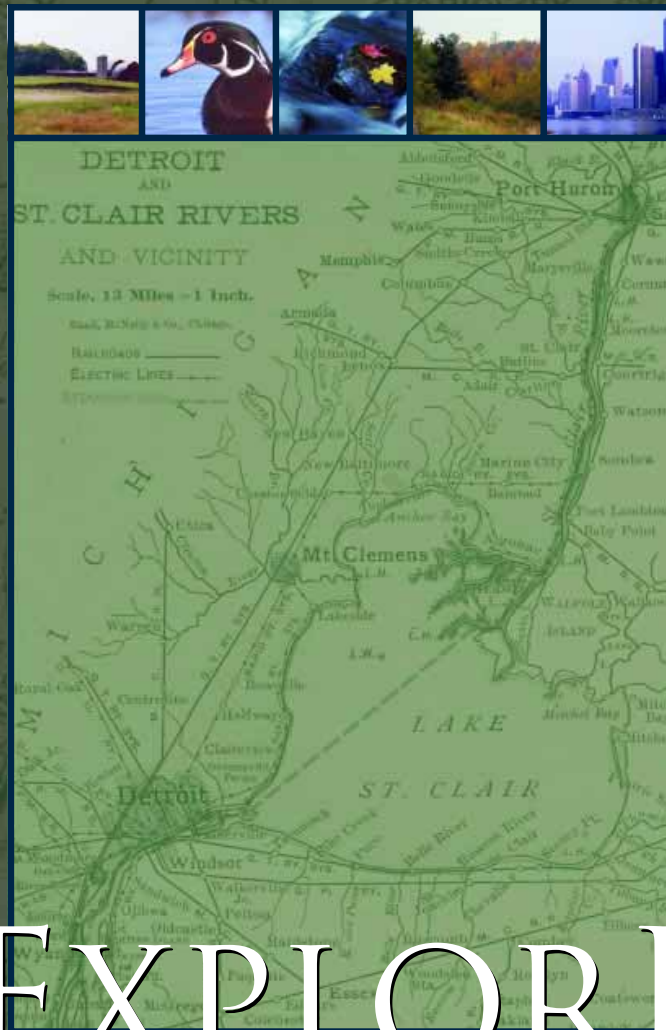


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Thank you to the following contributors who supported the publication of this book.



EXPLORE

OUR NATURAL WORLD

A BIODIVERSITY ATLAS OF THE
LAKE HURON TO LAKE ERIE CORRIDOR

"NATURE SEEMS TO HAVE REFUSED DETROIT
 NOTHING THAT CAN CONTRIBUTE TO MAKE A
 COUNTRY DELIGHTFUL; HILLS, MEADOWS,
 FIELDS, LOFTY FORESTS, RIVULETS,
 FOUNTAINS, AND RIVERS AND ALL OF THEM
 SO EXCELLENT IN THEIR KIND AND SO
 HAPPILY BLENDED, AS TO EQUAL THE MOST
 ROMANTIC WISHES. THE ISLANDS SEEM
 PLACED IN THE RIVER ON PURPOSE TO
 ENHANCE THE BEAUTY OF THE PROSPECT;
 THE RIVER AND LAKE ABOUND IN FISH,
 THE AIR IS PURE, AND THE CLIMATE
 TEMPERATE AND EXTREMELY WHOLESOME".

HENRY R. SCHOOLCRAFT, 1820
 DESCRIBING THE DETROIT AND WINDSOR REGION.

LOU TERRY

EXPLORE

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*This book is dedicated to all
 of the plants and animals
 that live in this region
 and the people who have yet to
 learn about them.*

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PREFACE

In the spring of 2002 we embarked in partnership on the development of a Biodiversity Atlas of the Lake Huron to Lake Erie Corridor, which has focused on the watersheds of the St. Clair River, Lake St. Clair and the Detroit River. This activity has resulted in a first – the publication of an Atlas which documents the natural heritage treasures and the human resources of this area in which we reside and share together. The Walpole Island First Nation lies at the heart and the confluence of these watersheds. It is our home and our lifeblood. As stewards of these lands and waters since time immemorial, it is right and fitting that we have participated in this Biodiversity Atlas project. Indeed, we have been most happy to have the opportunity to do so and to share equitably our indigenous knowledge and values to assist others in caring for and preserving this area.

This decision to share our traditional knowledge is significant and should be briefly explained. For many hundreds of years, our Place, Bkejwanong-the Place where the Waters divide-has been the soul of Indian Territory. We have remained steadfast in our stewardship and caring for our lands and waters in spite of depredations and impacts made on the landscape surrounding us. For many years we have been subjected to, among other impacts, pollution upstream from chemical plants near Sarnia. Our citizens had campaigned alone for many years to get zero discharge since it was our drinking water that was affected and also impacted the flora and fauna and animals and birds that lived with us in our Territory. Our environmental legacy won us a prestigious United Nations award in 1995.

