## THE VOYAGE OF THE BEAGLE PHYLO DECK



## HOW TO PLAY

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The HMS Beagle was a Cherokee-class 10-gun brig-sloop of the Royal Navy, one of more than 100 ships of this class. The vessel, constructed at a cost of £7,803, was launched on 11 May 1820

from the Woolwich Dockyard on the River Thames. In July of that year she took part in a fleet review celebrating the coronation of King George IV of the United Kingdom, and for that occasion is said to have been the first ship to sail completely under the old London Bridge.[2][3] There was no immediate need for Beagle so she "lay in ordinary", moored afloat but without masts or rigging. She was then adapted as a survey barque and took part in three survey expeditions. On the second voyage a young naturalist named Charles Darwin was on board; the pivotal role this round the world voyage played in forming his scientific theories made Beagle one of the most famous ships in history.

(From Wikipedia, November 15, 2017)

# Phylo

#### INTRODUCTION:

PHYLO: The Trading Card Game celebrates ecosystems in all their awesomeness. It showcases the many weird, wonderful, and wacky species that live on the planet Earth. It also deals with some serious threats to ecosystems like wildfires, oil spills, and climate change.

ECOSYSTEMS are communities of species who interact with one another and share a common environment. An environment is defined by its TERRAIN and CLIMATE. When many different species make up a particular ecosystem, we say that ecosystem is rich in BIODIVERSITY. Biodiversity is a good thing because it makes ecosystems more stable and resilient to threats.

The PHYLO Ecosystem Game allows players to use their PHYLO cards to build food chains, create stable ecosystems, augment/protect connections, sabotage opponents' ecosystems, and rack up points in the process. The game is flexible, and we encourage you to make and play by your own house rules. For official rules, do read on, but more gameplay options, and hundreds of free printable PHYLO cards are available on our website at www.phylogame.org.

#### VOYAGE OF THE BEAGLE DECK

This deck is special because it highlights many of the awesome SPECIES that Charles Darwin discovered or observed during his H.M.S. Beagle voyage. It also contains a number of EVENT cards that are specific to some of his (mis)adventures during this time. In general, the game is played in the same way as other biodiversity PHYLO decks, except that geographical location of the species is also denoted by a coloured border at the bottom of the card. This colour, when compared to the map board, will give you an idea of where that organism was seen.

#### THIS IS A PHYLO SPECIES CARD!



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I. COMMON NAME: the simple, everyday name for a particular species.

2. LATIN NAME: the scientific name for a species, often used in research.

3. **POINTS VALUE**: points awarded to the player who has the card played.

4: **CARD TEXT**: describes how the card can be played, along with a cool fact about the species.

5. **LEGAL STUFF**: PHYLO cards are licensed under Creative Commons Attribution-NonCommercial-NoDerivs 2.0 Generic. This means that anyone can share, copy, and freely distribute the cards, so long as credit goes to the artists and the images aren't used in non-card form as well as for commercial purposes.

6. **ARTIST INFORMATION**: this tells you who did the artwork on the card and where you can find more of their work.

7. **SCALE/SIZE**: the size of the species. Carnivores and meat-eating omnivores may only eat species of equal or lesser scale. Herbivores and plant-eating omnivores may eat species of any scale.

 FOODCHAIN#: the species' relative position in its food web. Photosynthetic plants are always FOODCHAIN#1. Omnivores and carnivores will tend to have higher FOODCHAIN numbers, depending on where they fit in the food web.
DIET: the type of food a species eats. See colour legend above.

10. **CLASSIFICATION**: how the organism is categorized scientifically. There are various ranks in this classification, and PHYLO cards display the three highest: Kingdom, Phylum/Division, and Class.

II. **CLIMATE**: the climate preference of the organism: cold, cool, warm, or hot. An organism may have multiple climate preferences.

12. **TERRAIN**: the geographical and geological conditions of an organism's habitat. Essentially, where the organism lives.

13. **VOYAGE LOCALE COLOUR**: This highlights the geographical area where the organism is found (see map board) A BLACK border colour means that the organism is found throughout the world (i.e. no specific locale)

#### THE PHYLOMON ECOSYSTEM GAME!

Age: 8 years old and up. Number of players: 2 Game Duration: Approximately 30 minutes.

**Deck Requirements:** The Voyage of the Beagle PHYLO game comes with one deck of approximately 60 cards. This is good for a 2 player game where the cards are shared. Note that the game can also be played where each player specifically builds their own deck of about 25 cards each, and then go head to head.

**Set Up Instructions:** Two players sit across from one another at a table. The deck is shuffled and placed to one side. This is the PICK UP pile. Make sure there is also a space for cards that are discarded as the game progresses - this will be the DISCARD pile. At the start of the game, the MAP BOARD will be placed in the middle of the table. In essence, table set-up should look a little like the below:



Each player draws 5 cards from the PICK-UP pile to form their starting hand. The PHYLO Ecosystem Game is played in turns, and players may play rock, paper, scissors, to determine who will go first.

**QUICKTAKE**: In general, this card game is similar to Dominoes. The main difference is that you're not just looking for the same number to create the match, you need to make sure climate, terrain, food chain (and in the case of this Darwin deck, Voyage locale) details are compatible.

