

BONE WARS

Rulebook

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Bone Wars

The Bone Wars, also known as the Great Dinosaur Rush, was a period of intense and ruthless competitive fossil hunting between two American paleontologists: Edward Drinker Cope and Othniel Charles Marsh. During this time, which started in 1877 and lasted until Cope's death in 1897, both men used every method available to outdo each other in the field. Teams were bribed, bones were stolen and dig sites were even damaged and destroyed. They also sought to damage their rival's reputation by attacking them in scientific publications.

Cope and Marsh met in Berlin in 1864 and the start of their relationship was amicable. They even named species after each other (Ptyonius marshii and Mosasaurus copeanus). Due to the fact that they were totally different in both personality and scientific beliefs, their relationship soured over time. After both men visited Cope's marl pits of New Jersey – where William Parker Foulke had discovered Hadrosaurus, described by Joseph Leidy – Marsh bribed the pit operators to send the fossils they found to him instead of Cope. Later, Marsh humiliated Cope by openly pointing out that Cope's reconstruction of Elasmosaurus was wrong. Cope had placed the skull at the end of the tail instead of on the long neck. Joseph Leidy published the correction shortly afterwards. Cope, in turn, began collecting fossils in Kansas and Wyoming – a territory that Marsh considered "his" hunting ground.

Over a period of 20 years, both men made many finds of immense scientific value. Cope discovered 56 new dinosaur species, while Marsh discovered 80. Judging by these numbers, Marsh "won" the Bone Wars, but actually, both men lost. By the end of the Bone Wars, both men were financially and socially ruined. The public rivalry between Cope and Marsh harmed the reputation of American paleontology in Europe for decades. Joseph Leidy even withdrew from the field, being fed up with the petty squabbles.

Before his death in 1897, Cope issued a final challenge to Marsh. He would donate his skull to science so his brain could be measured. He challenged Marsh to do the same, so they could compare who had the biggest brain – which, at that time, was thought to be an indication of intelligence. Marsh never accepted the challenge. Cope's skull is still preserved at the Penn Museum.



Othniel C. Marsh °October 29, 1831 – †March 18, 1899



Edward D. Cope °July 28, 1840 – †April 12, 1897

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Notes and information

NOTE ON SPECIES CARD ARTWORK

Some animals on the species cards are deliberately pictured wrong or outdated. This was intentional to better depict the way paleontologists in the late 1800s thought these animals looked. For example, we now know that many dinosaurs were much sleeker and covered in early feathers and the Uintatherium did not have a trunk and had different horns. Three especially fascinating cases are the stegosaurus, the elasmosaurus, and the dryptosaurus/laelaps.

The stegosaurus on the species card looks nowhere near the stegosaurus we are used to but is based on one of the first drawings made of the animal based on Marsh's initial description.



The **elasmosaurus** on the species card looks like how Cope first composed the fossilized skeleton. He put the skull on its tail and thought the long neck was its tail instead.





The artwork on the **dryptosaurus** and **laelaps** cards is intentionally identical. Laelaps was first described by Cope based on (what he thought was) a three-fingered forepaw (we now know that this dinosaur was a tyrannosaurid and

only had two fingers on its forepaws). However, it was later discovered that laelaps was already the name of a mite genus, and Cope's rival Marsh renamed it dryptosaurus.

MAIN PLAYERS OF THE BONE WARS

Joseph Mellick Leidy (°1823 - †1891)

American paleontologist who described the hadrosaur was Cope's mentor but supposedly debunked Cope's elasmosaurus. Left paleontology because of the rivalry between Cope and Marsh.

William Harlow Reed (°1848 - †1915)

American fossil collector who collected for Marsh. Had to destroy a site for Marsh to prevent Cope from getting fossils.

Charles Sternberg (°1850 - †1943)

American paleontologist who worked with both Marsh and Cope.

William Parker Foulke (°1816 - †1865)

American geologist who discovered one of the first full dinosaur skeletons in North America (Hadrosaurus).

George Peabody (°1795 - †1864)

Marsh's uncle built the Peabody Museum of Science and left Marsh with a large inheritance.

John Wesley Powell (°1834 - †1902)

Head of the United States Geological Survey in 1881 who placed Marsh at the head of the consolidated government survey.

William Edwards Carlin (°1866 - †1928) American fossil collector who first worked for Marsh, later for Cope.

Samuel Wendell Williston (°1852 - †1918) American entomologist and paleontologist and former student of Marsh.

Arthur Lakes (°1844 - †1917)

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American geologist who worked for both Marsh and Cope (increasing the animosity).

Oramel William Lucas (°1849 - †1935) American naturalist who collected fossils for Cope.

Game Materials



1 Game Board



4 Player Boards



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Game Materials



Game Setup

Note: Specific setup steps for 2-player games are marked in pink, and specific setup steps for 3-player games are marked in blue. As a general rule, all spaces marked with ••• are only used in a 3- and 4-player game, and spaces markes with •••• are only used in a 4 player game!



Place the **game board** in the middle of the table.

In a 2-player game, cover up the rows of the minor finds area marked with ••• and •••• with a "no digging"-strip. In a 3-player game, only cover up the row marked with ••••. In a 4-player game, you do not cover up any of the rows.



Collect as many **minor find tiles** of each type as there are players. Shuffle these and randomly allocate 1 tile to each open spot in the minor finds area.

Shuffle all 8 bonus tiles and randomly allocate 1 to each column of the minor finds area as well as every blank space on the round track (rounds 1, 2, and 3).

Put the round marker on the first space of the round track (1877-1882).

Collect 2 of each bone token and place these on their respective spot in rare bones display.



Put the rest of the bone tokens in the bone bag.

Fill all 6 dig sites by placing a random species card (a), a random dig site action tile (b), and 3 bone tokens from the bag (c).

Shuffle the **paleontologist cards** and place the deck next to the game board. Then draw 3 cards and place them in an open display next to the deck.



Shuffle all grant tiles and randomly take 4 to be used in this game. Place the chosen grants on the universities. The leftover tiles are discarded back into the box.

