

Manoomin (Anishinabe) or Manomin (Cree)

Wild Rice and Northern Wild Rice

“The Food That Grows On Water”



**From the
Creator's Garden
to
All of Creation**

Inquiry?

What is
Manoomin,
Manomin or wild
rice?

The Food That Grows on Water



Manoomin, Manomin is Wild Rice

- Wild rice is a **plant**.
- It is a **seed plant**. It **makes seeds**.
- It is a **flowering plant**. It makes flowers.
- It is part of the **grass family**.
- The science names for the two types of wild rice in Canada are **Zizania palustris** and **Zizania aquatica**.

Zizania Palustris



Inquiry ?

What are science
facts about wild
rice?

Manoomin, Manomin Facts

- It is an **annual** plant.
- It **lives and dies** each year.
- It grows from a **planted seed**.
- It is **not a perennial** plant.

Green Seeds of Manoonmin, Manomin



Inquiry?

What do plants
need to grow?

Name _____

Plants_Need



sun



air

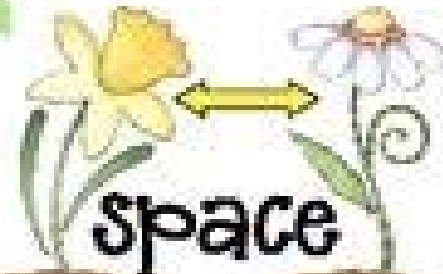


water

needs



soil



space

To Grow, All Plants Need

- **water**
- **nutrients**
- **sunlight**
- **air**
- **correct temperatures**
- **space**
- **time to grow**

Inquiry?

What does
Manoomin or
Manomin need to
grow?

Manoomin & Nibi,
Manomin & Nipiy, Water

- Wild rice is an **aquatic plant**. It needs to grow in **water**.
- It needs to grow in **fresh water**.
- It does not grow in salt water.

Manoomin & Nibi,
Manomin & Nipiy, Water

- It needs to grows in **clean fresh water** that is not polluted.
- Wild rice grows best in **moving water** along the shore of a lake, stream or river not stagnant water.