We have always used traditional ecological knowledge to save ourselves and our neighbours. We have survived in this our place for thousands of years. In the late twentieth century, our neighbours began slowly to learn from us and our ways in terms of mutual respect and in equal partnerships. What is really significant here is that we bring to the table a willingness to share our knowledge which includes both our ways of knowing as well as the traditional values which are part and parcel of our understanding of how our watershed system works and how it can be enhanced as we move forward in the future together. The significance of stewardship of First Nations was succinctly highlighted more than fifteen years ago in the 1987 Bruntland Report, “Tribal and indigenous peoples will need special attention as the forces of economic

development disrupt their traditional life-styles-life styles that can offer modern societies many lessons in the management of resources in complex forest, mountain, and dryland ecosystems. Some are threatened with virtual extinction by insensitive development over which they have no control. Their traditional rights should be recognized and they should be given a decisive voice formulating policies about resource development in their areas.” The Royal Commission Report on Aboriginal Peoples in 1996 echoed these statements. We are now seeing catastrophes across this planet which are directly related to climate changes and global warming. Our Bkejwanong Territory is still hemmed in by industrial developments in the twenty first century. But all is not doom and gloom.

Our traditional knowledge is a rich storehouse which we are prepared to share in an equitable way. It has its underpinnings our values. What are they? Bkejwanong is endowed with a unique ecosystem of wetlands, Carolinian forests and prairie grasslands. We are rich in fish and wildlife. We have a strong cultural heritage that is celebrated by our people. Traditional knowledge and values means that we have to learn how to live in a holistic way with all that interconnects and surrounds us. It is imperative, if we are going to continue to act as stewards and care responsibly for our lands and waters, that we have a dialogue, consensus and equity as we move forward towards building a sustainable future together. That is as it should be; we are all here to stay.

Indeed, the publication of this Biodiversity Atlas truly is a watershed in itself. Until now, there have been a number of comprehensive descriptions of this area but none have included the diversity of the Bkejwanong Territory linking the people and the natural heritage in such a diverse and imaginative way. We are very proud to be making a valuable contribution to this project and to the publication of this Biodiversity Atlas which marks a stepping stone to the future.

Dr. Dean M. Jacobs
Executive Director
Nin.Da. Waab.Jig
Bkejwanong First Nations

November 7, 2002

DESCRIPTION OF THE REGION

This Biodiversity Atlas tells the story of the natural communities found in the Lake Huron to Lake Erie Corridor.

The Corridor is made up of the St. Clair River, Lake St. Clair and Detroit River, as well as the watersheds of southwestern Ontario and southeastern Michigan that drain into these great waterways. Water in the Corridor flows from the mouth of Lake Huron through the St. Clair River, Lake St. Clair and the Detroit River, into Lake Erie. The tributaries, creeks, streams and drains in the watersheds connect the surrounding lands to the Corridor.

This Atlas is organized according to elevations above sea level - from lower to higher - from the open waters and shorelines to the shoreline and upland areas, and finally to the ecosystems of the interior lands that drain into the Corridor.

A wide variety of life forms - biodiversity - make the Corridor unique. The glacial history, climate, soils and water resources have created a landscape that is home to an incredible diversity of natural communities: forests, savannas, grasslands and wetlands. Within these natural communities live species that have global ecological significance.

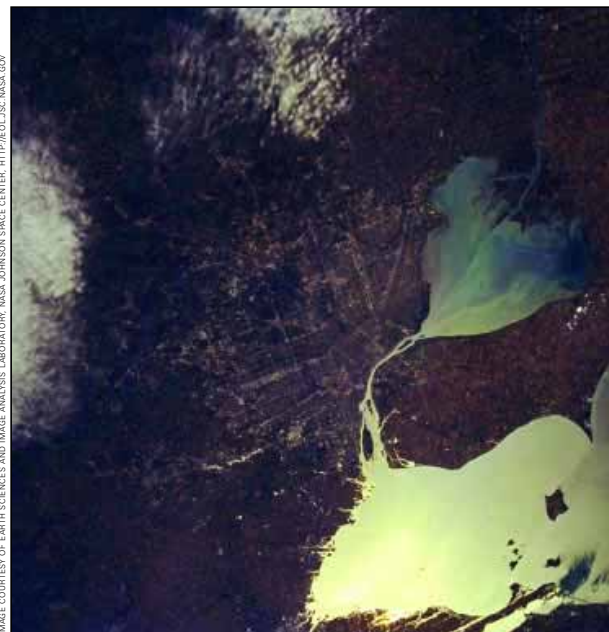


IMAGE COURTESY OF EARTH SCIENCES AND IMAGE ANALYSIS LABORATORY, NASA, JOHNSON SPACE CENTER, HTTP://OLJ.SC.NASA.GOV

A goal of everyone involved in producing this Atlas is that readers will gain a better understanding of this amazing region, and a desire to play an active role in caring for it.

