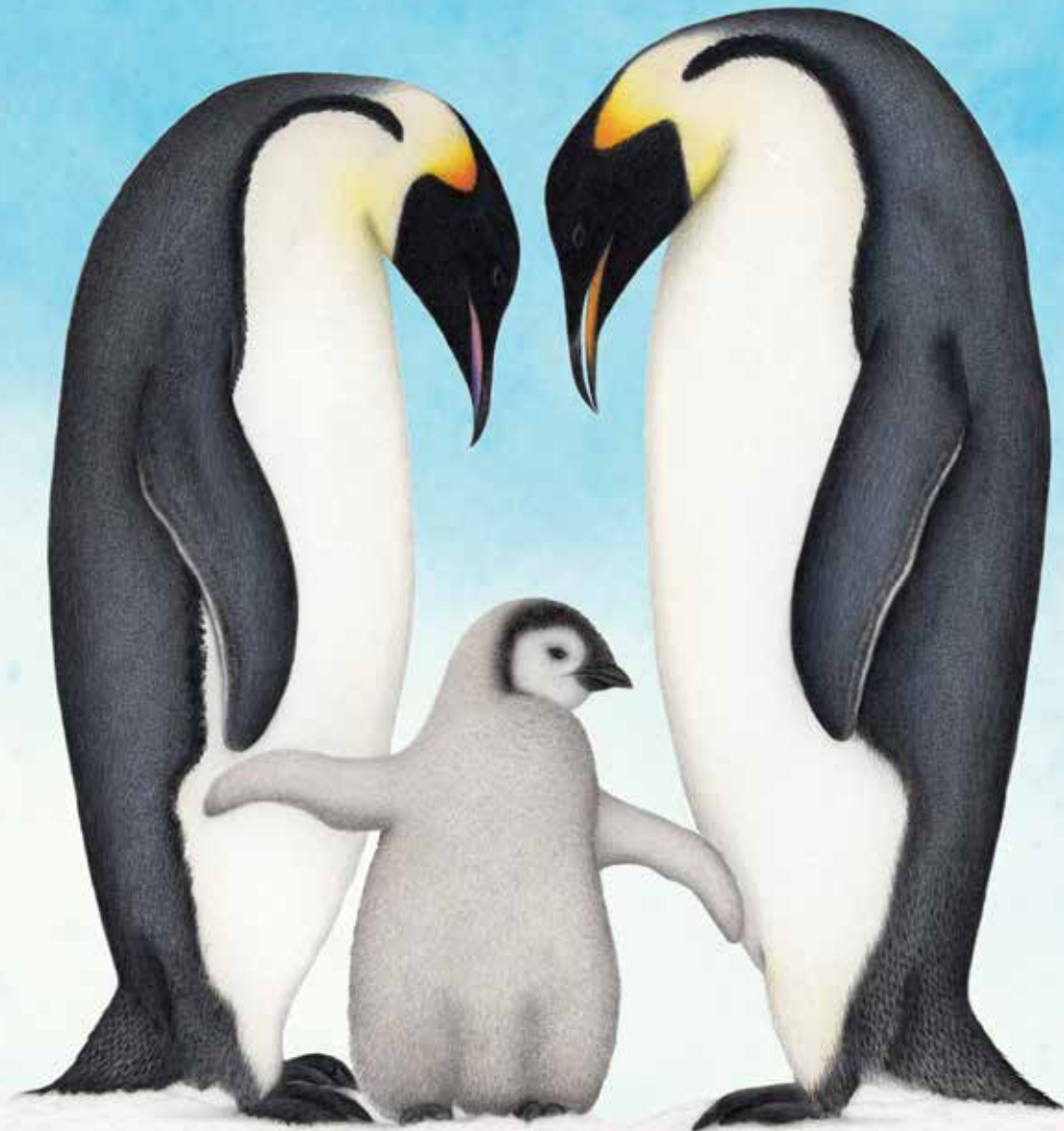


WADDLE WADDLE™


How to Play




A game by Darren Humphrey




In *Waddle Waddle*[™], you play the role of a *Penguin Hero*, specializing in a particular *Penguin Species*. Your job is to study these amazing penguins as they cross the treacherous seas and travel to their nesting grounds, called *Rookeries*.

There's safety in numbers, so penguins travel in groups called *Waddles*. You will identify and tag *Waddles* and score **Conservation Points**  for each *Waddle* you tag.

When *Waddles* contain *Mating Pairs* they make *Nests* that you will tag. The players who tag the most *Nests* in each *Rookery* will score extra  at the end of each *Breeding Season*. You'll also get special bonuses when you tag the *Nests* of the *Penguin Species* that your *Penguin Hero* specializes in!

Each *Penguin Card* has a number indicating its pecking order in the penguin social hierarchy. Only compatible penguins will make *Waddles*.