In a 2-player game, cover up the Bookshelf spots marked with ••• and •••• with neutral book tiles. In a 3-player game, only cover up the bookshelf spots marked with ••••. In a 4-player game, you do not cover up any of the bookshelf spots.

Place all remaining components (dollar coins, species cards, paper tiles, upgraded action slot tiles, reputation tokens, and endgame tile) within easy reach of all players in a general supply.



Round track This track indicates the current round and current round bonus.



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Game Setup

Paleontologist actions

This is where you'll place your paleontologist to perform paleontologist actions (see page 14).

Awards zone

This is where you'll be able to claim awards during the game to score loyalty points (see page 17).

Rare Bones display

Certain actions will allow you to swap your bone tokens with the ones present in this zone (see page 18).

lack Hills Judith River Basin SOUTH DAKOT. Haddonfield WYOMI 8b white River Badlands 120 8a COLORAD 80

Minor Finds Area

This zone hosts the minor finds that you found during your excavations with your paleontologist (see page 17).

Universities

This is where you will start and end each round with your team (see pages 9 ぐ 20).

Bookshelf This track is the heart of the game, it will allow you to publish papers under Cope or Marsh's name, and score

loyalty points (see page 10).

Dig Sites

This is where you will travel with your team and perform team actions (see page 12).



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Example of a 3-player setup

Player Setup



Every player takes a **player board** and all components of their chosen color *(see list on page 3)*.

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Place your **Patron tile** in the locket. For the time being, it doesn't matter which side you place face-up.



- Place your 4 **base camp markers** on their designated spaces.
- Take your 3 basic team cards in your hand.

Place your **specialist tiles** and **upgraded team action cards** face down next to your player board in a **reserve**. You will need those later on, so make sure to keep them separate from the rest of your game components.

> **Archive** *This is where you archive your species cards (see page 15).*

Place play

Place your **claim markers** and **player aid** next to your player board.

8 Place a **loyalty marker** on space "x0" of both loyalty tracks of the bookshelf.





Each player draws **1 paleontologist card** from the top of the deck, places it into their hand, and takes \$5.



Put your **paleontologist**, **team**, **profession**, and **grant marker** near at hand.

Crates

This is where you store your bone tokens (see page 12).

Locket

You store your Patron tile here to show your current allegiance.

Base Camp

Spaces • Your base camps are stored here, and indicate how many species cards you can store, and how many movements your team meeple can make.





Action slots This is where you will play your Team cards, Species cards and Paleontologist cards to perform actions.



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Determining Player Order

Once the game and player setup are done, you must perform a few additional steps before the game can start.



Deal x+1 species cards (where x is the number of players) and place them next to the board within easy reach of all players. Then, randomly deal 2 bone tokens from the bone bag on top of each of the species cards.

Randomly determine a **first player**. Players must then, starting with the first player and continuing clockwise around the table, choose between two setup bundles:

- a. **take a species card** (and place it in their hand) and the matching bone tokens from the offer, OR
- b. choose a career path by:
 - i. placing their **profession meeple** on an **available profession space** in the left-most column and receiving **the associated bonuses;**
 - ii. placing their **team marker** on an available **university space** as well as their **grant marker** on the **corresponding grant** (*see page 27*).
 - iii. Once that is done, flipping their patron tile in their locket to match the university they start from *(see below)*.

In a 2-player game, both players are obliged to choose a different patron at the start of the game.

Then, in reverse order (starting with the player who chose last and continuing counterclockwise), everybody gets to choose another, but **different** setup bundle. Discard the remaining species card from the offer and return the bone tiles on it to the bag.

When playing with less than 4 players, you must make the following adjustments.

- a. First, take the player pieces of the unused player color(s). These will represent your virtual opponent(s).
- In both a 2-player or 3-player game, place the 3 award markers of one virtual opponent on the places marked with
 on each of the 3 award tiles



c. In a 2-player game, place the base camp from the virtual opponents on each of the base camp spaces marked with ••• and ••••. In a 3-player

game, only cover op the spaces marked with ••••.

d. In a 2-player game, place the virtual opponent's team marker on the university space where the first team marker was placed.
In a 3-player game, place the



virtual opponent's team marker on the **leftover** empty university space.

The player whose profession meeple is now highest on the profession track now becomes the first player of the first round. Player order continues according to the position of the profession markers on the profession track (from top to, bottom)



Gameplay

BONE WARS is a competitive game that is played over the course of 4 rounds, each divided into a variable number of turns.

During a player's turn, they either :

A. Perform an action by playing a card under their player board, or

B. Pass and prepare for the next round.

Players can either play team cards (), species cards (), or paleontologist cards (). The team cards trigger team actions (), the paleontologist cards trigger paleontologist actions () and the species cards can trigger both types of actions.

Whenever a player can no longer (or chooses not to) perform actions, they pass and prepare for the next round by choosing a new profession, choosing their patron and grant for the next round, and potentially receiving loyalty bonuses from the university.



Team Card

Species Card



Paleontologist Card

At the end of the 2nd round, players will perform a mid-game scoring. And at the end of the 4th round, players will perform a final scoring. The player with the most reputation points (7) - shortened in this rulebook to RP – wins the game. In case of a tie, whoever has the most species cards in their archive wins the game. If there is still a tie, the player with the greatest cranial circumference wins the game (since according to 19th-century logic, a person with a larger brain was considered to be smarter than someone with a smaller brain).



Before we explain the actions more in detail, we want to explain an important game concept: loyalty (S). In the game, you will support the paleontological research of both Othniel Marsch (()) and Edward Cope (). When you start the game, you will

either be under the patronage of Marsh of that of Cope (see previous page). When you perform certain actions, you will gain loyalty points (), which are indicated by the two columns on the left and right of the bookshelf on the game board. When your patron tile shows Marsch, you will advance our loyalty marker located on the left loyalty track, and when your patron tile shows Cope, you will advance your loyalty marker located on the right loyalty track. During the mid-game scoring and final scoring, you will earn reputation points (RP) depending on your position on BOTH loyalty tracks.