Wild Rice along a shore



Wild Rice and Water

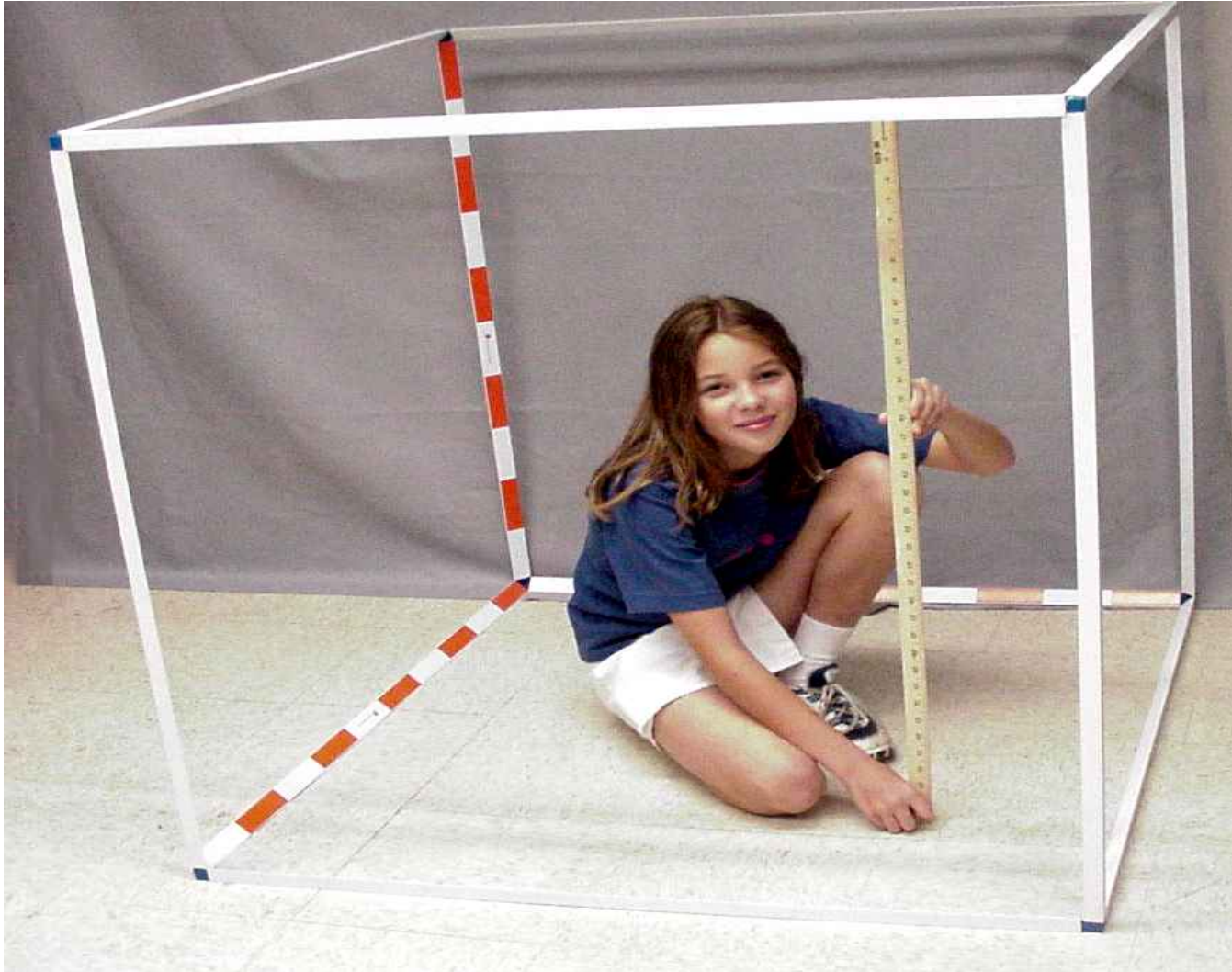
- Wild rice grows best in a **sheltered or protected** place away from the wind and waves. An example of a good place for wild rice to grow is along a shoreline lined with trees.
- Wild rice can only grow in areas where the **water level does not change.**
- It likes to grow in water about **1 metre deep.**

Inquiry?

How deep is one metre of
water?

How can we measure or
represent one metre?