There are six different *Penguin Species* that each like to nest in different places. You'll need to carefully choose the *Penguin Cards* from the *Ice Floe* to score the most .

Food is scarce! There is a limited fish supply at each *Rookery*. It costs one fish to play each *Waddle*. You might need to send penguins on a *Fishing Trip* to find more fish. And finally, beware of *Threats* that appear each *Breeding Season* ("Season") and make it harder for *Waddles* to land at each *Rookery*.

The player who earns the most  wins the coveted title of **Top Conservator!**

BEFORE YOU START

Waddle Waddle has three game speeds so you can choose the length of game that fits into your play schedule. Setup is the same for each **Game Speed**.

QUICK (30-45 MINUTES)


A *Quick Game* takes place over just one *Season*. A *Quick Game* is a great choice for your first time playing *Waddle Waddle*.

STANDARD (60 - 90 MINUTES)

A *Standard Game* takes place over two *Seasons*. After the first *Season*, follow the instructions to reset the game for the second *Season*.

EPIC (90 - 120 MINUTES)

For the ultimate challenge, an *Epic Game* takes place over three *Seasons*.

No matter how many *Seasons* you play, after the final *Season* ends, the player(s) with the most  is crowned **Top Conservator!**

Most games will take 30 to 40 minutes per *Season*.

SCAN FOR BIGGER PRINT

Too much small text? Scan the QR code for a PDF version of this rulebook that you can view on your device.



"If you've had an adventure then you haven't prepared!" -- Roald Amundsen

GAME COMPONENTS

72 Penguin Cards



6 Penguin Hero Cards



8 Threat Cards



And 8 Threat Tokens



9 Season Events



5 Fish Supply Tokens



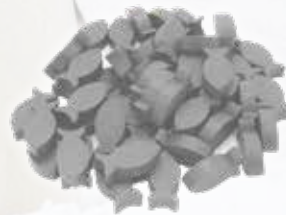
5 Conservation Points Tokens



6 Score Tokens



30 Fish Tokens



150 Nests



Game Board



6 Frozen Cards



6 Player Aid Cards



First Player Standee



SETTING UP THE GAME

Before you start setting up, choose a **Game Speed**: *Quick, Standard or Epic*.

CHOOSE A FIRST PLAYER

The **First Player** is the player who most recently saw a live penguin in person. If there's a tie or no-one in the group has ever seen a live penguin, then players vote on which person most closely resembles a penguin. (Or use an app or roll dice. It's just a game.)

BUILD THE SEASON EVENT DECK

Each **Season Event Card** corresponds to **Season 1, 2 or 3**. Randomly choose one **Season Event Card** to correspond with each **Season** in the **Game Speed** you chose and form a face down pile next to the **Game Board**, in **Season** order.

CHOOSE PENGUIN HEROES

Starting with the **First Player**, and continuing clockwise, each player chooses one **Penguin Hero Card**. Each **Penguin Hero** provides a special ability when you play **Waddles** with penguins of their specialty. (For details of each **Penguin Hero** see **Penguin Hero** bios starting on page 14).

CHOOSE NESTS

Each player takes all of the **Nests** of the color corresponding to their hero and places one **Nest** on the **Score Track**.

Each **Nest** color has a different symbol printed on it. There is no gameplay use for these symbols. **Nests** are marked this way so that color-blind individuals are able to distinguish between the different **Nest** colors.

THE PENGUIN DECK

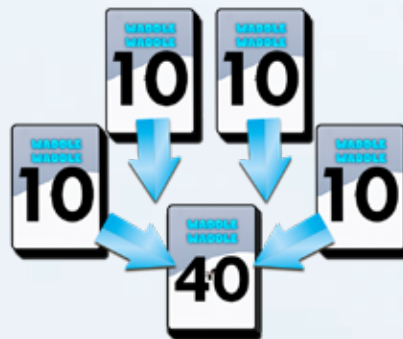
At the beginning of each **Season**, you will need to prepare the **Penguin Deck**.

First, gather all 72 **Penguin Cards** and shuffle them. Then deal 4 stacks of 9 **Penguin Cards**, face down. Place a random **Threat Card** face down on top of each pile. Set aside the unused **Threat Cards** for the next **Season**.

It's optional but, we recommend not using the **Snowy Sheathbill** and **Oil Spill Threat Cards** in the first **Season** of your game.



Shuffle each pile, then **STACK** the piles to form the bottom half of the **Penguin Deck**.



Stack the remaining **Penguin Cards** on top the **Penguin Deck**, so the **Threat Cards** end up in the bottom part of the **Penguin Deck**.

