Insect Identification

Butterflies


☐ Monarch Butterfly


☐ Viceroy Butterfly


☐ Cabbage Butterfly (white)


☐ Common Sulfur (yellow)


☐ Alfalfa Butterfly


☐ Tiger Swallowtail


☐ Black Swallowtail


☐ Spicebush Swallowtail


☐ Red Admiral


☐ Painted Lady


☐ Mourning Cloak

Moths


☐ Sphinx Moth (tomato hornworm)


☐ White Lined Sphinx Moth

Insect Identification

Other Insects


☐ Dragon Fly


☐ Damsel Fly


☐ Flying Grasshopper


☐ Non Flying Grasshopper


☐ Katy Did


☐ Honey Bee


☐ Bumble Bee


☐ Yellow Jacket


☐ Black Ant


☐ Fly

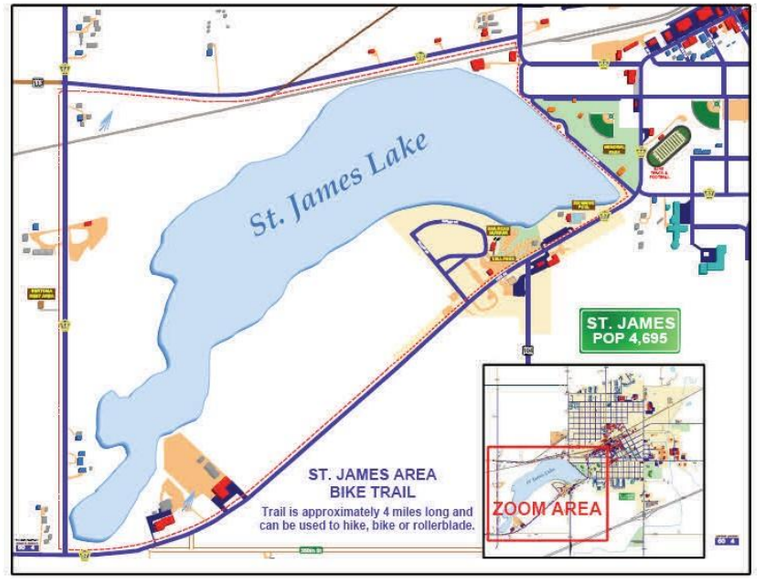

☐ Mosquito


☐ Japanese Beetle


☐ June Bug


☐ Lady Bug


☐ Asian Beetle



This Brochure is provided by the St. James Area Chamber of Commerce Conventions and Visitors Bureau

516 1st Avenue South
St. James, MN 56081
507-375-3333
888-859-0813
www.stjameschamberofcommerce.com

If while on your adventures you find items that are not listed on this brochure please call us, or stop by the Chamber of Commerce and we will collect "data" from you for our "Trail Board". We may ask for you to identify what you see, as we want to be sure that we have the correct name and photo attached to the brochure for future trail exploration adventures!

Thank you, and happy trails to you!

Date	What I saw on the Trail	Where I saw it on the Trail
☐		
☐		
☐		
☐		
☐		

Have you spotted me on your adventure? Let us know!


☐ Painted Turtle


☐ Eastern Cottontail Rabbit


☐ White Tail Deer

St. James Bike Trail

4 Miles of Paved Trail



Keep your eyes open to the sights of nature...

Enclosed is a brief inventory of plants, animal, and rock that can be seen and identified along the St. James Bike Trail.

This "check-off" form is just the beginning of what you will see on your travels around the lake. If you find items of interest that are not listed, let us know and we will add them at a later time.

Please use this brochure as a "getting to know nature" identification tool, and discover the diversity our trail beholds. Blank spaces have been left for your notes of features that you have seen, but are not listed on the form.

Plant Identification
Flowers

☐ Dandelion
Not Native

☐ Bindweed
Not Native

☐ Thistle
Not Native

☐ Golden Rod
Not Native

☐ White Clover
Not Native

☐ Wild Asparagus
Native to MN

☐ Sweet Clover
(yellow or white)
Not Native &
Invasive

☐ Mullein
Not Native

☐ Red Clover
Not Native &
Invasive

☐ Virginia Creeper
Native to MN

☐ Alfalfa
Not Native

☐ Parsnip
Not Native &
Invasive

☐ Cattail
Native to MN

☐ Vervain
Native to MN

☐ Milk Weed
Native to MN

☐ Curley Dock
Not Native

☐ Wild Rose
Native to MN

☐ Birds Foot Trefoil
Not Native & Invasive

Plant Identification
Grass

☐ Foxtail
Not Native &
Invasive

☐ Prairie Cord Grass
Native to MN

☐ Big Bluestem
Native to MN

☐ Timothy
Not Native

☐ Brome
Not Native &
Invasive

Grasses, Wild Flowers and Weeds go through various stages of growth and development during their life cycle. The photos we show here are examples of them in their "flowering" stages, but they may look very different when you are looking for them on your trail adventure.

One of the exciting facets of nature discovery is finding a pattern, whether it is a leaf, or a stem, or bloom that sets each species apart from its cohabitants so that you are able to watch the changes it makes during its life cycle.