On each turn, a player draws I new card from the PICK UP pile and may take 3 of the following ACTIONS (any combination is fine):

- PLAY a card from your hand onto the table (SPECIES or EVENT card - see Playing a Card).

- DROP one card from your hand into a DISCARD PILE and PICK UP three new cards

- MOVE a SPECIES card (see Moving a Card).
- PASSING (essentially to end their turn).

#### Playing a Card

It is important that players place their own cards on the table facing them (and opposite their opponent). This allows players to keep track of whose cards belong to whom. Players may place cards adjacent to their own cards or adjacent to those of their opponent. SPECIES cards may only be placed next to cards which share at least ONE common CLIMATE, ONE common TERRAIN, and in the case of the VOYAGE OF THE BEAGLE deck, the Voyage locale colour must also match (with the exception of the black border which can be played next to any Voyage locale).

TERRAINS in this deck are as follows:



CLIMATES in this deck are as follows:

#### The VOYAGE LOCALES (leg of journey) in this deck are as follows:



Callao, Lima, Valparaiso leg.



Cape Verde, Bahia, Rio de Janeiro leg.





Montevideo. Falkland Islands leg.



#### SPECIES cards must also be food chain COMPATIBLE. FOODCHAIN#1

(autotrophs) cards can be played anywhere, so long as they are placed adjacent to a climate/terrain COMPATIBLE species. Note that any FOODCHAIN#I card may be played adjacent in any free spot adjacent to the MAP BOARD.

FOODCHAIN#2 cards must be placed adjacent to at least 1 compatible FOODCHAIN#1 card. Most FOODCHAIN#3 cards are carnivores (meateating, as indicated by a red circle): unless otherwise specified, they may only be played next to prey of equal or smaller SCALE. Omnivores (FOODCHAIN#3, brown circle) may be played next to SPECIES which are FOODCHAIN#2 or a plant FOODCHAIN#1. Note that some cards have a BLACK circle in the food chain spot. In these cases, it's best to read the card text as the SPECIES may have special requirements or instructions.

The general idea is that any card played onto the table, can be connected back to an energy source (an autotroph or FOODCHAIN # I organism). This means that cards are ultimately compatible, by way of food chain needs, climate, terrain, and locale. Any breaks in these connections, due to movement of cards, or EVENT cards that modify the connections may result in cards that are not connected properly in a viable food chain. In these cases, the cards affected are said to be INCOMPATIBLE and are effectively in trouble.



The above highlights three cards that form a compatible food chain. Note that there is an autotroph (food chain #1, the Monkey Tree Puzzle) starting the chain. Note that the other adjacent cards are compatible via food chain requirements (the beetle is a herbivore and hence can eat the tree, etc); climate requirements (there is at least one common climate between adjacent cards); terrain requirements (there is at least one common terrain between each adjacent card); as well as voyage locale (all of these organisms were observed in the Callao, Lima, Valparaiso leg of the trips). Also note that if the tree or beetle card(s) are removed, there will be cards that no longer track back to an autotroph source, and hence a food chain is broken, and organisms may become incompatible. **EVENT cards** may be played as directed by instructions on the card. Unless otherwise specified, EVENT cards take immediate effect, and are then removed from the table and placed in the DISCARD pile.

Some EVENT cards will result in broken food chains, resulting in the presence of newly INCOMPATIBLE cards. Affected players may use their **one** next turn (i.e. their next 3 ACTIONS) to react so as to rescue these cards. These players may choose actions to play new cards to replenish broken food chains, and/or MOVE affected cards to COMPATIBLE areas on the table. Any cards that cannot be saved after this reaction turn must be placed in the DISCARD pile.

**Moving a Card:** MOVE# (located in the card text) indicates how many places a species may move per turn. Species can be moved up, down, left, or right (like a Rook in chess), and must land on an empty space. Birds, insects, and other organisms that travel by FLIGHT may also move along diagonal path (like a Queen in chess). Moving may also result in INCOMPATIBLE CARDS - if so, the affected player (like above) will get one turn to react.

**Ending the Game:** When a player picks up the last card in the PICK-UP pile, then that player will finish his/her turn, and their opponent will then play one last turn. At that point, the game officially ends, UNLESS an EVENT card is played during that last turn – essentially, when EVENT cards are played the other player always has the right to react by getting one extra turn. In the end, players will then add up all points that remain on the table (these are the cards that are facing you): player with the most points wins!

Optional Rule Sometimes, cards which are compatible in the game are not actually compatible in real life. This might be because, despite sharing compatible terrains and climates, species may actually live in different areas of the world. As well, some species may have highly specialized diets and eat only a limited selection of things in the wild. Because of this, some players choose to include a CHALLENGE or "call your bluff" rule. With this rule, players may challenge strange or questionable SPECIES connections (just as one would challenge a misspelled word in Scrabble). We recommend using Wikipedia (www.wikipedia.org) or the Encyclopaedia of Life (www.eol.org) to verify real-world species compatibility. The player that wins the "call your bluff" CHALLENGE may subsequently remove any card from the table with immediate consequences.

For more gameplay options, check out our website at www.phylogame.org!

#### CREDITS

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