STARTING A SEASON

At the start of each *Season*:

1. Prepare the **Penguin Deck**. Place it above the GameBoard. This is the start of the **Ice Floe**.
2. Deal two **Penguin Cards** to each **Player**.
3. Turn over two **Penguin Cards** in the **Ice Floe** for each **Player**.
4. In *Season One*, shuffle the **Conservation Points Tokens**, place one token in the marked area in each **Rookery**, then flip over the **Tokens**. For later *Seasons*, see **Drafting Tokens** on page 10.
5. Shuffle the **Fish Supply Tokens**, place one token in each **Rookery**, then flip over the **Tokens**. Place the indicated number of **Fish** in each **Rookery**. For later *Seasons*, see **Drafting Tokens** on page 10.
6. Reveal the **Season Event Card** and follow its instructions.
7. Starting with the **First Player**, begin playing your first *Season*! Each *Season* of the game consists of several *Rounds*. Each *Round* consists of each **Player** taking one *Turn*.

STARTING A TURN

At the start of each player's *Turn*, first refill the **Ice Floe**. The **Ice Floe** gets refilled if it has fewer face up **Penguin Cards** than there are players in the game. Refill the **Ice Floe** by drawing and revealing one **Penguin Card** at a time until there is one face up **Penguin Card** for each player.

 If you reveal a **Threat**, STOP immediately and proceed to the **Playing a Threat** step.

PLAYING A THREAT

When you draw or reveal a **Threat Card**, the active player finds the matching **Threat Token** and places it in a **Rookery** that has an empty **Threat Space**. The **Threat Token** will stay there until the end of the *Season*. Some **Threat Cards** have placement restrictions indicated in a red box.

If the **Threat Card** has an immediate effect, trigger that effect now. Some threats, like the **Fishing Boat**, have an ongoing effect.

After placing the **Threat** and triggering any effects, your turn is over. Those darn predators!



THREAT STRATEGY

Threats make it more difficult to play **Waddles** in the **Rookeries** you place them in. Consider placing a **Threat** in a **Rookery** where you have the most **Nests** to protect your lead there. Or maybe play it in another **Rookery** to slow down a competitor.

“A strange occurrence was the sudden appearance of eight emperor penguins from a crack 100 yds. away.”

-- Ernest Shackleton

GAME SETUP

Ice Floe

Prepare the *Penguin Deck* then place it here face-down.

Fill the *Ice Floe* by turning over 2 *Penguin Cards* for each player.



Score Track

Each player puts one *Nest* on the zero space.



Season Events

Make a deck with one random *Season Event* per *Breeding Season*.



Conservation Points Tokens

Place one random token in the designated spot at each *Rookery*.



Threat Tokens

Place the *Threat Tokens* next to the Game Board.



Fish Tokens

Make the *Fish Supply Pile* by placing the *Fish Tokens* in the center of the Game Board.

Extra Score Tokens

Place the *Extra Score Tokens* next to the Game Board.



Fish Supply Tokens

Place one random token in each *Rookery*.



Frozen Cards

Place the *Frozen Cards* somewhere convenient, like below Antarctica.



Give Each Player

- One *Player Aid Card*
- All the *Nests* of one color



FIRST

Choose a *First Player* and give them the *First Player Standee*.




THEN

Starting with the *First Player*, and continuing clockwise, each player chooses a *Penguin Hero Card*.




PLAYING A TURN

On your *Turn*, if you did not reveal a *Threat*, choose from one of these *Actions*.

 If you draw or reveal a *Threat*, skip your turn and proceed to *Playing a Threat*.

DRAFT PENGUINS

Take one Face Up or Face Down *Card*.

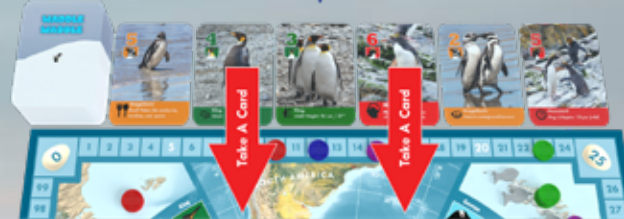
 You cannot *DRAFT* if you already have 9 *Cards*.



REFILL YOUR HAND

If you have no *Cards*, take two *Cards*.

One *Card* must be Face Up.



EXCHANGE A PENGUIN


Swap a *Penguin Card*. Take a *FROZEN Card*.

 You cannot *EXCHANGE* if you're *FROZEN* already!




FISHING TRIP

Put a *Penguin Card* back on the *Ice Floe*. Take a *Fish*.

 You cannot take a *FISHING TRIP* if you have 2 *Fish* already.



PLAY WADDLES

1. Choose a *Rookery* that is *Compatible* with your *Waddle*. (See page 8)
2. Return a *Fish* from that *Rookery*, or from your hand, back to the *Fish Supply Pile*.
3. Claim ! Move your token on the *Score Tracker*.
4. Place *Nest(s)* if allowed. (See page 9)
5. *WaddleWaddle* if you can, (see page 8) otherwise return the rest of the cards in your hand to the *Ice Floe*.
6. Discard your *Frozen Card* if you have one.



