**SETUP**

1. Sit across from your opponent. Place two HOME cards adjacent to each other in the centre of the table, one facing each player.

2. Shuffle the deck and split into two PICK UP piles, one for each player. Reserve a spot for a communal DISCARD pile. Draw 5 cards to form your hand.

**PLAY**

3. The youngest player begins. On each turn, DRAW one card from the pick-up pile and make ONE of the following moves:
   1) **PLAY** a card from your hand.
   2) **DISCARD** one card and **PICK UP** three cards.
   3) **MOVE** a card already on the table the number of spaces indicated on the card.

Remember to play your cards facing you so that you can tally your points at the end!

4. The last round starts when a player draws the last card from their pick up pile. This player gets THREE final moves in their last turn, and so does their opponent.

5. Tally your points. The player with the most points, wins!

**SPECIES**

- Build your ecosystems like a game of dominos, with each card building off of another.
- You can build off of your own cards, or your opponent’s.
- New cards added to the table must have at least one matching TERRAIN and must be of equal or greater SIZE to at least one adjacent card.
- Species DIETS must be compatible:
  1) **Autotrophs***: These cards can be placed anywhere around the HOME cards.
  2) **Herbivores, omnivores, other**: These cards can only be played next to an autotroph or another level 2 species of smaller size.
  3) **Carnivores**: These cards can only be placed next to other level 2 or 3 species.

*A species that produces its own food.

**EVENTS**

- Play event cards according to instructions on card.
- The opposition has their next turn to react to an event card. They can:
  1) Play a **SPECIES PROTECTION** card.
  2) Replace the affected card with a new species.
  3) Move a species card that will be affected.
- If the affected card cannot be protected, replaced, or moved, this card and all other cards supported by the affected card are removed.

Invasive species are among Canada’s greatest threats to the survival of our wild animal and plant life. They arrive, often accidentally, and in the absence of natural predators they kill, crowd out or otherwise devastate native species and their ecosystems. Learn more about ecosystems and the dangers of invasive species in this exciting, points-based game!

**DURATION:** 20 - 30 minutes  **AGE:** 8+

Watch the instruction video on our YouTube channel!
SET UP EXAMPLE

Remember: Cards are always played facing the direction of the player who placed them. This makes it easy to tally points at the end.

This deck is modeled to be a part of the official Phylo Trading Card Game. More information about this project and additional decks can be found at https://phylogame.org/.
**About us:** The Invasive Species Centre prevents the spread of invasive species in Canada by connecting stakeholders with knowledge and technology. Incorporated as a non-for-profit in 2011, the Invasive Species Centre is a hub for collaboration and knowledge sharing between stakeholders and has grown into a respected partner and leader in invasive species science, education, and action in Canada, and beyond.

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**Willow Tree**  
*Salix Spp.*  

9 1  

**FACT:** Rare types of willow can grow to the height of 70 feet

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**Sphagnum Moss**  
*Sphagnum Spp.*  

5 1  

**FACT:** Depending on the species, sphagnum moss may hold water up to 16 – 26 times their dry weight.
Black Eyed Susan
*Rudbeckia hirta*

**FACT:** Black eyed Susans are pioneer plants, and are often one of the first plants to grow after a natural disaster.

Oak Tree
*Quercus Spp.*

**FACT:** Some oak tree species may produce up to 2000 acorns/year, providing ample food for several animals.

Maple Tree
*Acer Spp.*

**FACT:** Maple trees can live to 200 years and beyond and have been tapped for 150 years or more.

Mycorrhizal fungi
*Oidiodendron spp.*

**PLAY:** Mycorrhizal fungi must be placed adjacent to *Plantae* species.

**FACT:** Important in assisting the host plant with the uptake of phosphorus and nitrogen, two nutrients vital to plant growth.
**Blueberry**

*Cyanooccus Spp.*

**4 POINTS**

**Plantae, Angiosperms, Eudicots**

**FACT:** The blueberry is one of the only foods that is truly naturally blue in colour.


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**Phytoplankton**

*Class: Bacillariophyceae*

**2 POINTS**

**Heterokonta, Ochrophyta, Bacillariophyceae**

**PLAY:** Phytoplankton has a MOVE of 1

**FACT:** Phytoplankton remove carbon dioxide from sea water, release oxygen as a by-product, and store the carbon in the form of organic materials.