One metre deep



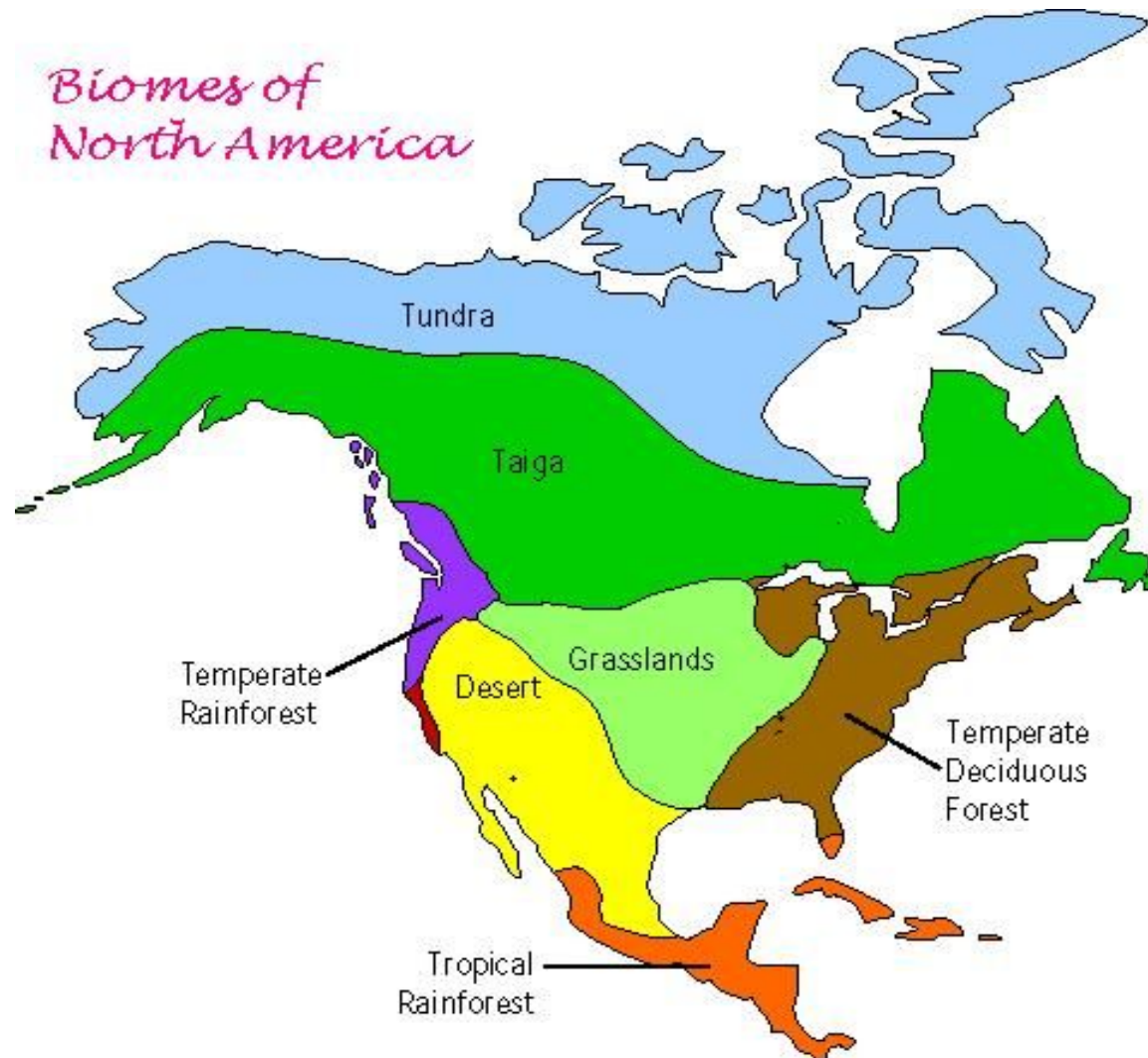
Question

Where does wild
rice grow?

Wild Rice, Water, Location 1

- Northern Wild Rice grows in the fresh waters in the **Deciduous Forest** near the **Great Lakes** and the waters and wetlands of the **Coniferous Forest of Northern Ontario.**