WHAT'S A WADDLE?



3 to 6 **Penguin Cards** in Numerical Order.



3 to 6 **Penguin Cards** all the same **Species**.



3 to 6 **Penguin Cards** all the same **Number**.

WADDLE SCORING

Waddles score based on the number of **Penguin Cards** in the **Waddle**. More **Cards** = more .

Waddle Size	Normal Waddle	Bonus Waddle
3		
4		
5		
6		

BONUS WADDLES!

Score +1 bonus per **Penguin Card** for **All Same Species in Numerical Order**. (The **Waddle** below is worth 8 not 5).



COMPATIBLE ROOKERIES

A **Waddle** is **Compatible** with a **Rookery** if at least one **Species Symbol** on any **Penguin Card** matches a **Species Symbol** at the **Rookery**. In this example, the **Waddle** is compatible with **South Georgia Island** because a **Gentoo** symbol matches.



CAN YOU EVEN **WaddleWaddle**?

After you play a **Waddle**, if ALL of the remaining cards in your hand form a second **Waddle** with **NO EXTRA CARDS**, you can **WaddleWaddle**!

To **WaddleWaddle** play the second **Waddle** following the usual rules. You do not have to play the second **Waddle** at the same **Rookery** as the first **Waddle**.

Remember: you can only **WaddleWaddle** if there are **NO LEFTOVER CARDS** after playing the second **Waddle**.

Sadly, this means you cannot **Waddle-Waddle-Waddle**!

"Difficulties are just things to overcome." -- Ernest Shackleton

PLACING NESTS

Place one **Nest** for each **Mating Pair** (two of the same **Species**) in your **Waddle**, which also matches the **Species** icons listed on the **Rookery**. In this example, place **TWO Nests** if you play your **Waddle** at **Macquarie Island**, but place only **ONE Nest** if you play it at the **Antarctic Peninsula** or at the **Argentine Sea**.



Each **Waddle** plays at a single **Rookery**, so if it places more than one **Nest**, place **ALL** of the **Nests** for that **Waddle** in that same **Rookery**.

Each **Waddle** requires only one **Fish** no matter how many **Nests** you place (even if you don't place any **Nests**).

(**Threats** and **Heroes** may modify placement rules.)



"A bird doesn't sing because it has an answer, it sings because it has a song."

-- Joan Walsh Anglund

"Wherever there are birds, there is hope."

-- Mehmet Murat Ildan

SCORE TRACKER

Use the **Score Tracker** to keep track of your score as you play each **Waddle**. In this example, purple has 45 . They score a **Waddle** worth 8 , so they move the score token from 45 to 53.



THE GREAT PENGUIN RESCUE OF 2000

In June of 2000, MV *Treasure* sank off Cape Town. 19,000 African penguins and hundreds of other seabirds were oiled, and a further 19,500 penguins were captured and translocated to the Eastern Cape. Penguin Hero Dyan deNapoli was part of a worldwide rescue team led by SANCCOB (Southern African Foundation for the Conservation of Coastal Birds).

"Exhausted, the penguin finally heaved itself onto the rocky beach, where hundreds of other penguins stood huddled together, the heavy black oil that slowly dripped from their bodies forming expanding black puddles around their feet."

--Dyan deNapoli, "The Great Penguin Rescue"

"2020 marks the 20th year since this event, which is still recorded as the biggest animal rescue operation in the world."

-- SANCCOB press release

ENDING A SEASON

Playing the 4th *Threat Card* triggers the end of the season. When the 4th *Threat* is played, each player in the current *Round* who has not acted yet gets another *Turn*. Then play one final *Round*. This is your last chance to play a *Waddle* and score 🍳 this Season.

Example: Dee has the *First Player Standee* and finds the last *Threat* on her *Turn*. The other players get one more *Turn*, then the final *Round* begins. In a *multi-Season* game, if you can't play a *Waddle*, your final *Action* may be a *Fishing Trip* to acquire a *Fish* for the next Season.

END OF SEASON SCORING

Now that the Season is over, score the *End Of Season Bonus* for each *Rookery*.



The player with the most *Nests* gets the larger 🍳 bonus. Second most *Nests* gets the smaller bonus.

In case of a tie for *1st Place*, the players tied for *1st place* each get the *2nd place* bonus. *2nd place* is not awarded.

In case of a single player claiming *1st place* and multiple players tied for *2nd place*, the players tied for *2nd place* will each get half of the *2nd place* bonus.

If your score passes 100 🍳 grab an *Extra Score Token*. If it passes 200 🍳 flip the token over!