And this is where the subtle balance of the game comes into play. All players will help publish and debunk papers in favor of one or the other famous paleontologist. Publishing paper will result in paper tiles getting added to the bookshelf. Debunking papers will result in paper tiles switching sides. As the rows of the bookshelf start to fill up with paper tiles, your loyalty towards one or the other will start to earn you more or less RP than your opponents (see page 21).

The essence of the game is to help either Marsh or Cope in their research but also to switch allegiance to score more RP than your opponents during both scorings of the game. Every time you pass (but also through certain actions), you will be able to either stay loyal to your current patron or leave him to help his competitor.



A. Performing Actions

In player order, every player plays one of their **hand cards** in the **leftmost open slot** at the bottom of their player board. As a reminder, this can either be a team card, a species card, or a paleontologist card. Before a player can perform actions, they must pay the **activation costs** in **Dollars.** These are indicated on each **action slot** (and vary between \$0 and \$3) as well as on each **team card** (these also vary between \$0 and \$3). The player needs to pay all indicated costs to perform actions in their turn.



In her third turn, Elisabeth wants to play a paleontologist card. The total activation costs for this are \$3: \$2 as indicated by the action slot and \$1 as indicated on her paleontologist card. She pays \$3 and performs a team action.

Once the activation costs are paid, you will either be able to perform **one or more team actions or a paleontologist action, or either, depending on which type of card you played from your hand:**



Let's take a look at the different types of cards in more detail. They each give you practical information, which you must observe while playing the game:



Important: Whenever you place a species card in an action slot that shows a minor find icon that matches the Minor find on the species card itself, you receive the indicated prize bonus *(see page 26),* either before or after performing actions.



TEAM ACTIONS

Team actions can be performed by playing either a team card (basic or upgraded) or a species card from your hand. Both these types of cards give you a number of **action points** that you can spend as you please, and indicate **how deep you can dig** when you perform the team action "dig for bones" *(see further)*.



Team cards directly show you how many action points you get, and how deep you can dig. In this example, you would get 3 action points and could dig up to level 1.

There are 6 different kinds of team actions. You can see all the team actions summarized on your **player aid**. You will able to perform these **based on the location of your team marker**. There are

6 different dig sites where you can perform these team actions.

Before, after, or while spending action points, **you are allowed to move your team marker** a **free** number of steps as indicated on your player board. This is called your **free move**. You may ONLY



differently: it's the action slot

where you place the card that

decides how many action

points you get, and how deep

you can dig. In this example,

you would get 2 action points

and could dig up to level 3.

move by following the \iff or \iff arrows. At the start of each round, you **must** move your team marker to one of the two dig sites connected to the university you start from.

You start the game with 1 free move but can upgrade this to 2 or 3 moves by **setting up base camps** (*see next page*). Once you have 2 or 3 free moves, you can even split these up between performing actions.

Important: You can **only** perform a team action at the dig site where your team marker is currently located! (with one exception, see action n°3.) This may force you to move your team marker in order to perform a team action, either by using up your free moves or by performing the "move your team" action. At the start of each turn, you must move your team marker to move from a university to a dig site.

1. Dig for Bones (cost: 1 action point)



You may take **one bone token** from your current dig site. The team card/action slot you chose indicates from which depth you can take the bone token:





You can only take the bone token in the topmost slot.



You can take either the topmost or middle bone token.



You can take any one bone token.

Note: if there are no bone tokens available in the slots you have access to, you cannot perform this action.

Place the bone token in an available crate on your player board. Each crate can only hold 1 bone token. If you don't have an available crate to store the bone token you can choose to discard a bone token of your choice by returning it to the bone bag.



Note: At the beginning of the game,

you only have 4 crates available. But as the game progresses, you will be able to access more crates by removing the cover tiles that cover up some crates through the "remove cover tile" action, as explained on page 19.

2. Discover (cost: 2 action points)

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You may take the species card from your current dig site and place it into your hand. Note that if there is no card available in your current dig site, you cannot perform this action.





3. Dig Site Action (cost: 1 action point)

You can perform the action shown on the dig site action tile, either in the dig site where your team marker is located **or in any dig site that contains one of your base camps.** All dig site actions are listed on page 26.

4. Establish Base Camp (cost: 1 action point)

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You choose 1 base camp from your player board and place it on a free space in your current dig site. Note that you cannot establish a base camp in a dig site where you already have a base camp.



Established base camps do 2 things:

- When performing a dig site action, you can choose to perform a dig site action where you have established a base camp, on top of your current dig site.
- They unlock bonuses on your player board: either extra movement for your team marker or extra capacity for your archive *(see page 15).*

5. Dig Deeper

(cost: 1 action point)

Remove all bone tokens and species cards from your current dig site and refill all bone token and species card spots.



6. Move your team (cost: 1 action point)

If your team's free move is spent, you can use action points to move your team marker. Each extra move costs 1 action point.



Example

Nello decides to play a team card. He has to pay \$4 (\$3 for the card itself and \$1 for the action slot 1). He has 3 team actions points, but can only dig down to level 1 2. He has 3 'free moves' 3, and first decides to move from Montana to Wyoming 4.



He spends 1 action point, performs the 'Dig for Bones' action and takes the topmost bone token 5, and stores it on his player board. He then spends one more remaining 'free move' to move to Colorado 6 and spend his 2 final action points to perform a 'Discover' action and takes the local species card into his hand 7. He has one 'free move' left but decides to forfeit it.



PALEONTOLOGIST ACTIONS

Paleontologist actions can be performed by playing either a paleontologist card or a species card from your hand. Both these types of cards will allow you to perform one of the four paleontologist actions on the game board. The paleontologist cards, however, will allow you to enjoy a specific bonus when you play the associated paleontologist action (see page 25 for a full list of the paleontologist bonuses).





Paleontologist cards will give you certain bonuses IF you perform the matching paleontologist action as depicted on the bottom half of the card.

Species cards simply allow you to perform one paleontologist action, without any specific bonus.

There are 4 different kinds of paleontologist actions. You can see all the paleontologist actions depicted on the game board. You will able to perform these based on the location of your Paleontologist. Every time you want to perform a paleontologist action, you must move your Paleontologist to another paleontologist action location (which is symbolized by the paper notes at the top of the game board).



