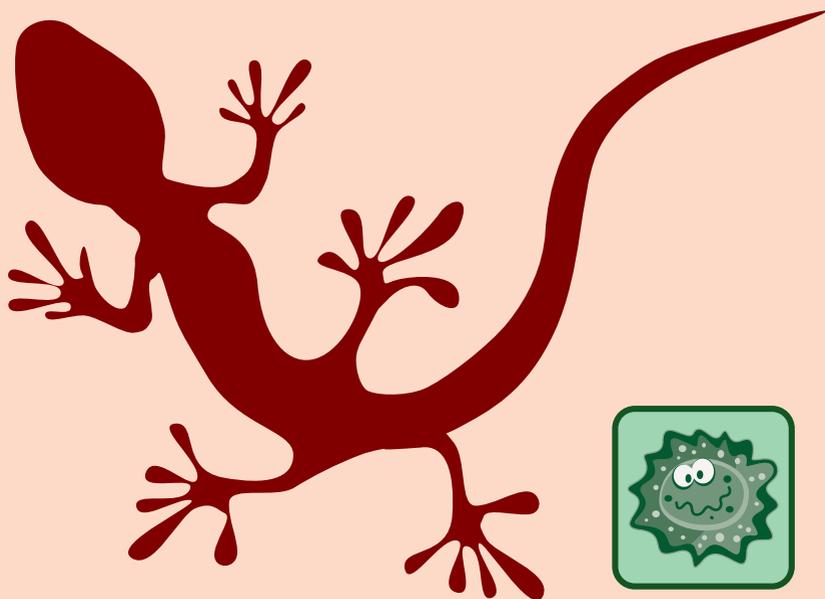


RANDOM MUTATION EVOLUTION

GAME RULES



RIGHTGAMES RBG

Evolution unavoidably and ubiquitously affects all life forms on our planet. In its core lie two processes: natural selection and random mutations. How does it work? Features of the living organisms are encoded in DNA molecules that are continuously copied and transmitted from parents to progeny. Sometimes, the new copy is produced with a mistake (mutation), providing the organism carrying it with a new trait. Most often this trait is deleterious, and the animal carrying it dies, leaving no descendants. However, if the trait turns out to be useful, the descendants of this animal gradually out compete other animals that do not carry it.

In *Random Mutations*, the game, you will be playing for several evolving species of animals. Your task is to have, by the end of the game, as many animals as possible.

The goal of the game

The goal of the game is to have the most abundant and complex set of species by the end of the game. The player receives points for each animal that survived and each trait that surviving animals carry. The player to have the most points by the end of the game wins.

Setting up the game

Thoroughly shuffle the deck and give each player seven cards from the main deck. These seven cards are the player's deck and should be placed before them face down (lizard image up).

Each player then receives three more cards from the main deck. These are placed separately in a row lying face down (see image 1). These are the three starting species. Place the main deck at the center of the table. Leave the food tokens (red and blue), parasite tokens (black) and shelter tokens (green) in the game box or within reach.

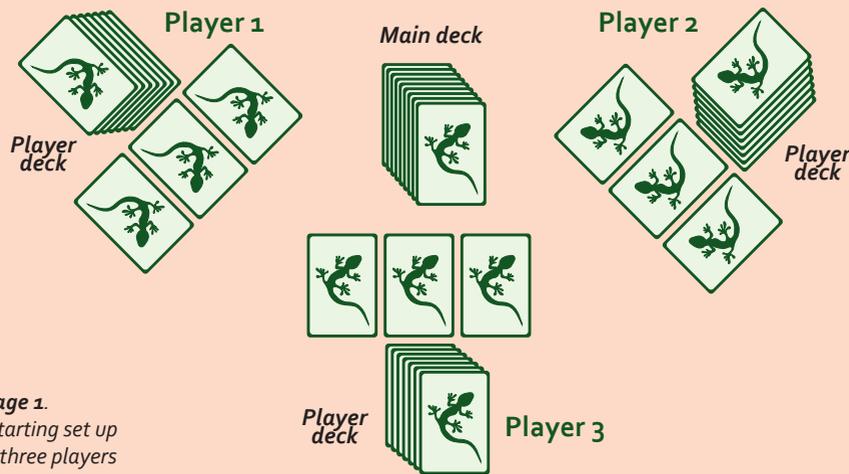


Image 1.
A starting set up
for three players

Why milk? Because the useful mutation allowing humans to digest milk in adulthood appeared not so long ago – a mere 5000 years or so. Most people on Earth can only digest milk as children.