10

THE NEXT SEASON

In a *multi-Season* game, you'll need to reset the game between Seasons:

1. *Fish* and *Nests* remain on the board between Seasons.
2. Keep any *Fish* you have in your hand.
3. Players discard all *Penguin Cards*.
4. Rebuild the *Penguin Deck* and *Ice Floe*.
5. Return the *Threat Tokens*, *Fish Supply Tokens* and *Conservation Points Tokens* to the side of the board.
6. Give the *First Player Standee* to the player in last place. (In case of a tie for last, choose the player closest to the left of the current *First Player*).
7. Draft the *Conservation Points Tokens* and *Fish Supply Tokens* (see below).
8. Place additional *Fish* in each *Rookery*.
9. Reveal the next *Season Event Card*.
10. Begin play with the *First Player*.

DRAFTING TOKENS

5 or more players: In Lowest to Highest score order, each player chooses a *Conservation Points Token* and places it in a *Rookery* that doesn't have one.

4 players: The last place player places two *Conservation Points Tokens*. Then proceed one at a time.

3 players: The last place player places three *Conservation Points Tokens*. Then proceed one at a time.

Draft *Fish Supply Tokens* the same way, but in Highest to Lowest score order.

WINNING THE GAME

After the final **Season** ends, the player with the most wins the coveted **Top Conservator** prize. 🏆

In case of a tie, the player with the most **Nests** wins. If there is still a tie, the player with the most **Nests** in a single **Rookery** wins.

If there's still a tie, celebrate this amazing achievement! No matter the score, you all win because you all did something to help penguins!

SIMPLIFIED RULES

Regardless of which **Game Speed** you choose, you also have a choice of the standard ruleset or the simplified ruleset.

The simplified ruleset is for less-experienced gamers, younger children, or just those who like a more casual gaming experience free from rules and restrictions.

For a simpler game, choose any of the following changes:

1. Don't use the **Threat Cards**. The **Breeding Season** ends as soon as the **Penguin Deck** has no more face down cards.
2. Don't discard your extra cards after playing a **Waddle**.
3. Don't use **Fish**. It doesn't cost a **Fish** to play a **Waddle**.
4. Don't use **Frozen Cards**. There is no limit to how many times you can exchange cards with the **Ice Floe**.
5. Don't use **Season Event Cards**.
6. Don't use the **Penguin Hero Cards**.
7. **Have fun!**

"More simply stated, if penguins are dying, it means our oceans are dying. Which ultimately will impact other species, including humans."

-- Dyan deNapoli

"Such significant declines suggest that the Southern Ocean's ecosystem is fundamentally changed from 50 years ago, and that the impacts of this are rippling up the food web to species like chinstrap penguins."

-- Dr. Heather Lynch

"We pretty much solved the oil pollution problem. Once those tanker lanes got moved further offshore, we're not seeing oiled penguins like we did 35 years ago."

-- Dr. Dee Boersma

"Penguins enrich our lives and livelihoods in many ways. So if they make such a great effort to thrive and protect their chicks against all odds, we can all do our part."

-- Dr. Pablo Boroboroglu

"Penguins appeal universally to humans, even in places where penguins do not live."

-- Dr. Lloyd Spencer Davis

"Just as canaries alerted coal miners to dangerous air quality, ecosystem sentinels serve as early warning systems of natural or human caused environmental change."

-- Center for Ecosystem Sentinels

TWO PLAYER VARIANT

For an engaging two player game of *Waddle Waddle*, set up and play the game as usual, with the following modifications:

1. The *Ice Floe* has four cards. Refill the *Ice Floe* at the start of a *Player's* turn when it has less than four *Penguin Cards*.
2. When scoring end-of-Season 🟡, only award 🟡 to the *Player* with the most *Nests*. In case of a tie, neither *Player* scores any 🟡.
3. If a *Player* runs out of *Nests* of one color, the *Player* can choose a second color of *Nests* to supplement their supply.
4. The recommended game length is two *Seasons*. But hey, you paid for this game, we're not going to stop you if you want to play three *Seasons*.

"Dr. Pablo Boroboroglu is responsible for major achievements in understanding penguin behavior and ecology. He has preserved millions of acres of critical penguin habitat, which is an astonishing achievement. He is a powerful, optimistic, and expert voice for animal conservation and is extremely deserving of this year's Indianapolis Prize."

-- Dr. Rob Shumaker, President and CEO Indianapolis Zoological Society, Inc.

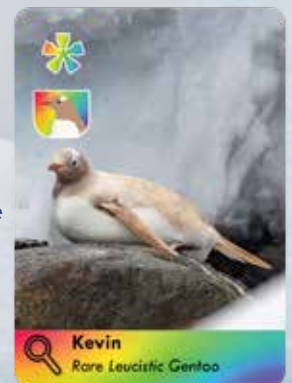
KEVIN

Kevin is a very special Gentoo penguin who lives at Detaille Island. *Kevin* is *Leucistic*, which means his body doesn't produce all of the normal pigmentation that a Gentoo usually has. In particular, *Kevin's* feathers lack the black pigment which is why he looks tan or beige. *Kevin* is an optional card you can add to *Waddle Waddle* for even more gameplay variety.

