Ecogon

Rulebook

1. Ecogon

The word "Ecogon" is made up of two parts, ecology and hexagon. This also sums up the game itself: by playing hexagonal tiles players form ecosystems.

As the designer of the ecosystem it is your job to create the broadest and most stable network of plants, animals and habitats. The aim of the game is to score points by building ecosystems in which the animals can live. This is done by connecting animal tiles side by side with habitat, plant and other animal tiles which they need for survival. Throughout the game your ecosystems face challenges brought about by event cards. Play together or against each other to let nature take shape in front of you.

This rulebook contains all the information you need to play, guiding you through the game step-by-step. There are two modes of play: a cooperative game when everyone plays together following simple rules and also a competitive game when each player tries to score the most points to win.
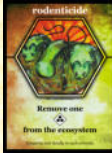
In the white info boxes are additional rules for an advanced version which you can play once you got familiar with the basics of the game. These add more strategy to Ecogon, making the game even more realistic.

In the green info boxes are additional information to give you a better understanding of the game and real-life ecosystems.

Ecogon is designed to be versatile, appealing to the widest range of players and is good for educational purposes. The cooperative game is an ideal learning tool for schools. It teaches the players about the relationships in the ecosystem and the native species, whilst also building teamwork and strategic thinking.

Number of pieces	Cards and components		
80 hexagonal tiles = nature cards	18 habitat cards	wild apples 24 plant cards	ladybirds 1 37 animal cards
		1 blank tile	
20 rectangular cards = event cards	rodenticide Remove one from the ecosystem	20 event cards	
80 tokens	4 x 20 beans		
Instructions	Rules and additional information for Ecogon		

Note:
The blank tile allows you to create your own tile and add any animal or plant species to the game. You just need to research what each organism needs to survive. It is also an option to leave out the blank tile.

3. Rules (cooperative game)

If any questions arise during the game that the basic rules do not refer to, go to Section 5 (FAQ's) or look at the green info boxes. Further information on: www.ecogon.de and www.facebook.com/EcogonTheGame

3.1 Object

The object of the game is to earn as many victory points as possible by the end of the game. You can get a victory point for each established animal in the ecosystem. Established animal means that all its needs are met.

Info: Only large enough ecosystems can be stable in the long run. That is why you should try to provide the living conditions for as many species as possible. The more biodiversity there is, the more likely it is that the ecosystem can return to a stable state after a disastrous event.

3.2 Setting up the game

- Shuffle the rectangular event cards. The length of the game depends on the number of event cards you use. The more cards you play with, the longer the game lasts (see Section 3.9 The end of the game). Put the event cards in a stack and place it face down (= event stack).
  → The remaining cards are not needed.

- Start the game with a habitat card placed in the centre of the playing area.

- Shuffle the remaining hexagonal tiles and place them on a face down stack (= nature stack).

- Then each player receives two nature cards from the stack. Keep all the cards in your hand face up so your fellow players can see them.

- Place the tokens on the side, ready for use.

event stack

discard
pile

5-20x

nature stack

discard
pile

79x

starting habitat

-
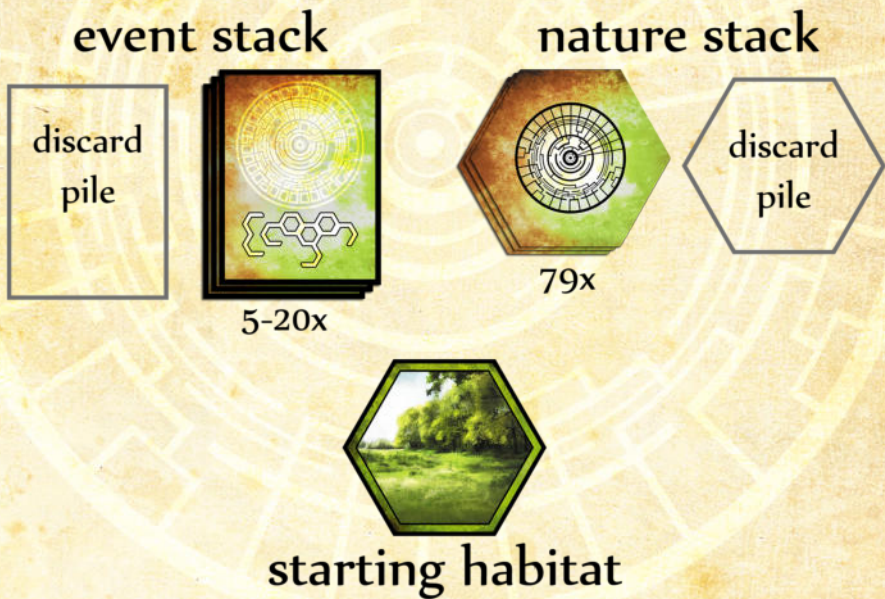
Complex version:
The starting card has to be a **forest-edge** habitat (light green border).

In the cooperative version it is possible for more than 6 people to play; however, because of the extended waiting time it takes longer until your next turn.