Bird Identification
Commonly Seen

☐ American
Robin

☐ Canadian
Goose

☐ Crow

☐ Mallard
Duck

☐ Blue Jay

☐ Ring Neck
Pheasant

Bird Identification
Commonly Seen

☐ Red Winged
Blackbird

☐ Killdeer

☐ Yellow Headed
Black Bird

☐ Western
Meadowlark

☐ Common
Grackle

☐ Mourning
Dove

☐ House Sparrow

Less Commonly Seen

☐ Northern
Oriole

☐ American
Coot

☐ American
Goldfinch

☐ Lesser Scaup
(Bluebill)

☐ Purple
Goldfinch

☐ Wood Duck

☐ White Breasted
Nuthatch

☐ Northern Shoveler
(Spoon Bill)

☐ Northern
Pintail

☐ Red Breasted
Nuthatch

☐ Canvasback

☐ Northern
Flicker

☐ Pied-billed
Grebe
(Hell Diver)

☐ Red Headed
Woodpecker

Bird Identification
Less Commonly Seen Continued

☐ Downy
Woodpecker

☐ Great Blue
Heron

☐ Belted
Kingfisher

☐ American
Bittern

☐ Great Egret

☐ Swamp
Sparrow

☐ American
White Pelican

☐ Grasshopper
Sparrow

☐ Brown Headed
Cowbird

☐ Dark Eyed
Junco

☐ White Throated
Sparrow

☐ Red Tailed
Hawk

☐ Eastern
Kingbird

☐ Brown
Thrasher

Kid Challenge:

Some of these birds are also seen in town, do you have them visit your house? If you have feeders, watch them to see if any of these birds visit!

Minnesota Geology

Minnesota is best known for it's 1000's of lakes, rolling farmland, low areas of the northwest, rocky northeast and valley shaped southeast. Geologists say that in prehistoric times, Minnesota had mountains, volcanoes (as close as Franklin), oceans (shark teeth, coral, trilobites and squid fossils are relatively common) and glaciers. Since glaciations was the most recent event, that action formed most of the surface features that we see today.

Southeast Minnesota is known for its sandstone and limestone (with fossils). Northeast Minnesota has a variety of rocks, most of which are igneous. Our part of the state has occasional outcroppings of quartzite and with the help of eroding waters, metamorphic and igneous rocks in the Minnesota River Valley. New Ulm, Mankato and St. Peter provide us with sandstone and limestone features.

Here in Watonwan County, we have only one small area where bedrock is found. However, granite is found several hundred feet below the entire county.

Glaciers and glacier melt water have greatly influenced our soil types. Along with the transported soil, we have received a great variety of large rocks (very few farmers say "thanks a lot"). The 20 ricks at this site were all a result of glaciations. Ice and wa- ter shaped them, polished them, flattened parts of them and even put small scratches in them. All rocks were found on the south side of the Cottonwood River, south of Sleepy Eye.

Types of Rocks

1. Igneous Rocks: Rocks formed from the cooling of liquid rock.
   A. Intrusive: cooled below the surface. This extra time allows crystals to grow larger.
   B. Extrusive: cooled at the surface. This rapid cooling produces small grains.

2. Metamorphic Rocks: Rocks changed by the action of heat and pressure. This action may produce new minerals, flow characteristics, or a type of mineral alignment. No melting occurs as with the igneous rocks.

3. Sedimentary Rocks: These rocks show grains or fragments obtained from other rocks. Some smaller grains may be difficult to see (shale, which is mud, may have very small particles while a person can feel sand in sandstone).

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Geology Study on the Trail
Rocks found at the Sertoma Shelter

Sedimentary Rocks

Limeston
e
Fine sediments of calcium carbonate (like in Tums). Limestone bubbles in acid while fine sandstone or shale will not. Fossils found here?

Oolitic Limestone
Add a feature to the rock and you get a new name. Here, fragments produced by water-dwelling organisms have resulted in "balls" in the limestone.

Metamorphic Rocks

Quartzite
Quartz grains of sandstone have been re-crystallized or cemented with silica and the help of heat. The color may vary from white to pink to purple.

Gneiss
Layering (foliation) of dark miner- als make it a gneiss (nice).

Gneiss
A wavy mineral alignment is often found in gneiss. The bands are often light and dark.

Mica Schist
The large amount of dark mica (biotite) give a special name to this schist. There are many types of schist just like there are many types of gneiss.

Morton Gneiss
Sometimes called granite-gneiss because it used to be granite, and yes, it could have come from Morton. Found as a building stone (First Presbyterian Church, and other store fronts in St. James).

Migmatite
This is more of a condition than that of a rock name. Twisted layers of granite and biotite schist. This is almost like saying "Morton Gneiss".

Igneous Rocks

"Basalt-Like"
Very similar to basalt, but basalt is not coarse. Notice the rusted surface. This is the best example of glaciation because of the abraded flat surface and striation marks.

Basalt
Relatively common rock found in our fields, Minnesota's north shore, and they Hawaiian Islands. Always dark and very small grained.

Gabbro
A dark, coarse grained rock. Chemically the same as basalt but because it cooled deep underground it had time to grow larger crystals.

Poryphyry
Contains all of the minerals found in granite but is cooled slowly and has a very large orthoclase feldspar (red feldspar) crystals.

Red Granite
Large crystals of quartz, red feldspar, black mica and hornblende. Cooled faster than Porphyry.

White Granite
Same minerals as in the red granite except it contains white feldspar. Compare this granite to the red; notice the white has smaller crystals so it must have cooled more quickly.

Dark Rock with Granite Intrusion
Here you can see the power of very hot liquid rock (the red granite). Geologists say it would have forced its way into the already solid, older black

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