The 🦎 sign in the description of traits denotes an “animal”. The ● sign denotes a red token from the food bank. The ● sign denotes a blue extra food token which you can get as a result of using some traits. The ● sign denotes a green shelter token.

To begin the game, the last person to drink milk gets to go first.

Game turns

The game is played in turns. Each turn is divided into four phases:

- DEVELOPMENT
- CLIMATE
- FEEDING
- EXTINCTION

During each phase player's act in order moving clockwise from the first player. The phase of development and the phase of feeding may include several rounds; after the first round is over, the first player acts again, etc. The player who for some reason cannot act during a phase passes his turn. The role of first player passes clockwise from the first player of the previous turn.

DEVELOPMENT PHASE

In this phase players can play cards from their player decks to the table. This phase includes several rounds. The following happens each round: starting from the first player and going clockwise in order players play the top card from the player's deck. When the turn reaches the first player, round two begins, the first player then plays another card from his player's deck and so on.

During this phase a player can play any amount of cards from his player's deck (but only one each round). A player may also say “I pass” to stop playing cards. The player to do so won't be able to play any more cards during this phase but keeps all his remaining cards in his deck. If a player's deck is depleted he must say “I pass” since there is nothing more he can do. When taking the top card from his deck the player must announce how he plays this card. IMPORTANT! You need to loudly announce how you play a card before flipping it.

Cards can be played in three different ways:

1. **Create a new animal species.** The player plays the card to the table before himself lizard side facing up and creates a new animal species. The card is placed to the right of his already existing species. The species need to be in a row so it's easy to tell which animal is to the left and which to the right. You cannot change the order of your animal species.

In nature, a new species cannot appear out of nothing. So in this game, we presume that new species appear by migration from some other parts of the world.

2. **Play a new trait.** The player declares that he is about to play the card as a trait and indicates the animal species on which it will be played. He then flips the card face up and adds the trait to the chosen species by placing it above the other traits the animal already has. Take note that animal species can have a number of traits **but one species cannot have two identical traits**. Some traits (due to the text on their card) cannot be played on a species with a certain trait. **IMPORTANT!** A trait can only be played on a species that has only one animal (see below for details).

If the trait cannot be played on the chosen species, the trait must be played on the species to the right of the chosen one. If this species also cannot obtain the trait it moves on the right to the next species and so on. If no species can add the trait the trait itself becomes a new animal species – flip the card face down so the lizard image is facing up and place the card to the right of your last animal species.

Some traits grant your species helpful abilities but some can make things worse. These “deleterious” traits have a darker background. **If the first trait played on a species is “deleterious”, the trait can be removed and played as a new animal species.**

There are more useful traits in the game than harmful ones. In nature, however, deleterious mutations are much more common, and useful mutations are quite rare.

3. **Increase the animal population of a species.** The player adds a card to one of his species. The card is played as an animal, lizard side up below the other animals of that species. All players must be able to see how many animals a species has. All animals of a single species considered to have the same set of traits.

You cannot increase the animal population of a species above the total number of animal species a player has.

For example if a player has three species, a species with three or more animals in it cannot have any more animals added to it (exception – BUDDING trait). At the same time if a species already has more animals than is allowed (because they were played earlier) they are not discarded.

In nature, the population of a species can reach thousands or millions of individuals. For added realism, you may imagine one animal to represent a population of 1000 individuals; two animals, of 2000; three, of 4000; four, of 8000, and so on.

If a species consists of more than one animal, the player cannot add new traits to this species.

Thus, by increasing the population of a species, you lose the ability to play traits on them. If, during the game, the population size drops back to one for any reason, new traits can be added as before. This is due to the fact that the chance of identical mutations happening to more than one animal of a species, and especially to all of them, is highly unlikely.

Once all the players have “passed” the DEVELOPMENT phase ends.



A **species** consists of one or more **animals** and **usually has one or several traits**. An animal is simply an animal, a card with the lizard face up. Each animal has all the traits of its species, requires food and gets food tokens, can have shelter and parasite tokens; can attack if the species is a carnivorous. An animal played separately on the table without any traits is also considered a separate species.

Image 2.

Possible player moves during the DEVELOPMENT phase. (1) Make a new species; (2) Play a new trait; (3) Increase the animal population of a species; (4) Say “I pass”.

Extra “Divergence” rule for experienced players (you will have to agree on using this method of playing cards before starting the game):



The player adds a new animal to an existing species dividing it into two separate independent species (see image 3). The new animal will have all the traits of the divided species but can also acquire mutations of its own – while the new subspecies has one animal it can get new traits. A species divided this way can be divided again into two new species.