HOW TO PLAY KEVIN

To play with *Kevin*, shuffle *Kevin* into the top half of the *Penguin Deck*. *Kevin* cannot be part of a *Waddle*, but on your turn, if you have *Kevin* in your hand you may exchange *Kevin* with a card from the *Ice Floe*. When you do so, do not take a *Frozen Card* as usual. Then after exchanging *Kevin*, immediately take a second *Action* for free. Or, you may go on a Fishing Trip with *Kevin*. If you do so, take a second *Action* for free. You may NOT *Draft Kevin* back to your hand on the same turn that you return him to the *Ice Floe*.

Kevin counts as a normal card otherwise, thus you cannot *WaddleWaddle* while holding *Kevin*. If you play a *Waddle* while holding *Kevin*, you must discard *Kevin* to the *Ice Floe*.



THREATS

The *Waddle Waddle* base game comes with eight *Threat Cards*, each with a unique ability and a matching *Threat Token* for placing on the Game Board.



PENGUIN CARDS

Waddle Waddle contains six decks of *Penguins Cards*. Each deck contains 12 *Penguin Cards* numbered 1 - 6, two of each number. There are a total of 72 different *Penguin Cards*, each with a unique fact about penguins.



PENGUIN SPECIES CLARIFICATION

Waddle Waddle has *Penguin Cards* for six of the world's species of Penguins. One of those species we have labeled simply as *Rockhopper* to simplify card layout. Did you know there are three subspecies of Rockhoppers? Northern, Southern and Eastern Rockhoppers! The *Rockhoppers* you see in *Waddle Waddle* are Southern Rockhoppers.

IN MEMORIAM

Most of the penguin photos in *Waddle Waddle* were taken by Craig and Lauren. Besides being a good friend, Craig was one of my groomsmen. He loved the Antarctic so much that he traveled there six times. On the fifth trip, Lauren came too and took many of the photos you see. On that trip, Craig proposed to Lauren on Booth Island, amongst the penguins.

Craig passed from cancer in 2020. He is survived by Lauren and their son Thomas.



Boersma, P Dee PhD

Founder, Center for Ecosystem Sentinels

Doctor of Science, Central Michigan (Honorary)

PhD Zoology, Ohio State

B.Sc Honors, Central Michigan

When playing Dr. Dee Boersma, each **King Nest** a Waddle places counts as one extra **Penguin Card** for Waddle size scoring purposes. Waddles bigger than 6 cards don't score extra.

For example, if your Waddle has four **King Penguin Cards**, it would place two **Nests**, and score as if it had six **Penguin Cards**, scoring **15** instead of **8**.



Dr. Dee Boersma



Each **King Nest** in your Waddle counts as one extra card for scoring.

Center For Ecosystem Sentinels

Dr. Dee Boersma is the founder of the **Center for Ecosystem Sentinels** at the University of Washington. The Center advances the conservation of species that are sentinels of their ecosystem by linking science to effective policy actions. She enjoys working in penguin colonies because they are noisy, bustling with activity, and often internet-free.

Dee holds the **Wadsworth Endowed Chair in Conservation Science** and was elected to the **American Academy of Arts & Sciences**. She also co-founded the **IUCN Penguin Specialists Group** and the **Global Penguin Society** with Dr. Pablo Borboroglu. Dee has received the **Elliot Coues Award**, the **Heinz Award for the Environment**, the **Pacific Seabird Group Lifetime Achievement Award**, and was a finalist for the **Indianapolis Prize** three times. Most recently she was awarded the **Godman-Salvin Prize** as a signal honor for her distinguished ornithological work.

Boroboroglu, Pablo PhD
President, Global Penguin Society

National University of Comahue, Argentina
PhD (honors) in Biology, Ecology and Management of Seabirds

National University of Patagonia Sun Juan Bosco
Bachelor of Biological Sciences, Seabird Ecology

When playing Dr. Boroboroglu, if the **highest** Penguin Card (or tied for **highest**) in your Waddle is a **Magellanic** penguin, you may play that Waddle in any Rookery, ignoring the usual Nest placement restrictions for the **Magellanic** penguins.

For example you could place **Magellanic Nests** in the *Crozet Islands, Antarctic Peninsula, Maquarie Island or South Georgia Island.*



Pablo is the founder and President of the **Global Penguin Society**, a researcher at the **National Research Council** in Argentina, associate professor at the **University of Washington**, and the co-founder and co-chair of the **IUCN Penguin Specialist Group**. He has spent 35 years in the field of marine conservation, with special emphasis on penguins. He and his team have helped protect 32 million acres of habitat for penguins.