Hundreds of endangered, threatened and special concern species live in the Lake Huron to Lake Erie Corridor.

The greatest threat to these species at risk is the loss of habitat. However remnants of original ecosystems, like pieces of a patchwork quilt, still exist. Every community has places that can be preserved, enhanced or restored to support native biodiversity.



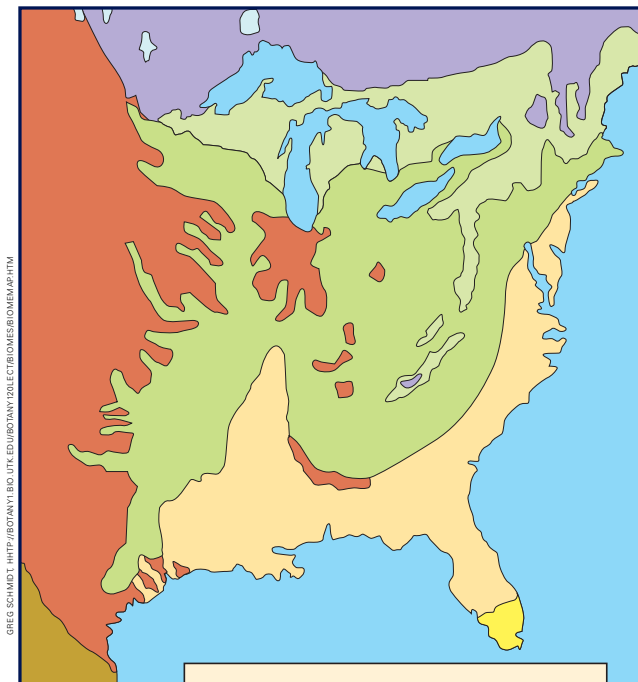
LANDSCAPE ECOLOGY

The Lake Huron to Lake Erie Corridor lies within the northern limits of the Eastern Deciduous Forest Region. The Corridor is regarded as part of the "Carolinian Life Zone" because of its link with forest communities located farther south. Many of the species found here are at the northern boundaries of their range. The Corridor also is a transition area between the hardwood forests of the east and the prairies of the west.

A natural community is a distinct assemblage of plants and animals that live together in a common habitat. One of the most important factors defining a natural community is the presence or absence of water. A natural community's composition can be altered by disturbances in the landscape, such as invasive species, alterations in groundwater flow and fragmentation resulting from land development.

Natural Communities of the Lake Huron to Lake Erie Corridor

NATURAL COMMUNITY	TYPE
Great Lakes Coastal Marsh	Wetland
Marsh	Wetland
Wet Meadow	Wetland
Prairie Fen	Wetland
Bog	Wetland
Shrub Swamp	Wetland
Conifer Swamp	Wetland
Hardwood Swamp	Wetland
Floodplain Forest	Wetland
Beech-Maple Forest	Upland
Oak-Hickory Forest	Upland
Oak Barren	Upland
Tallgrass Prairie	Upland
Oak Savanna	Upland



GREG SCHMIDT, HTTP://BOTANY.BOL.UK.EDU/BOTANY/ELECTRONICS/BIOMES/BIOMAP.HTM

Although the Lake Huron to Lake Erie Corridor does not boast dramatic topography, its vegetation is a mosaic of natural communities. This mosaic is a result of small physical changes in the landscape created by the advance and retreat of glaciers long ago. The glacial features created different physical characteristics in the landscape, such as slope, aspect, topography and soil type. These variations have led to

many distinct associations of plants and animals.

This book describes many types of natural communities as if they are separate units, but they actually exist in a continuum - the grassland, savanna, forest and wetland all blend into one another, each determined by subtle changes in the topography, soils and water conditions.

BIODIVERSITY WORTH PROTECTING

When considering biodiversity conservation, most people

think of tropical rainforests around the equator.

However right here in the middle of North America,

the Lake Huron to Lake Erie Corridor is home

to a biodiversity that is unlike anywhere else in the world.

With its fascinating open waters, lush freshwater wetlands along the coast, tallgrass prairie and savanna ecosystems near the shoreline, and woodlands that have existed across much of its inland area, the Lake Huron to Lake Erie Corridor is a uniquely beautiful part of Earth.

What happens in this region can have an impact on other parts of the world. The Corridor provides important habitat for more than 90 species of migratory birds as they fly in autumn and spring to destinations as far away as the Arctic and South America. Thus, loss of habitat here affects not only resident wildlife but also those traveling through from elsewhere.