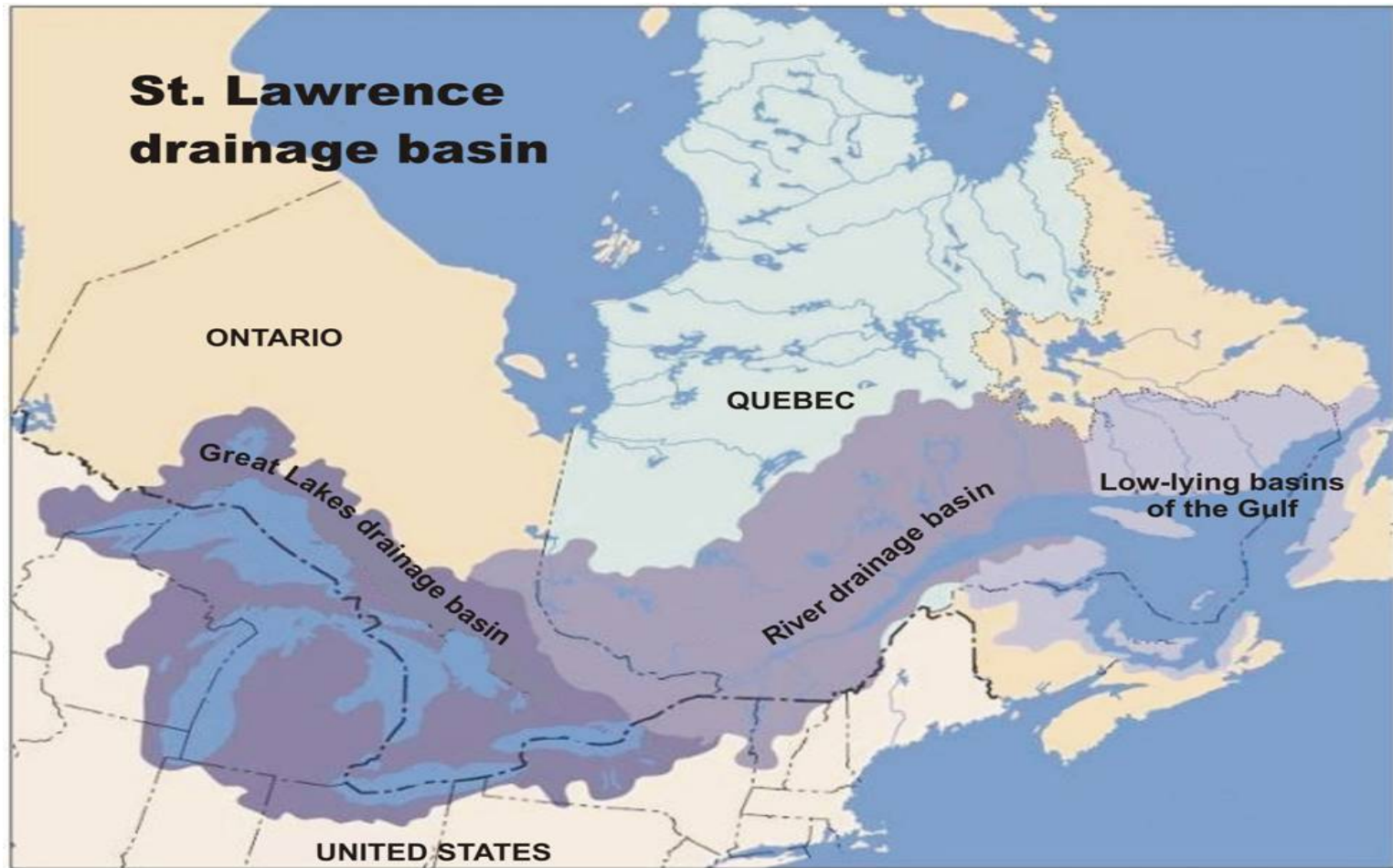
Biomes of Turtle Island, Brown and Darker Green Areas



Wild Rice, Water, Location 2

- The species Wild Rice grows in the fresh waters of the **Deciduous Forest** near the **St. Lawrence River** in Ontario.

St. Lawrence River Watershed



Inquiry?

What or who eats
Manoomin,
Manomin, or wild
rice?

Manoomin, Manomin is Food

- It grows a seed you can eat.
- The green seed is a food for birds such as geese, ducks and songbirds.
- The plant is eaten by muskrat, beaver and other animals that live in wetlands.
- People harvest the seed and process it so it can be stored, cooked and eaten.

Wild Rice Seeds after Processing

HEALTH BENEFITS OF WILD RICE

Organic  Facts



Beneficial in maintaining bone mineral density



Helps to prevent diabetes and cancer



Strengthens heart health



Boosts immune system



Aids in reducing signs of aging



Reduces risk of cardiovascular diseases



Eliminates diarrhea, bloating and cramping



www.organicfacts.net

Food for Geese and Ducks



Muskrats eat Manoomin, Manomin



Munching Muskrats

Some plants and animals in the backwaters of the Mississippi River depend on munching muskrats. Muskrats feeding on standing aquatic plants create small open water areas. These open water areas allow other species of aquatic plants to thrive. These plants, and the insects they attract, are valuable food for fish, waterfowl and other wetland birds.