From URL: [https://en.wikipedia.org/wiki/Diatoms_through_the_microscope.png](https://en.wikipedia.org/wiki/Diatoms_through_the_microscope.png)
**Ash Tree**
*Fraxinus Spp.*

**FACT:** There are 45 to 65 species of ash trees that can be found in the northern parts of Europe, Asia and North America.

**Beaver**
*Castor Spp.*

**FACT:** Beaver has a MOVE of 3.
**FACT:** The large front teeth of the beaver never stop growing.

**Zooplankton**
*Copepoda subclass*

**PLAY:** Zooplankton has a MOVE of 1. It may feed on salmon species card.
**FACT:** Zooplankton are primarily transported by ambient water currents.

**Zooplankton**
*Copepoda subclass*

**PLAY:** Zooplankton has a MOVE of 1. It may feed on salmon species card.
**FACT:** Zooplankton are primarily transported by ambient water currents.
Monarch Butterfly
* Danaus Plexippus

**Play:** Monarch Butterfly has a **Flight** of 2

**Fact:** A large monarch caterpillar can eat an entire milkweed leaf in less than 4 minutes.

![Monarch Butterfly Image]

Earthworm
* Lumbricus terrestris

**Play:** Earthworm has a **Move** of 2

**Fact:** In one acre of land, there can be more than a million earthworms.

![Earthworm Image]

Honey Bee
* Apis mellifera

**Play:** Honey bees have a **Flight** of 3

**Fact:** Honey bees must gather nectar from two million flowers to make one pound of honey.

![Honey Bee Image]

Moose
* Alces Spp.

**Play:** Moose has a **Move** of 4

**Fact:** A moose can dive more than 5 meters underwater when searching for food.

![Moose Image]
**Blue Jay**
*Cyanocitta cristata*

**5 points**

**Play:** Blue Jay has a Flight of 3

**Fact:** Blue jays can mimic the calls of hawks to use as warnings or trick other species.

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**Black Fly**
*imuliidae Spp.*

**4 points**

**Play:** Black flies have a Flight of 3. It may feed on any warm-blooded animal.

**Fact:** Female black flies must feed on blood before laying their eggs.

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**Black Bear**
*Ursus americanus*

**8 points**

**Play:** Black bear has a Move of 3

**Fact:** The black bear is the smallest, yet most common, of the three bear species found in North America.

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**Mosquito**
*Culicidae spp.*

**4 points**

**Play:** Mosquitoes have a Flight of 3. It may feed on any warm-blooded animal.

**Fact:** Female mosquitoes need to feed on blood before laying their eggs.
**Human**
*Homo sapiens*

**Play:** Human has a move of 3

**Fact:** 50,000 cells in your body died and were replaced by new ones while you were reading this sentence.

**Moss Mite**
*Cryptostigmata Spp.*

**Play:** Moss mite has a move of 2

**Fact:** Mites don't have heads. They have a structure called the gnathosoma, housing the mouth and feeding parts.

**Crayfish**
*Paranephrops planifrons*

**Play:** Crayfish has a move of 1

**Fact:** There are 200 species of crayfish in North America.

**Hawk**
*Buteo jamaicensis*

**Play:** The hawk has a flight of 3

**Fact:** Hawks can see 8 times better than humans, locating its prey from a distance of 100 feet.
Otter
*Lutra lutra*

**PLAY:** Otter has a MOVE of 3

**FACT:** Otters hold hands when they sleep so they don’t drift away from each other

Image by: Huskyherz
From URL: https://pixabay.com/en/otter-cute-animal-3653709/

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Pike
*Ésox lucius*

**PLAY:** Pike has a MOVE of 2

**FACT:** The biggest pike on record was 58 inches long and weighted 68 pounds

Image by: Meinig
From URL: https://pixabay.com/en/pike-night-underwater-fish-2276178/

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Rock Bass
*Ambloplites rupestris*

**PLAY:** Rock bass has a MOVE of 2

**FACT:** Rock bass can get quite old up to 15 years or more.

Image by: Huskyherz
From URL: http://hookineandtinker.co/rock-bass/

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Chinook Salmon
*Oncorhynchus tshawytscha*