He has worked extensively as a scientific advisor to the media, including Disney, Paramount Pictures, BBC, CNN, National Geographic, among others.

He is a **Duke University Global-Fellow** in Marine Conservation, received the **Pew Fellowship** in Marine Conservation, the **Whitley Gold Award**, the **National Geographic Buffet Award**, **The Rolex Award for Enterprise**, and the **Honor Recognition** by the Congress of Argentina. He is also the winner of the **2023 Indianapolis Prize**, the world's leading animal conservation award.

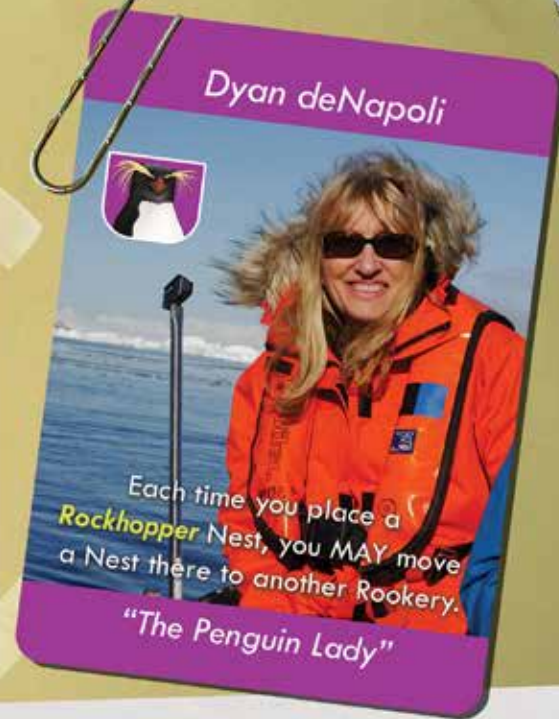
Learn more about Pablo's work at www.globalpenguinsociety.org

deNapoli, Dyan

BSc Animal Science, Mount Ida College
AZA Conservation Education,
North Carolina State University
AA Liberal Arts, Colby-Sawyer College

When playing Dyan deNapoli, for each **Rockhopper Nest** your Waddle places, you MAY move a **Nest** from there to another Rookery. **Nests** can be moved to any Rookery, even if the **Brown Skua** is present at the destination Rookery.

Your own existing **Rockhopper Nests**, are not immune from this ability. When you place **Rockhopper Nests** at a Rookery, you may move your own existing **Rockhopper Nests** there elsewhere.



Dyan deNapoli (AKA *The Penguin Lady*) is a penguin expert, TED speaker, and award-winning author. While working as a Penguin Aquarist at Boston's New England Aquarium, she helped manage the rescue of 40,000 penguins from the *MV Treasure* oil spill near Cape Town, South Africa. Her 2011 TED talk and first book, *The Great Penguin Rescue*, both recount this historic event. She founded her company, The Penguin Lady, in 2005 to teach audiences worldwide about penguin biology, behavior, and conservation.

Over the last 30 years, Dyan has been a frequent guest penguin expert on TV, radio, and podcasts in the US and abroad. She has given 6 TEDx talks, and has been a lecturer on several ships visiting Antarctica, including on the *National Geographic Explorer*. Her lifelong mission is to raise awareness and funding to protect threatened and endangered penguins.

To learn more about her work, visit www.thepenguinlady.com

Davis, Lloyd Spencer PhD
Professor, University of Otago

PhD Zoology, University of Alberta, Canada
MSc Zoology, University of Canterbury, New Zealand
BSc & BSc(Hons) 1st Class, Zoology,
University of Wellington, New Zealand

When playing Dr. Davis, place one extra Nest on any turn when you place a Macaroni Nest. Place the extra Nest in the same Rookery where you placed the Macaroni Nest. You may place at most ONE extra Nest on a turn.

For example, if you WaddleWaddle and each Waddle places a Macaroni Nest, only one of the Waddles will place an extra Nest.



Dr. Lloyd Spencer Davis is an award-winning writer who has penned 10 books on penguins. His work has been involved with penguins for over three and a half decades. He was commissioned to write by the Smithsonian Institute, and he was also the senior editor of the landmark textbook about penguins entitled, Penguin Biology.

In addition to being a writer, Lloyd Spencer Davis is also an award-winning scientist, photographer, filmmaker and science communicator. He currently holds the Stuart Chair in Science Communication at the University of Otago where, among other things, he teaches creative nonfiction writing and science communication.

Learn more about Lloyd's work at lloydspencerdavis.com

Ludynia, Katrin PhD
Research Manager at SANCCOB

PhD in Marine Biology, University of Kiel, Germany
Diplom in Biology, University of Kiel, Germany

When playing **Katta**, you MAY convert two **Chinstrap** Penguin Cards in each Waddle you play to a different species.