Huts and Pushups

Muskrat huts are built out of aquatic vegetation and mud. The hollow hut has several chambers for resting and tunnels for exiting. During winter, several muskrats live together in a single hut. Snuggled together their combined body heat keeps the home warm and the underwater entrance ice-free. The smaller mounds nearby are feeder huts also called pushups.

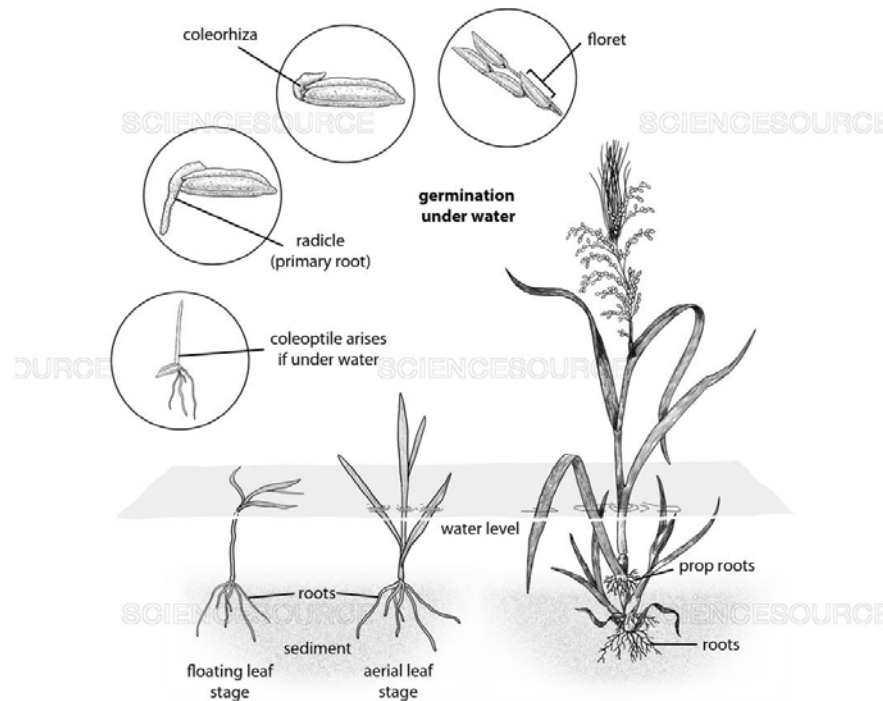


Inquiry?

What is the life cycle
of Manoomin,
Manomin or wild
rice?