The first two actions can be performed multiple times in your turn (💿), whereas the last two can only be performed once per turn (1x).

1. Publish a Paper



You may publish one or more papers by playing one or more species cards from your hand. For each paper you want to publish, you have to perform the following steps:

A. Discard Bone Tokens

Discard 2, 3, or 4 different bone tokens from your crates to the bone bag to assemble the skeleton of the dinosaur depicted on your species card.



Each species' skeleton consists of 4 different parts:



Torso: These are generic and each torso bone token can be used to assemble the skeleton of any species cards.



Tail: These are generic and each tail bone token can be used to assemble the skeleton of any species cards.



Skull: Your species card will require you to pay either a carnivore or herbivore bone token. Note that some species cards allow you to use either type of skull token.



Limb: Your species card will require you to pay either a paw, flipper, claw, or wing bone token. Note that some species cards allow you to use either type of limb token.

Based on how complete your skeleton is, you will earn certain bonuses:

	1
A B	



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You get 1 loyalty.

You get 1 loyalty. You also get the prize bonus depicted on the species card.

You get 2 loyalty. You also get the prize bonus depicted on the species card, as well as the current round bonus (see page 17).

Note: You have to play all species cards you want to publish and allocate bone tokens to each species card before you receive any rewards or bonuses from performing this action. Once all bone tokens have been paid, you can resolve the bonuses gained in any order you see fit.

Note: The species cards you use all have the name and monogram of a paleontologist on them. But this is totally unrelated to your current patron.

B. Archive your Species Card



Next, slide each species card into your archive, in the envelope whose icon corresponds to the minor find photograph on the species card. You receive the

indicated bonus of the envelope as many times as the number of cards now present in that archive envelope.

Note: Each archive envelope can only hold a certain number of species cards, as indicated on your player board. At the beginning of the game, you may only

archive 1 species card per envelope, but as you establish more base camps, you will be able to archive 2, or even 3 species cards per envelope.



C. Add a Paper to the Bookshelf



Finally, for each paper you publish, you will add one paper tile to the bookshelf, on the side of the bookshelf matching your

current patron (Cope or Marsh). The amount of different bone tokens you discard determines the value of the paper tile you add to the bookshelf. For example: If you discarded 3 different bone tokens, you get to add a value-3 paper to the bookshelf of your current patron. If the bookshelf ever were to get full, store excess paper tiles in the topmost shelf underneath the patron's portrait.



Example S.

Ellen decides to play a paleontologist card. Her current patron is Edward Cope. She pays a \$1 fee 1 and moves her paleontologist to the "Publish a Paper" section 2.





She decides to publish 2 papers, one about the Ichtyornis 3 and one about the Archaeotherium 4. For the Ichtyornis, she discards 1 carnivore skull and 1 wing bone token from her crates 5. For the Archaeotherium, she discards 1 torso, 1 herbivore skull (she could have also discarded a carnivore skull but didn't have one), and 1 paw bone token from her crates 6.



As a reward, she receives 1 loyalty for the 2 bone tokens she used for the paper regarding the Ichtyornis. But she decides to use the bonus from her paleontologist card and receives one more loyalty 7 since she used 3 bone tokens or less. She receives another loyalty for her paper about the Archaeotherium 8, and also gets the prize bonus from her species card. In this case, she gets to draw 2 bone tokens from the bone bag 9.



Next, she archives both species cards. She gets \$2 from archiving the Archaeotherium 10, and 2 species cards from archiving the Ichtyornis 11 (since it's the second card in that archive). Finally, she adds one value-2 and one value-3 paper token on Cope's side of the bookshelf 12.



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2. Debunk a Paper

You may debunk **one or more** papers by discarding sets of identical bone tokes from your crates. For each paper you want to debunk, you have to perform the following steps:

A. Discard Bone Tokens

Discard 2, 3, or 4 **identical** bone tokens from your crates to the bone bag to debunk a published paper from your current patron's opponent.

Based on how many bone tokens you discard, you will earn certain bonuses:

You get 1 loyalty.
You get 2 loyalty.
You get 4 loyalty.

B. Flip a paper tile



For each set of identical bone tokens you discard, you take a paper token whose value matches the number of bone tokens you discarded from your current patron's opponent's side, flip it to its other side, and

move it to your current patron's side of the bookshelf.



Important: You may only debunk a paper if you can discard the **exact** amount of identical bone tokens that match the value of the paper you are trying to debunk.

Once you are done, you must slide down any paper tiles on the opposite side to fill up any gaps left.





Robert plays a species card **1** and decides to perform the 'Debunk a Paper' action. Since the action slot matches his species card's minor find **2**, he unlocks the prize bonus **3** and removes one cover tile from his player board **4**. This also grants him \$2 or 1 RP **5**, and he decides to get \$2 **6**.



Roberts current patron is Marsh. He now discards his 3 torso bone tokens 7, which earns him 2 loyalty 8. He takes a value-3 book from Cope's side, flips it to its red side, and places it on the first available spot on Marsh's side of the bookshelf 9. He still has 2 identical bone tokens left in his crates 10, but there isn't a single value-2 paper published on Cope's side, so he cannot debunk another paper. Finally, he slides down the value-4 paper on Cope's side to fill the newly-created gap 11.



3. Claim an Award





You may claim **one** award with this action, by placing one of your available award markers on a **free** space on the award you want to claim (each space can only be occupied by a single award marker). You can **only** place your award

marker on a space if you have **met or exceeded the indicated condition.** Note that you can only have **1 claim marker on each of the 3 award tiles.** Once you place your award marker, you immediately score any loyalty depicted next to your award marker. There are 3 kinds of award tiles:







Type A: You must have a number of species cards in your archive that were discovered by the indicated paleontologist (Marsh, Cope, or Leidy) *Type B:* You must have a number of species cards of the indicated type (reptile, mammal, bird)

Type C: You must have a number of species cards in the indicated archive envelope (A, B, C, D, or E)

Note: Species cards with an Amphibian icon count as any type of species card for the B-awards.