**PLAY:** Chinook Salmon have a MOVE of 2

**FACT:** The chinook is the largest of the Pacific salmon species, the world record standing at 57.27 kilograms (126 pounds)

Image by: Huskyherz
Yellow Perch
*Perca flavescens*

**5 3**

**Animalia, Chordata, Actinopterygii**

**POINTS**

**PLAY:** Yellow perch has a **MOVE** of 2.

**FACT:** They live in large schools in the shallow waters of the Great Lakes.

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Dragonfly
*Anisoptera Spp.*

**4 3**

**Animalia, Arthropoda, Insecta**

**POINTS**

**PLAY:** Dragonflies have a **FLIGHT** of 2.

**FACT:** Dragonflies are carnivores, but don’t generally sting or bite people.

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Oak Wilt
*Bretziella fagacearum*

**Event Card**

**Play:** Place this card on any Oak tree species.

**Effect:** The Oak tree species must IMMEDIATELY be removed. You may leave this card on the table to show this space is invaded by oak wilt, and no other oak tree play be played here.

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Bighead Carp
*Hypophthalmichthys nobilis*

**Event Card**

**Play:** Place this card on any ocean or fresh water based SPECIES card.

**Effect:** The SPECIES card must IMMEDIATELY be removed. You may leave this card on the table to show this space is now invaded by Carp, and no other ocean or freshwater species may be played here.
Black Carp
_Mylopharyngodon piceus_

**Event Card**

**PLAY:** Place this card on any ocean or fresh water based SPECIES card.

**Effect:** The SPECIES card must IMMEDIATELY be removed. You may leave this card on the table to show this space is now invaded by Carp, and no other ocean or fresh water species may be played here.

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Phragmites
_Phragmites australis_

**Event Card**

**PLAY:** Place this card on any terrestrial or grassland plant species, excluding trees.

**Effect:** The plant species must IMMEDIATELY be removed. You may leave this card on the table to show this space is invaded by phragmites, and no other terrestrial or grassland plant species (excluding trees) may be played here.

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Emerald Ash Borer
_Agrilus planipennis_

**Event Card**

**PLAY:** Place this card on any ash tree species.

**Effect:** The ash tree must IMMEDIATELY be removed. You may leave this card on the table to show this space is invaded by emerald ash borer, and no other ash species may be played here.

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Asian Longhorned Beetle
_Anoplophora glabripennis_

**Event Card**

**PLAY:** Place this card on any hardwood tree species (maple, willow, oak).

**Effect:** The tree must IMMEDIATELY be removed. You may leave this card on the table to show this space is invaded by Asian longhorned beetle, and no other hardwood species may be played here.
**Habitat Loss**

**Play:** Place this card on any species card and change it's habitat to URBAN permanently.

**Effect:** The species card must be IMMEDIATELY removed. You may leave this card on the table to show this place is now an URBAN terrain.

Image by H-J. Sydow
From URL: commons.wikimedia.org/wiki/File:Holztafeln.jpg

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**Oil Spill**

**Play:** Place this card on any ocean or fresh water based species card.

**Effect:** This species card must be IMMEDIATELY removed.

Image by Kris Krug
From URL: flickr.com/photos/kk/

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**Wildfire**

**Play:** Place on top of any species card of grassland or forest terrain.

**Effect:** The species card beneath the Wildfire must be IMMEDIATELY removed.

Image by U.S. Department of Agriculture
From URL: flickr.com/photos/usdagov/
**Wildfire**

**Play:** Place on top of any species card of grassland or forest terrain.

**Effect:** The species card beneath the Wildfire must be IMMEDIATELY removed.

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**Climate Change**

**Play/Effect:** Place this card on top of any species card to immediately remove. In the same action, this event card then moves to an adjacent species card. A game of rock-paper-scissors determines whether this card is also discarded. Continue moving this event card and removing species card until you lose. Card can only be played once per game.

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**Species Protection**

**Legislation**

**Play:** Place this card on any species you would like to protect from a development or destruction event.

**Effect:** The species of your choice is protected for this play.

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**Species Protection**

**Conservation & Restoration**

**Play:** Place this card on any species you would like to protect from a development or destruction event.

**Effect:** The species of your choice is protected for this play.