Life Cycle

Note: Months will vary by location, weather, water temperature



Mature Seed stage August - September



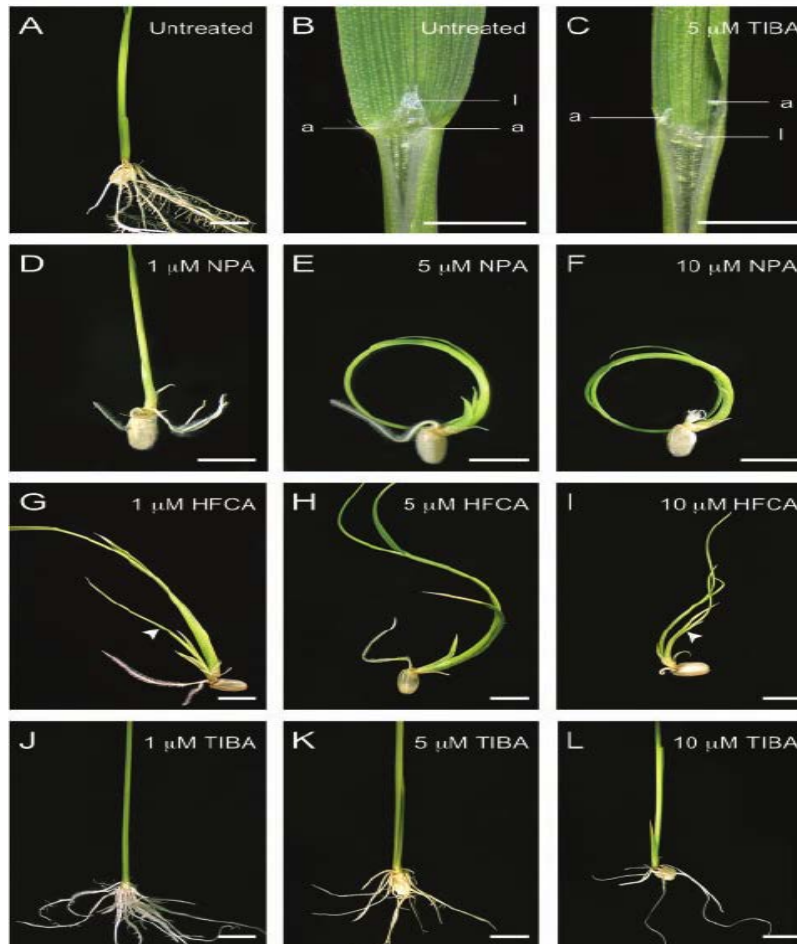
Dormant Seed Stage

November to May in mucky soil from 1 to 5 years



Germination stage

Seed sprouts roots and shoots – Early May



Submerged Underwater Leaf Growth Stage

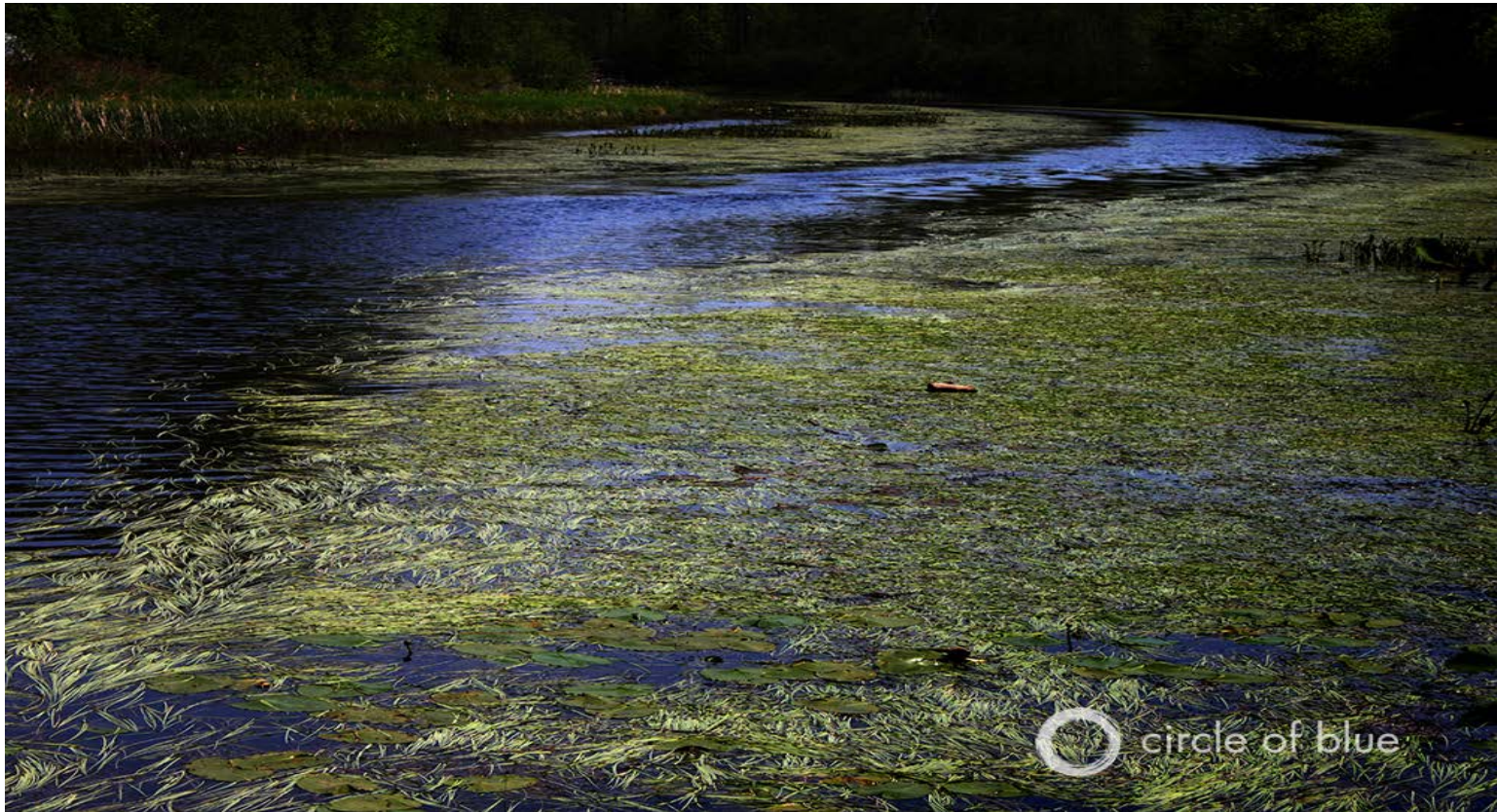
Late May to Early June



Floating Leaf Stage

Leaves grow to surface of water and float there

Mid-June



Aerial Shoot stage

Stocks and leaves emerge out of water

Late June to July



Flowering and Fertilization Stage

Late July

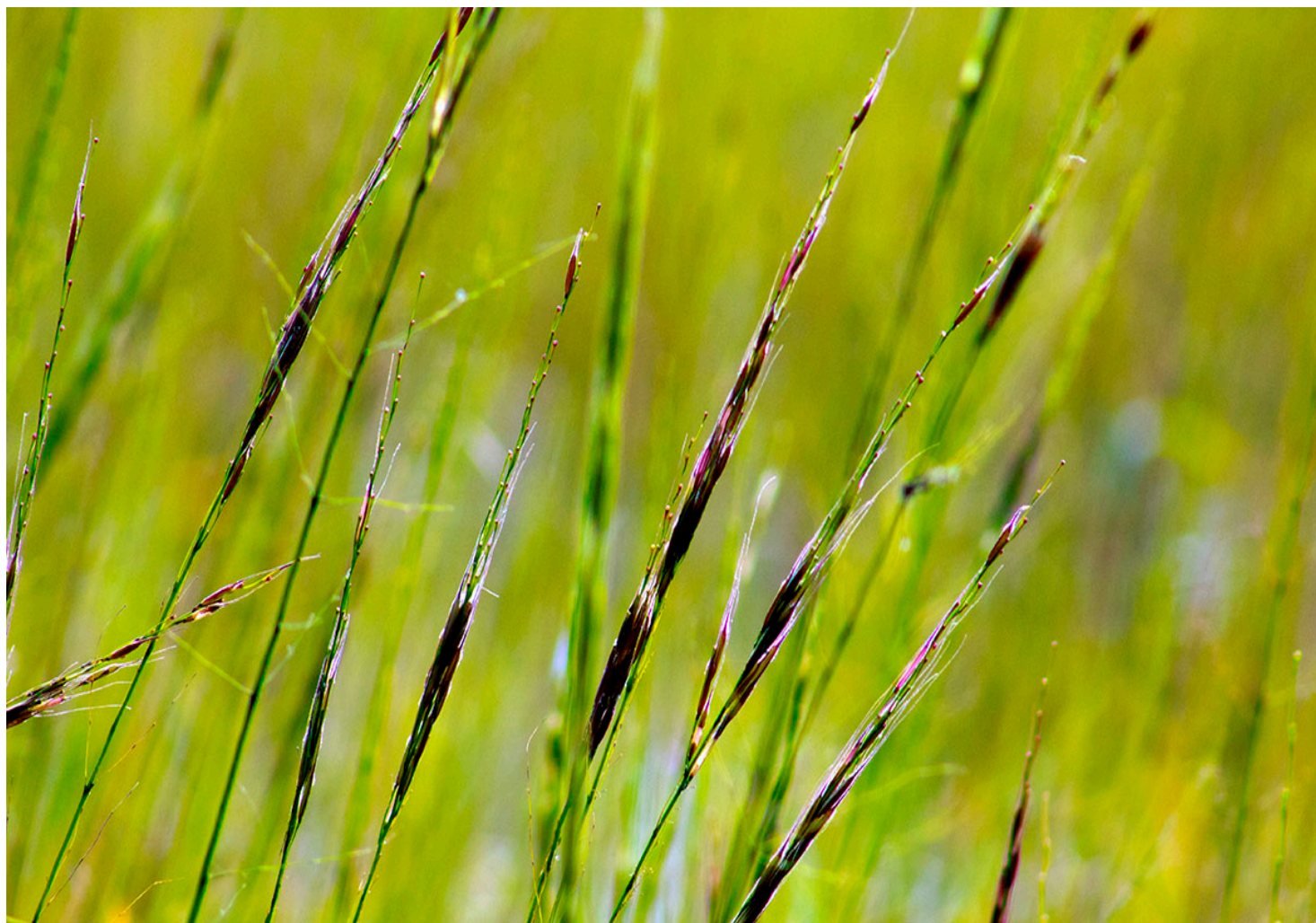


Seed Development and Maturation Stage

Late August to September



Seed Ripening stage



Plant Death Stage

Seeds fall, dive to bottom of water body
Leaves crumple, rot and decay at bottom of water