For example, if your Waddle consists of the 1 **Chinstrap**, 2 **Macaroni**, and 3 **King** Penguin Cards, you may convert the **Chinstrap** to either **Macaroni** or **King**, allowing you to place a **Nest** where either species nests.



Dr. Katrin "Katta" Ludynia is the Research Manager at SANCCOB in South Africa and has been researching southern African seabird species for around two decades, with a focus on reversing the decline of the endangered African penguin.

Dr. Ludynia started her career counting gulls in the North and Baltic Seas and today leads the African penguin transponder project, which has successfully marked thousands of African penguins with Passive Integrated Transponders to monitor their movements in the wild.

Katta and her SANCCOB colleagues strive to understand how best to improve both marine and terrestrial habitats for this species and how to limit threats from fisheries, climate change and pollution. They play a crucial role in bolstering the wild population by annually rescuing and hand-rearing hundreds of abandoned African penguin eggs and chicks that would not survive without intervention.

Learn more about Katta and SANCCOB's work at sanccob.co.za

Lynch, Heather PhD

Founder, Lynch Lab for Antarctic Ecology

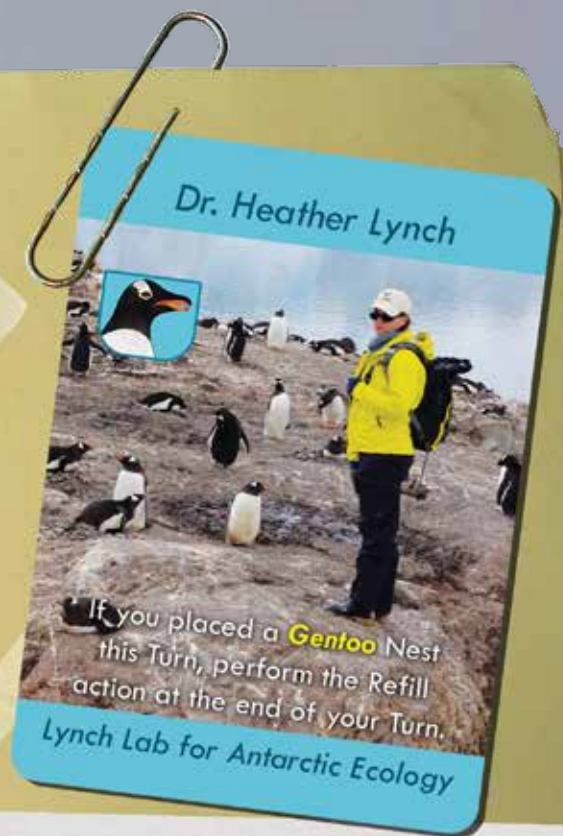
PhD Organismic and Evolutionary Biology, Harvard University

MA Physics, Harvard University

AB Physics, Princeton University

When playing Dr. Lynch, if you placed a **Gentoo Nest**, you must perform the **Refill** action at the end of your turn, instead of waiting until your next turn.

Note: If a season event causes you to retain cards after playing a **Waddle**, you cannot use Dr. Lynch's ability. Your hand must be **EMPTY** in order to take the **Refill** action.



Dr. Heather Lynch is a **National Geographic Explorer** who has spent nearly two decades using cruise ships, research vessels, and small yachts to map out the distribution and abundance of penguins in Antarctica. In addition to leading survey teams in the field, Dr. Lynch is a pioneer in the use of satellite imagery for studying Antarctic seabirds. Her work contributed to the first global surveys of Adelie, Chinstrap, and Gentoo penguins.

Dr. Lynch received an **NSF CAREER Award** for her work on the spatial dynamics of Antarctic penguin colonies, is an early career fellow of the **Ecological Society of America**, won the **Blavatnik National Award for Life Sciences**, and is a **Pew Marine Conservation Fellow**.

Dr. Lynch and her collaborators have developed www.penguinmap.com as an interactive tool for scientists, the tourism industry, and policymakers.

Learn more about Heather's work at lynchlab.com

WADDLE WADDLE

CREDITS

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Elevation and Bathymetry Data: GEBCO Compilation Group (2023) GEBCO 2023 Grid (doi:10.5285/f98b053b-0cbc-6c23-e053-6c86abc0af7b)

Land Use/Cover Data: Esri, Impact Observatory, and Microsoft (CC BY 4.0)

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*“Victory awaits those who have everything in order --
luck, people call it.”*

-- Roald Amundsen

Warning: This product contains small parts that can be swallowed and is not suitable for use by children under 36 months. THIS PRODUCT IS NOT A TOY. NOT INTENDED FOR USE BY PERSONS 3 YEARS OF AGE OR YOUNGER.



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