On top of the loyalty reward, you also gain the current round bonus (meaning the bonus depicted on the bonus tile next to the round marker).



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Nello plays a paleontologist card and decides to claim an award. He has 3 reptiles, 1 bird, and 1 amphibian in his archive **1**. Since he meets the requirements of the bottom spot (the amphibian counts as wild and can take on the role of a bird), he places his award marker and earns 4 loyalty **2**. He also gains the current round bonus, which earns him 3 bone tokens from the bag **3**.





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4. Make a Minor Find



You may make **one** minor find by choosing a species card from your hand that you wish to place in your archive. Same as with the 'Publish a Paper' action, you must slide the species card into your archive,

in the envelope whose icon corresponds to the minor find photograph on the species card (don't forget to respect your archive limit, though!). You receive the indicated bonus of the envelope as many times as the number of cards now present in that archive envelope.



Next, you must choose an available minor find tile from the minor finds area that corresponds to the minor find icon on the chosen species card. Take the matching tile and remove it from the game.

Important: If there is no matching minor find tile available, you may **not** perform this action.



Finally, gain the bonus depicted on the bonus tile placed in the same column as the removed tile.

Elisabeth wants to make a minor find. She decides to archive her Ornithomimus 1. The card shows a "hammer" minor find, so she slides it in the "hammer" archive envelope and receives 2 reputation points (since it's the second species card archived in this envelope) 2. She then takes a "hammer' minor find token from the minor find area, discards it, and then receives the matching bonus 3. She receives 2 rare bone tokens, and places them in her crates on her player board (4).

Example S.



OTHER ACTIONS AND BONUSES

On top of the main team and paleontologist actions, there are **other actions and bonuses** you will get throughout the game by performing various actions. You will find them on dig sites, on bonus tiles, on your archive, as prize bonuses, on the professions track, ...

NUMBERS AND INDICATIONS

Before we dive into this overview, we want to explain the significance of the numbers you may see next to some icons in different colors:





If there is no number, it means you receive ONE of the indicated item

If there is a green number, it means you RECEIVE the indicated amount.





If there is a red number, it means you need to PAY the indicated amount.

If there is a black number, it means you need to OWN the indicated amount.

1. Receive Money

You receive the indicated amount of Dollar coins. Dollars are used to pay the activation costs of your various cards.

2. Receive Bone Tokens from the Bag



You receive the indicated amount of bone tokens from the bag, drawn at random, and place them in your crates. If you don't have enough room in your crates, you may always discard bone tokens of your choice from your crates to make room for the new ones or discard the ones you just drew.

3. Receive Rare Bone Tokens



You receive the indicated amount of rare bone tokens from the rare bones display, and place them in your crates.

4. Exchange Rare Bone Tokens

You may exchange one of your bone tokens from your crates with one from the rare bones display.

5. Swap Patron

You may immediately flip your patron token to change allegiance. This means all actions that are influenced by your patron are now in favor of your new patron.

6. Remove your Paleontologist

You may take back your paleontologist. This means that you can – before performing next paleontologist action – place your paleontologist in a paleontologist action field of your choice, including the one you just left.

7. Draw and Keep Species Cards



You may look at the top 3 cards of the species card deck, and keep one. Return the other cards to the discard pile.

8. Draw a Species Card

You draw the top card of the species card deck and add it to your hand. If the draw deck ever runs out, shuffle back all species cards from the discard pile to form a new draw deck.

9. Draw a Paleontologist Cards

You draw one of the 3 face-up paleontologist cards, and add it to your hand. If you get to draw more than 1 paleontologist card, immediately refill the display to make sure there are always 3 cards in the display. If the draw deck ever runs out, shuffle back all paleontologist cards from the discard pile to form a new draw deck.

10. Perform Dig Site Actions



You may perform the indicated amount of dig site actions. You may perform the same dig site action more than once. You may perform **any** of the 6 dig site actions this way; you are **not restricted** to the dig site actions of your current dig site or the ones(s) where you established a base camp.

11. Get Loyalty

You advance the indicated number of steps on the loyalty track of your current patron. **If you ever reach the topmost spot of a loyalty track,** every time you gain loyalty from that patron, you receive 1 RP for each loyalty over the limit.





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12. Move an Archived Species Card



You may move an archived species card to another envelope of your choice. If you do so, you get the envelope bonus once.

Example

Nello unlocks the prize bonus of his species card by placing it in the matching action slot (1)He decides to move his Hadrosaurus to his first archive envelope (2). He gains \$2 (and not \$4) since he only gets the envelope bonus once (3)

13. Upgrade an Action Slot

You receive an upgraded action slot tile, and you place it either:

- over one of your existing action slots, OR
- next to your player board, as indicated at the right edge of your player board.



These tiles will help you improve your action slots, or even increase the amount of action slots that are available to you each turn. These can offer you a significant advantage throughout the game.

14. Remove a Cover Tile

You remove a cover tile on your player board and discard it from the game. This will allow you to store more bone tokens during the game.

Every time you remove a cover token, you also get a bonus of

either \$2 or 1RP. You also get this bonus each time you are allowed to remove a cover tile but have none left on your player board.





15. Upgrade a Team Card

You receive an upgrade to your team cards. This gives you one of two options:

A. Replace one of your basic team cards

You choose one of your basic team cards, discard it from the game, and take an advanced team card of your choice from your reserve. These advanced cards all offer better stats than their basic counterparts.



A. Hire a specialist

You choose one of your specialists from your reserve. These specialists can be placed on any team card that shows a torn-up picture when you place them under an action slot.

Each of them offers a specific bonus:



Miner: You may move an You gain the current archived species card.



Sketch artist:

round bonus.



Ichnologist: You receive a paleontologist card.

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B. Passing

Once you decide to pass, you immediately perform the end-ofround sequence, as indicated on your player board:



- 1. Choose Profession: You must move your profession meeple to a new (and available) profession space in a different row and column. You immediately take all associated bonuses.
- **2. Return Team:** Your team meeple must be placed on an available university space. You also flip your portrait tile to the patron corresponding to the location of your team meeple (if necessary).