body. October to November



Life Cycle: Summary

- 1. **Late Fall:** Green seeds embed in soil sediments at bottom of water body.
- 2. **Winter:** Seeds lie dormant in soil.
- 3. **Early Spring:** As water temperature rises and light increases, some seeds germinate growing roots which anchor in soil and green shoots which grow up toward water surface.
- 4. **Late spring:** Submerged shoots and leaves grow upward underwater

Life Cycle: Summary

- **5. Early Summer** - Leaves reach surface of water and float on the surface
- **6. Mid Summer** – Shoots with stocks and leaves grow into the air, emerging from the water
- **5. Later Mid Summer** – Plant produces purple flowers and yellow pollen which then self-fertilizes.

Life Cycle: Summary

- **6. Late Summer** – Seeds grow and mature from the bottom to the top on the stock of the plant.
- **7. Fall** – Mature green seeds fall into the water, dive to the bottom, embedding and anchoring themselves into the soil. The rest of the plant when touched by frost will change colour from green leaves to brown, crumpling and falling in to the water where it will rot and decay on the bottom of the water body adding nutrients to the soil.
- **8. Winter** – Dormant stage – Cycle repeats

Inquiry Questions????

- What is Manoomin, Manomin or wild rice?
- What are science facts about wild rice?
- What do plants need to grow?
- What does Manoomin or Manomin need to grow?
- How deep is one metre of water?
- How can we measure or represent one metre?

Inquiry Questions?????

- Where does wild rice grow?
- What or who eats Manoomin, Manomin, or wild rice?
- What is the life cycle of Manoomin, Manomin or wild rice?