The Corridor possesses certain qualities that have global significance. For example, Lake St. Clair and the Detroit River have some of the best fisheries for smallmouth bass and muskellunge in the world.

Another example of a globally significant feature is the St. Clair River Delta, which

is one of the largest freshwater deltas on Earth. The Great Lakes coastal marshes have a biological productivity rivaling that of the tropical rainforests. Despite significant losses of these coastal marshes, the Corridor still has enough to be considered one of the largest and most productive feeding and spawning grounds for ducks and fish in the midwestern United States.

Moving away from the water, lands bear tallgrass prairie and oak savanna ecosystems. The luxuriant growths of grasses and wildflowers in prairies contain some of the Corridor's greatest biodiversity, with as many as 200 plant species inhabiting a single remnant prairie. Today, less than one percent of the original prairie and oak savanna communities exist in Michigan and Ontario. The extensive loss of these special ecosystems and their unique character leave them at risk of global extinction.

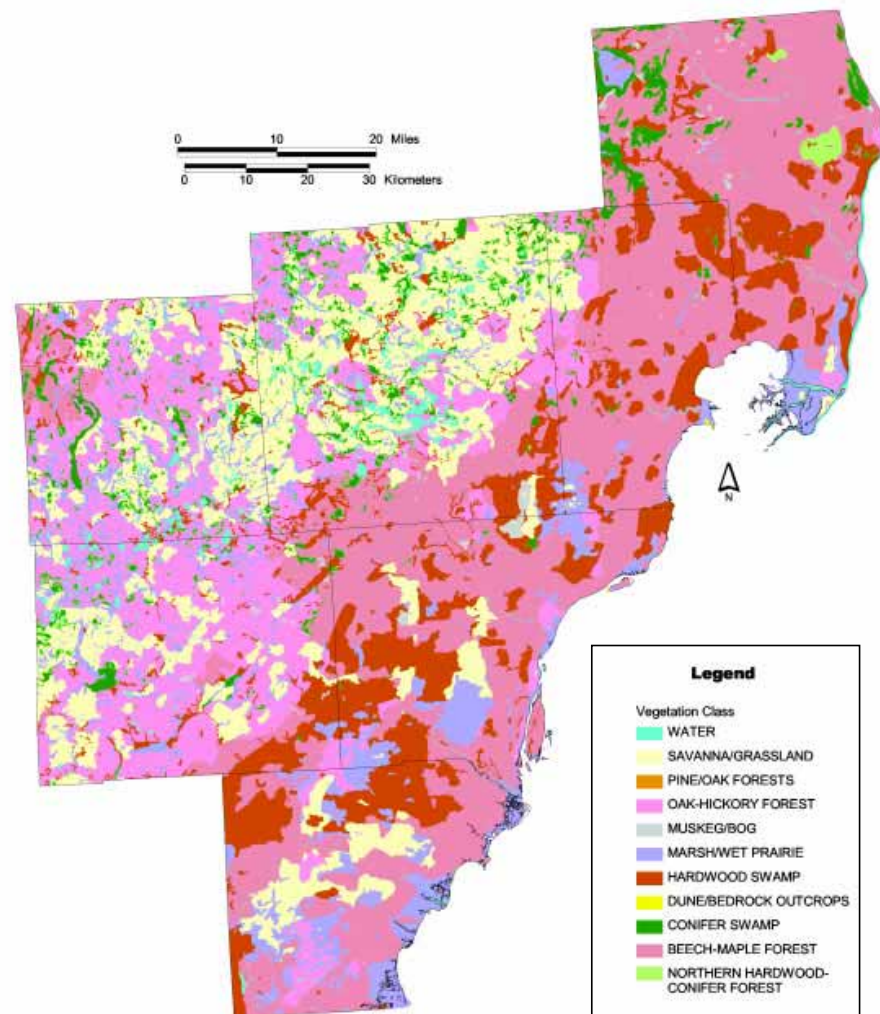
Abundant natural resources were the foundation of the economic prosperity

of southern Michigan and southwestern Ontario. Unfortunately, much of this natural heritage has given way to development. Habitat loss from human settlement has resulted in the extirpation of many wildlife species from the region. Buffalo, elk, moose, black bear, lynx, bobcat and grey wolf all disappeared in the middle of the last century. Viewing the landscape now, it is hard to imagine that this area was once a great wilderness.

Despite humans' dramatic alteration of the landscape, wildlife continues to persist. Fortunately there are protected lands that contain examples of the Corridor's rich natural heritage. Look to Appendix A for a map of protected areas in the region.

Learn more about the region's natural communities and how you can help protect them in the pages that follow.

SOUTHEASTERN MICHIGAN VEGETATION, CIRCA 1800



Michigan Natural Features Inventory, Michigan State University Extension, Data Source: Vegetation circa 1800 of Michigan, digital dataset, Michigan Natural Features Inventory.