Important: when playing with fewer than 4 players, the first player to pass moves the neutral team to the next university space in numerical order (so from 1 to 2, 2 to 3, 3 to 4, and from 4 to 1) BEFORE returning their own team.

3. Claim Grants: You place your grant marker to the grant tile associated with your chosen university space (unless you chose the same university place, in that case, you simply leave your grant marker in its place).



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4. Gain Loyalty Bonus:

Depending on your position on the loyalty track of your **current** patron, you gain the loyalty bonus(es) (1 loyalty and/or \$1) indicated **on or above your loyalty marker** on the loyalty track. Once you pass these spaces on the loyalty track, you do **not** gain this bonus anymore.



Note: In the final round of the game, when you decide to pass, only perform step 1 ('Choose Profession').

Example S. ...

Robert decides to pass, and moves his profession marker on the profession track 1. He receives a Team card upgrade, \$2 and 1 paleontologist card 2. For the team card upgrade, he decides to unlock the miner and places him face-up close to his player board 3. Next, since it's a 3-player game, he moves the neutral team marker from space 2 to space 3 4. He then decides to place his team marker on space 1 5. He changes allegiance, and since Marsh is his new patron, he flips his portrait tile to the 'Marsh' side 6. Robert now claims a new grant and moves his grant marker on the new grant right above his team marker 7 which will offer him a new ability for the next round. Finally, he gains his loyalty bonus. Since Robert is still below both bonus icons, he gains 1 loyalty and \$1 8.







Resetting the Board

Once all players have passed, the round is finished and the board is reset for the next round.

- 1. Push all remaining bone tokens upwards in each of the dig sites and replenish each empty spot (if needed).
- **2.** Remove all the species cards from the dig sites and deal a new species card to each dig site.
- Players take back their played team cards into their hand but discard all played species and paleontologist cards. Discarded cards go back into their respective discard piles.
- 4. Move the round marker to the next round. If it reaches the 3rd round, a **mid-game scoring** is triggered *(see below)*. If it reaches the 4th round, place the **endgame tile** as indicated. When you pass in round 4, you will gain loyalty instead of normal profession bonuses. In a 2-player game, you can not use the paces marked with ••• and ••••. In a 3-player game, you ignore the space marked by ••••.



The **player order** for the following round changes based on the new order on the profession track (from top to bottom).

Mid-Game and Final Scoring

At the end of the 2nd round, players perform a mid-game scoring (when the round marker is moved to the third round, there is a visual reminder to hold this scoring). Players will now score RP based on their progress on **both** loyalty tracks.



To score the bookshelf, establish the **credibility** of each patron. Every shelf with **at least 1 paper is worth 1 credibility** (except for the smaller shelf directly underneath each portrait). Note that in both a 2-player and a 3-player game, **you ignore the neutral paper tiles.** Only The coloured paper tiles (blue and red) are taken into account.

For each patron, each player now **multiplies** the position of their loyalty marker with the credibility of that patron, and gains as many RP tokens. Next to each loyalty track, you will find multiplication reminders to help you calculate your score, which varies between 0 and 7.



At the end of the 4th round, there is no need to reset the board. Instead, proceed to the end game scoring. Score the bookcase again as described above. Add up the value of all your reputation tokens to calculate your final score.

Whoever has the most reputation points wins the game. In case of a tie, whoever has the most species cards in their archive wins. If there is still a tie, the player with the greatest cranial circumference wins the game (that player has the largest brain and thus, is the smartest). Example 5.0:0.00

It's time for final scoring. Marsh has 2 credibility, and Cope has 4. **Robert** scores 6 RP for his position on Marsh's loyalty track (2 credibility x 3) 1 and 20 RP for his position on Cope's loyalty track (4 credibility x 5) 2.



Solo mode

You have been diggin for fays in the blistering sun. The sweat dripping from your forehead is turning the sand around you into mud. The whole horizon looks like one big blur and the desert bugs are making so much noise you have a hard time thinking straight. Time for a break. As you take a sip from your gourd, you hear that damn snake of Theodore exclaim: "FOUND IT!". You sigh. This is gonna be a tough day ...

SETUP

Set up the game for 2 players, choosing an unused color for Theodore. Instead of giving Theodore a set of 3 basic team cards, he receives his set of 12 basic solo action cards instead. Shuffle these and place the deck face down next to Theodore's player board.

Shuffle the 6 upgraded solo action cards (marked with *I*) and place them to the side for now. (For a more challenging game, you can take the 6 expert solo action cards (marked with *I*) instead of the advanced solo action cards.)







Basic

Advanced

Expert

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Both you and Theodore choose a setup bundle in the following order:

- 1. Theodore chooses a species card/bone tokens according to this order:
 - a. A species card that is needed for an award (in order A-B-C)
 - **b.** A species card that can be placed in the right-most archive slot
 - c. The first species card in alphabetical order
- 2. You choose a species card/bone tokens.
- **3.** You choose a career path.
- 4. Theodore chooses a profession and the starting location of his team. He always chooses the highest possible profession available to him, and will always let his team start at the other university, on the highest numbered space.

RULES CHANGES

Theodore:

- gains bone tokens as normal, placing him in his crates if able. If a bone token cannot be placed due to space limitations, remove a lid token automatically but do not give Theodore a bonus. If all of his crates are full, he will remove bone tokens if this would let him gain more different bone tokens. If not, he does not gain a bone token. All skull tokens and limb tokens are the same to him (respectively).
- can remove cover tiles. If Theodore has less than \$5, he will choose to take \$2. Otherwise, he will take a reputation token.
- gains species cards as normal.
- gains paleontologist cards as normal (always from the top of the deck). If Theodore performs a paleontologist action and he have a paleontologist card that corresponds to that action, he discard the card and gain 1 loyalty (instead of the normal bonus).
- gains rare bone tokens as normal. He always take the type that is the least available. In the case of a tie, he claim in this order: skull (any), limbs (any), ribs, tail.
- can upgrade his cards. If he may perform an upgrade, he take the top-most standard solo action card from his deck and replace it with the top-most advanced solo action card. Remove the replaced standard solo action card from the game.
- can reclassify species cards in his archive. If Theodore may perform an archive reclassification, he will always switch a card from the left-most slot to the right-most available slot. If all slots are filled, he forego this action.
- gains upgraded action slots as normal. He use him in this order: cover \$3 slot, create extra action slot, cover \$2 slot, create extra action slot, ... He will never place it on top of an action slot that already costs \$1.
- gains money and reputation tokens as normal.
- can use the bonus from his grant as normal. If he have the choice to take any era bonus, he always choose to gain 1 loyalty. If he can choose a museum bonus instead of the era bonus, he always choose the era bonus anyway.