CLIMATE PHASE

In this phase player one rolls dice of three colors to determine the amount of food, parasites and shelters that will be available in the next phase. The number of dice needed to roll is determined by the number of players.

Please note, that to play game with five-eight participants you have to use additional game set.

After the dice have been rolled place the required amount of tokens from the game box in the center of the table.

Remember the following colors indicate:

red – food

black – parasites

green – shelters.

The red tokens at the center of the table form the **food bank** for this turn.

Number of players	Food	Parasites	Shelters
2			
3			
4			
5 (two decks)			
6 (two decks)			
7 (two decks)			
8 (two decks)			

FEEDING PHASE

During this phase players take turns in choosing one token from the table and placing it, by the rules, on their own or another player's animal. The red tokens (food) and green tokens (shelters) can only be placed on your animals; the black tokens (parasites) can only be placed on other players animals. The tokens need to be placed on a certain animal in a species.

The FEEDING phase includes several rounds. The first player takes the first token, and other players continue clockwise. Once all the players have taken one token a new round begins – player one takes his second token and so on.

Red tokens (food)

An animal with one food token on it is considered fed. But some traits may increase an animal's food requirement – these traits have a "+" sign with a number at the top left of a card. All animals in a species with a trait that increases the food requirement need extra food. For example the HIGH BODY WEIGHT trait increases the required food amount by "+1", this means that each animal of the same species will need two food tokens to be considered fed (see image 4). If there is more than one trait on a species that increases the food requirement – they are summed.

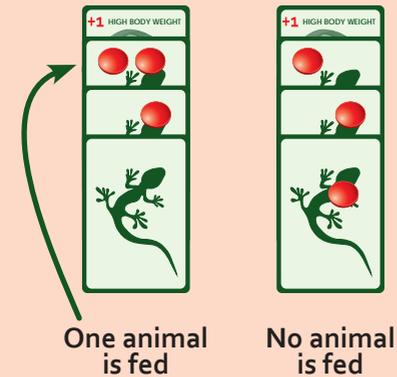


Image 4. It is very important to know which animal you should place the tokens on. For example if your species has the HIGH BODY WEIGHT trait and consist of three animals, you shouldn't place one food token on each of them, none will be fed. If you place two food tokens on the first animal, one on the second and none on the third – at least one of your animals will be considered fed and survive.

Once an animal is fed it cannot receive any more food tokens. If all the players' animals are fed he cannot take any food tokens but he can take shelter tokens and he can place parasite tokens on another players animals.

A player cannot skip his FEEDING phase while there are still tokens on the table that he can play one way or the other. Even if a player has no cards on the table he can still place black tokens.

As a result of some traits a player may also receive blue tokens during his feeding phase from the box. Blue tokens are also food, just like the red tokens, but the amount of red tokens is limited to the CLIMATE each turn. Blue tokens are limitless as long as a trait allows it. Either way an animal can be fed by red and/or blue tokens.

CARNIVOROUS trait

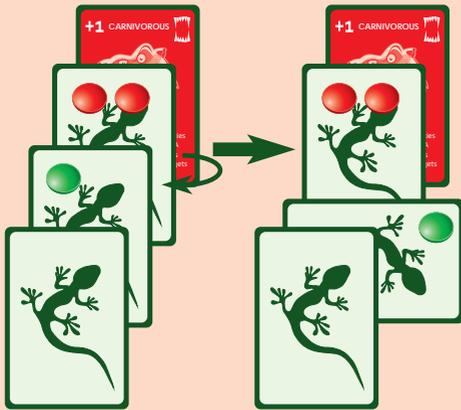
Instead of taking a token from the table a player may choose to use the CARNIVOROUS or OBLIGATE CARNIVOROUS trait by one of his animals. An unfed animal whose species has the CARNIVOROUS (OBLIGATE CARNIVOROUS) trait may attack a species on the table. A Carnivore can attack any animal species that doesn't have any protection from this carnivore. You can attack another player's species as well as your own. The only restriction is that you cannot attack other animals in the same species as the carnivore.

If the attack was successful one animal from the attacked species is eaten:

- the carnivore receives two BLUE TOKENS (an obligate carnivore cannot receive tokens from the food base or in any other way but after a successful attack is considered fed – place one blue token on the card to show it is fed.);
- the owner of the attacked species chooses one of his animals and discards it removing all tokens on that animal. If the species consisted of only one animal then all its trait cards are also discarded. All discarded tokens return to the box, discarded cards are removed until the end of the game.

You can attack with the CARNIVOROUS or OBLIGATE CARNIVOROUS trait even if there are no more tokens left on the table but the players turn sequence is unchanged by attacking other players.