THEODORE'S TURN

UPGRADED SOLO ACTION CARDS

During his turn, Theodore flips the top solo action card of his deck and adds it to his action row below his player board in

the leftmost open slot. This is his **current** solo card. The card that now sits on top of the deck is called the **next** card. **Theodore only needs to pay the cost of the slot,** as his solo action cards have no cost on him.



Depending on the colour and icon on the back of the **next** card of this draw deck (paleontologist or team), he now performs either the top half (paleontologist (purple)) or bottom half (team (green)) of the drawn solo action card. If the card shows the team icon, there are 2 possible scenarios:

- Theodore has a species card whose minor find icon corresponds to the action slot's minor find in which he placed his solo action card, he gains that species card's prize bonus and discards the species card. Then, he performs team actions based on the values indicated on the current action slot.
- 2. If he does **not** have a corresponding species card, he performs team actions according to the values indicated on the back of the **next** card of his draw deck.

Start with the **first action** shown on the card. If Theodore cannot perform this action, follow the arrow to the next action, and so on, until he spends all of his action points.



You draw the top card from **Theodore's** deck and place it in the leftmorst available folder action slot 1. The current topmost card shows a team action backside 2. You check and see that Theodore doesn't have a species card showing an Amber symbol so you check his next card, and see that he gets 1 action points and can dig up to level 1.

He must now first take a 'Discover' action 3, but he doesn't have enough action points for that. So you follow the arrows and see he now has to establish a base camp 4.



If the back of the **next** card shows one of more of these actions, please perform the following steps:



Theodore takes back his paleontologist meeple before performing his paleontologist action.



Theodore gains the indicated amount of loyalty from the **rival** patron (so the patron he is NOT currently supporting).

If the back of the **current** card shows one of more of these actions, please perform the following steps:



This indicates that Theodore will perform the paleontologist action loop **twice.**

Theodore performs a 'Move an Archived Species Card' action before performing any team actions.



Theodore gains the current round bonus before performing any team actions.

Theodore gains a paleontologist card before performing any team actions.

PASSING

Theodore will play a number of solo action cards equal to the number of slots at his disposal (5 to start with, but +1 for extra action slots he acquired) or until he cannot pay for an action slot – whichever happens first. Then, he will pass.

- **Profession:** Theodore always chooses the highest possible profession available to him (following the same rules as normal players) that is still useful for example: should he have all his upgrade cards, he will not choose the second profession anymore. same goes for the end of the game. In addition, Theodore will always gain 1 species card from the top of the deck.
- **Team:** Theodore's team marker will go back to a university according to these criteria:
 - 1. The side with the most published papers
 - 2. The same side as his current patron
 - 3. The highest-numbered university spot
 - 4. A free spot
- **Discard** all played solo action cards. If the deck runs out, shuffle the discard pile and form a new deck.

TEAM ACTIONS

Each solo action card depicts the number of team actions, the diggineg level at which these can be performed and in which direction the team moves if needed.

Excavate

6

Take the species card from the region where Theodore's team marker is located. For Theodore, **this only costs 1 action point.**

Dig



Take the bottom-most bone token available to Theodore's team.

Base Camp

Place a base camp in the region Theodore's team is located. He will place base camps in this order: movement, archive limit, movement, archive limit.

Move



Move Theodore's team one step in the direction shown on the solo action card. Theodore will use his free movement first and will then pay with action points. Theodore will always use up all his movement points.

Dig Site Actions



When Theodore has to perform dig site actions, do not look at his base camps. Instead, look at Theodore's next card for the dig site action order (they are all the same).

Theodore will perform dig site actions in this order, performing each option as often as possible AND are allowed to, before moving on to the next. Note that switching patron and removing his paleontologist are only possible once.



PALEONTOLOGIST ACTIONS

Note that Theodore is bound by (mostly) the same rules as a normal player. This means that he cannot perform a paleontologist action his paleontologist meeple is standing on at the start of his turn.

If Theodore cannot perform any of the depicted paleontologist actions, the action card will guide him to the team action half of the card. He will then perform actions with his team according to the action slot the current card is in and the team actions depicted on the card.



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Publish a Paper

This action cannot be performed if Theodore's archive slots are full. If performing this action, follow these steps:

- **1.** Choose a species card available to Theodore (in the following order):
 - **a.** A species card that is needed for an award, in order A-B-C.
 - **b.** A species card that can be placed in the right-most available archive slot.
 - c. The first species card in alphabetical order.
 - d. Pay 2-4 different bone tokens as many as possible (Theodore does not need to match the depicted skull or limbs, but each skull and limb token counts as the same token (respectively)).
- 2. Theodore gains the benefits of publishing just like a normal player.
- 3. Theodore will publish as many species cards as possible.

Debunk a Paper



Just like a normal player, but each skull and each limb token counts as the same token (respectively) to pay the same kind of bone tokens. Theodore will always debunk the highest possible papers first. Theodore will debunk as many times as possible.

Claim an Award

Theodore claims the award for which he gain the most loyalty AND is available to him. Otherwise from A to B to C. He will only claim an award if he can at least claim the **second** row. He gains the Era bonus as normal.

Make a Minor Find

This action cannot be performed if Theodore's archive slots are full. When performing this action, follow these steps:

- 1. Choose a species card available to Theodore (in the following order):
 - a. A species card that is needed for an award (in order A-B-C)
 - **b.** A species card that can be placed in the **right-most available** archive slot
 - c. The first species card in alphabetical order
- 2. Choose a museum token from left to right that is available AND corresponds to a species card Theodore has.
- **3.** Theodore gains the benefits of donating just like a normal player.