Each animal in a carnivorous species can attack only once per turn so to show this, turn the attacking animals card 90 degrees (see image 5).



Instinct

An unfed carnivore must attack if there are no more tokens at the center of the table but there are species that can be attacked. He must attack even if the species has a POISONUS trait.

Image 5. A player has a species with the CARNIVOROUS trait which consist of three animals. The player decides to attack a species with the RUNNING trait with one of his animals. The first animal cannot attack since it is already fed after receiving two red tokens from the food bank. The player decides to attack with his second animal that has a shelter token. The attack fails and the second animal doesn't receive two blue tokens from the box. His card is turned 90 degrees and can no longer attack this turn.

Green tokens (shelters)

During a players round of the FEEDING phase he may decide to take a green shelter token instead of a red food token. The player must place the token on one of his animals. Starting from this moment and till the next turn this animal is invulnerable to carnivores. The player cannot discard this animal if a carnivores attack was successful. If all animals in a species have a shelter token the species cannot be attacked altogether. Each animal can only have one shelter token.

There may be a situation when some of the animals of a species are protected (for example: have a green shelter token) while some are not. A carnivore may attack this species and if successful the species owner discards one of the animals that don't have protection.

Black tokens (parasites)

During a players round of the FEEDING phase he may decide to take a black parasite token instead of a red food token. A black token can only be played on another player's animal. At the end of the EXTINCTION phase the species with the most parasite tokens will have to discard one of its animals (see image 6). The game contains 10 black tokens and if they are all used up by either being on an animal or lying at the center of the table; no new tokens may be added, even if the dice roll says there should be more. Even a player with no animals on the table can play a black token.

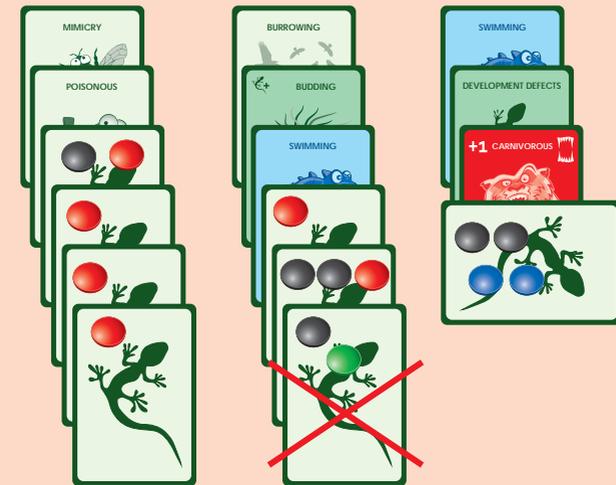


Image 6. An animal dies of parasites if that species has the most parasite tokens, the player chooses which animal dies. The animal must have at least one parasite token. Shelters cannot protect from parasites. The player may choose an unfed animal.

Ending the FEEDING phase

The phase ends when players cannot take any more tokens from the table (there are no more tokens left or they cannot be gained) and the CARNIVOROUS and OBLIGATE CARNIVOROUS traits have been used by all the animals that could use them. If there are red or green tokens remaining at the end, they are placed back in the box.

EXTINCTION PHASE

The players determine which animals managed to survive this turn and which became extinct.

1. First, determine which animals died of parasites. The species with the most parasite tokens discards one animal. The owner of that species chooses which animal dies but it must be an animal with at least one parasite token. Note that other animals with a parasite token will remain in game until they die with that token. Shelters cannot save animals from parasites. If there is a tie between two players on the highest number of parasite tokens both players must discard an animal.
2. Next, players determine which animals died of hunger. All unfed animals (animals that don't have the required amount of RED/BLUE tokens) die.
3. The cards of the dead animals are discarded and all tokens on the placed back in the box. If all animals of a species are dead, all traits of that species are also discarded.
4. All red, blue and green tokens from the surviving animals are placed back in the box. Only parasite tokens remain on animals.
5. Each player receives new cards from the main deck to his player deck. The amount of cards received is equal to the amount of player's animals +2.

For example a player has three species, one with a population of 3 animals, another with 2 animals and the third with a population of only one animal, he will receive $3+2+1+2 = 8$ new cards.

The cards are drawn from the top of the main deck one card at a time starting with player one. If the deck should end some players may receive fewer cards than they should to their players decks.

Once the cards are drawn the turn ends. The player to the left of player one starts the new turn, he is now player one.

If a player has no animals on the table and no cards in his player deck, he receives a new players deck of 10 cards at the start of the turn.

Determining the winner

Once all the cards in the deck are gone the final turn begins. After the EXTINCTION phase of the last turn players count their points.

Each player receives points for his surviving animals:

- 2 points for each animal card;
- 1 point for each trait;
- extra points for traits that increase the food requirement, for example +1 point for the HIGH BODY WEIGHT trait.

ANIMAL TRAITS

BARK BEETLE If an 🐛 of this species can receive 🟡/🔴, then 🟢 is changed to 🔵.	POISONOUS A carnivore that ate an 🐛 of this species immediately dies.	BUDDING At the start of each turn add a new 🐛 from the player's deck to this species.	+1 METABOLIC SYNDROME
MIMICRY If a species with this trait is attacked by a carnivore redirect the attack to one of your other species that the carnivore can attack.	EXTREMOPHILE Player may add a new 🐛 to this species only after discarding an extra card from his players' deck.	DEVELOPMENT DEFECTS A carnivore attacking this species can ignore one of its trait.	+1 HIGH BODY WEIGHT This species can only be attacked by a carnivore with HIGH BODY WEIGHT.
SIMPLIFICATION Remove the last trait played on this species. Place the removed trait and SIMPLIFICATION as two new animal species.	+1 CARNIVOROUS Once a turn a 🐛 of this species can attack another species. A successfully attacked species loses an 🐛, the carnivore gets 🟡/🔴.	GRAZING Each feeding round of a player's 🐛 it's possible to destroy 🔴 from the food bank in the amount equal to or below the number of 🐛 of that species.	BURROWING Once an 🐛 with this trait is FED it cannot be eaten by a carnivore. If all 🐛 with this trait are fed, the carnivore cannot attack this species.
SWIMMING This species can only be attacked by a carnivore with the SWIMMING trait. A carnivore with the SWIMMING trait can only attack a species with SWIMMING.	OBLIGATE CARNIVOROUS Once a turn an 🐛 of this species can attack another species. A successfully attacked species loses an animal, the carnivore becomes FED. 🐛 of this species cannot receive 🟡/🔴 from the food bank or in any other way.	SCAVENGER When an 🐛 is eaten, a 🐛 with this trait can receive 🟡/🔴 can only be received by one 🐛 on the table starting with the carnivores' player then following clockwise. A species cannot have both the CARNIVOROUS and SCAVENGER traits.	RUNNING When this species is attacked by a carnivore roll a dice. On a roll of 4, 5 or 6 the attack fails. The carnivore can no longer attack this turn.

SPECIAL RULES WHEN USING SOME OF THE TRAITS, EXPLANATION OF THE TEXT ON SOME CARDS

BARK BEETLE – until the animal is fed, all green tokens it receives become blue tokens (the green token returns to the box). This way a species with the BARK BEETLE trait can only be protected with a shelter after the animal is fed. An animal with the BARK BEETLE and OBLIGATE CARNIVOROUS traits cannot get any food tokens, so the green token received by this animal is considered to be a shelter even it is still unfed.

EXTREMOPHILE – if there is only one card left in the players' deck a new animal cannot be added to a species with this trait.

GRAZING – this trait can be played each time the player gets his turn during the FEEDING phase. The trait can be used if the player skips his turn and doesn't take any tokens. If a player has more than one species with this trait the trait is used simultaneously and the amount of tokens destroyed is equal to the sum of animals in both species.

CARNIVOROUS, OBLIGATE CARNIVOROUS and SCAVANGER – each animal species can have only one of these traits. If a species already has one of these traits, they cannot be played on it and are moved to the next species.

SCAVANGER – after an animal has been attacked and eaten, one of the animals that belong to a species with the SCAVANGER trait can receive a blue food token. If the player that attacked has a species with this trait, he will be the one to get the token. If not, the rights go to the next person clockwise with a species that has the SCAVANGER trait. The player decides which animal gets the token.

Player mistakes

Players cannot look through the cards in the players' deck. If this has happened the player must discard that card and replace it with a new one from the main deck. If a species received a trait or animal that goes against the rules, each card that broke the rules becomes a new species.

USING CARDS FROM OTHER "EVOLUTION" SETS

You can add some of the cards from other "Evolution" sets to your deck. If the card has two traits the player must use the trait that has a text description on the card. The following cards are recommended for "Evolution. Mutations":

From the "Time to Fly" set:

- ANGLERFISH (used as the text on the card says; if played as a new species – the player may check played cards of new animal species; if played as a trait grants CARNIVOROUS)
- FLIGHT
- INTELLECT
- VIVIPAROUS (a new animal is added to the species with this trait, there are no restrictions on the amount of animals).

From the "Continents" set:

- AEDIFICATOR
- HERDING (all animal species with this trait are taking into account).

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