END OF GAME

In case of a tie, Theodore has a head circumference of 56 cm.

pendix

PALEONTOLOGIST CARDS





Arthur Lakes: When performing the 'Claim an Award' action, you can choose to gain loyalty with any patron (and even divide the gained loyalty between the two).



Charles Sternberg: When performing the 'Debunk a Paper' action, you can choose to gain loyalty with any patron (and even divide the gained loyalty between the two).



Oramel W. Lucas: When performing the 'Claim an Award' action, you can place your award token on an **occupied** space (but are still restricted to 1 claim token per player per award tile).



Othniel C. Marsh: When performing the 'Publish a Paper' action, you can use **one** bone token as a bone token of **any** type.



Edward D. Cope: When performing the 'Claim an Award' action, you can choose to gain a round bonus **of your choice.**



Samuel W. Williston: When performing the 'Publish a Paper' action with 3 or fewer bone tokens, you gain 1 extra loyalty.



George Peabody: When performing the 'Make a Minor Find' action, you can choose a space where the minor find tile has already been taken (and consequentially you do not take a minor find tile) and **still get the associated bonus.**



John Wesley Powell: When performing the 'Make a Minor Find' action, you can archive your species card into an envelope of your choice.



Joseph Leidy: When performing the 'Debunk a Paper' action, you can use **one** bone token as a bone token of **any** type.



William E. Carlin: When performing the 'Publish a Paper' action, you can choose to gain loyalty with any patron (and even divide the gained loyalty between the two).



William H. Reed: When performing the 'Debunk a Paper' action with 3 or fewer bone tokens, you gain 1 extra loyalty.



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William Parker Foulke: When performing the 'Make a Minor Find' action, you can take **any** available minor find tile. You gain the bonus of the column of the chosen minor find tile.

DIG SITE ACTIONS



You may flip your portrait tile.



Discard 1 species card from your hand to look at the top 3 species cards. Choose 1 to keep and discard the other 2.

You gain \$1.







Exchange 1 bone token from your crates with 1 rare bone token.



Remove your paleontologist meeple from the game board. This means that you can move it to any paleontologist action spot during your next paleontologist action.



You gain \$3.

PRIZE BONUSES



You may draw up to 2 bone tokens from the bag.

You may remove 1 cover tile from your player board. You receive \$2 or 1 RP.



You may upgrade 1 basic team card to an advanced team card, or you may take 1 specialist tile.



You may move 1 archived species card.

You perform up to 3 dig site actions of your choice, identical or different. You may perform **any** of the 6 dig site actions this way; you are not restricted to the dig site actions of your current dig site or the ones(s) where you established a base camp.

BONUS TILES

You receive up to 2 rare bone tokens.	You receive 1 upgraded action slot tile.
Draw 3 species cards and choose 1 to keep. Discard the other 2.	You remove 1 cover tile from your player board. You receive \$2 or 1 RP.
You may upgrade 1 basic team card to an advanced team card, or you may take 1 specialist tile.	You perform up to 3 dig site actions of your choice, identical or different. You may perform any of the 6 dig site actions this way; you are not restricted
You may draw up to 3 bone tokens from the bag.	to the dig site actions of your current dig site or the ones(s) where you established a base camp.
You gain \$3.	You gain 1 loyalty with your current patron.

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GRANTS' ABILITIES





The hammer small find icon counts as any small find icon.



If you perform the 'Make a Minor Find' action, you can choose to gain the round bonus instead of the usual small find bonus.

If you perform the 'Publish a Paper' action with 4 bone tokens, you can

choose to gain a round bonus of your

choice instead of the current round

bonus.



The footprint small find icon counts as any small find icon.



The bug small find icon counts as any



If you perform the 'Debunk a Paper" action, you can choose to gain 1 loyalty less to also gain a round bonus of your choice.



The fossil small find icon counts as any small find icon.

small find icon.



When performing a paleontologist action, you do not have to move to a different action space.



The plant small find icon counts as any small find icon.

Each time you draw bone tokens



When you gain a round bonus, you can choose to gain any small finds **bonus** instead.

Each time you move your team



from the bag, you can draw 1 extra to choose from. After choosing, place 1 bone token back in the bag.



Your team can use up to 2 extra free moves.



marker to a dig site containing another player's team marker, or if another player moves their team marker to a dig site containing your team marker, you gain \$1.

When you Move an Archived Species Card, you receive all the envelope bonuses, instead of only once (as if you had placed the card there for the first time).

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If there is any issue with this product, please contact the vendor where you purchased this game, or contact our customer service at https://gamebrewer.com/customer-service

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Iconography

		The second				
R	Move	Bone Token	C	Team Marker	C	Archive
R	Take Back	Rare Bone Token	Î	Paleontologist		Single Archive Envelope
5	Move Paleontologist	Bone Bag		Loyalty Marker		Minor Find
A	Exchange	Edward D. Cope		Base Camp		
8	Repeat, Flip	Othniel C. Marsh		Loyalty Marker		Minor Find Bonus
		Joseph M. Leidy		Award Marker	(8)	Current Round's Bonus
~	Clockwise	Reptile				Grant
Ç	Counterclockwise	Mammal		Team Action		Grant Marker
K	Take	Bird		You can only take the bone token in the topmost slot.		
0	Look At	Amphibian		You can take either the topmost or middle bone token.		University
\checkmark	Perform, Confirm	Bug Minor Find		You can take any bone token.		Publish a Paper
X	Discard, Remove	Footprint Minor Find		Dig Site Action		Debunk a Paper
6	Species Card	Fossil Minor Find	0	Move from one dig site to another,	Ţ	Claim an Award
		Hammer Minor Find	-	following the arrows Paleontologist		
C	Paleontologist Card	Plant Minor Find		action	2	Make a Minor Find
	Team Card	Prize Bonus		Marsh's Paper Tile	F	Upgrade Team Card
	Loyalty	Dollars		Cope's Paper Tile	0-07	Upgrade Action Slot
1	Reputation Point	Cover Tile			*	Loyalty Toward Rival

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