Draw a nature card (1) → Play cards in hand if desired → Try to establish animals if possible (2-4) →Draw an event card (if it is time)
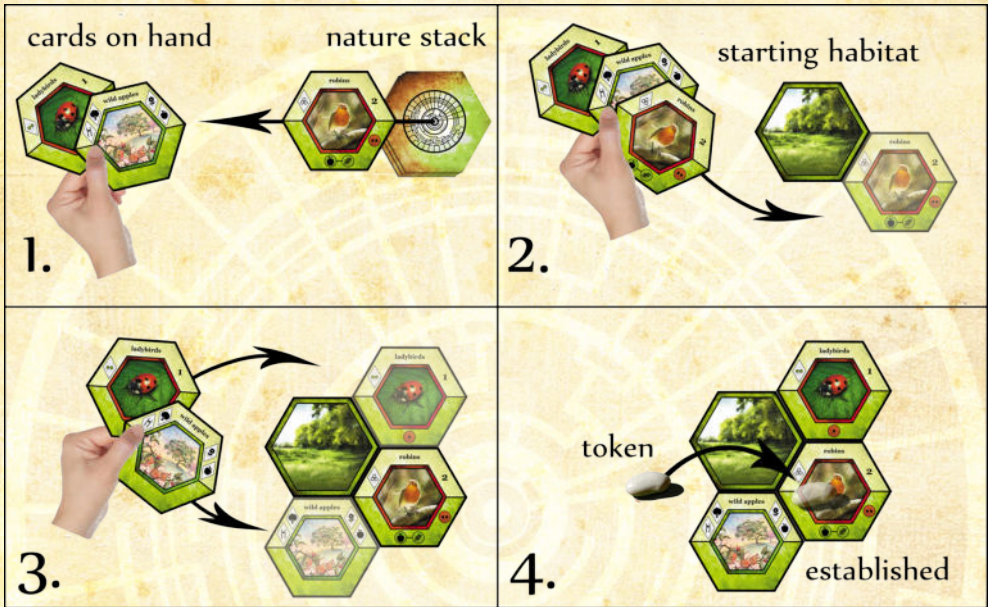
The player who was outdoors most recently goes first, the turns go clockwise. On each turn a player draws a card from the nature stack and has the chance to play one or more of their own cards. If the player does not wish to play any more of his cards, it is the end of their turn. After every three turns, an event card is revealed and activated, once there are two habitat cards in the game (see Section 3.7 Event cards).

At the end of your turn you can't have more than three cards in your hand. If you have more than three, you chose one of your cards to put into the discard pile (these cards are no longer for use).

> Note:
> Each organism card represents a whole population (i.e. a group of individuals) not only a single animal or plant.

3.4 Habitats

The habitat cards are the basis of the game, they allow the organism cards to be played. When you want to play a new animal or plant card, you must always connect it to a free edge of a habitat card already in play.

Each animal and plant card must be connected to at least one habitat card!

New habitat cards must always be connected to already existing tiles (no matter if it is an organism or another habitat). You can't place them without any connection into the playing area.

Complex version:
There are three types of habitat cards.

yellow border = **Meadow**	light green border = **Edge of the forest**	dark green border = **Forest**
This open habitat represents a meadow or a wayside. Here you can find warm-loving species that need little or no shade at all.	The forest edge is the transition from a meadow to a forest. But it stands also for orchards or gardens with trees, shrubs and open areas. It is a partially shaded area which hosts animals from neighbouring forest and meadow habitats.	In the forest, because of the dense canopy little light reaches the ground. Here you can find animals and plants that prefer cooler, darker and more humid conditions.

Important: At any time during the game when you play your habitat card, please remember that a forest and a meadow card should never lie next to each other. This is also true for all other types of cards including animal and plant cards.
Only the forest-edge can host both forest and meadow species.

There are two types of organisms:
plants whose images are surrounded by a green border and animals whose images are framed in red.

> Complex version :
> Every living being is associated with the three habitats above (meadow - yellow, forest edge - light green, forests - dark green). You can easily recognize in which habitat an organism lives because the background colour of the organism card matches the colour of the border on the habitat card.

To play an organism card, you must directly connect it to one or more habitats (see the illustration below). At this point it is not necessary to fulfil all its needs.

> Complex version :
> The forest and the meadow species may not border each other's habitats or organisms. → **Dark green and yellow cards can never be next to each other.** However, the forest edge cards can connect to all.

Each card has two main parts. The top of the card (light, highlighted area) shows what the organism is. The bottom shows what it needs.

The name is at the top, next to it on the left (or on both sides if it is a plant) there are some diamond shaped symbols representing the ecological category the animal belongs to. This is essential because it shows what can possibly feed on the animal or plant.
Animals are represented by dots, the more dots there are the larger the animal is.
(See back of the rulebook for symbol explanation.)

> Complex version :
> **The colour of the dots** shows how the animal mainly moves. Green dots = on the ground. White dots = flying.

ecological category   victory points

wild apples   honeybees   3   what it **is**

what it **needs**

plant   animal   needs

On the right side of animal cards, you see the victory points you can get once they are established. Establishing a species means that all its needs are met. (See section 3.6 How to establish animals.)

You find the needs at the lower part of the animal card which is darker than the section above. One or more symbols indicating what each species needs to survive. Each symbol represents one condition. If there are two symbols connected with a line, you can choose either of them, you do not need to fulfil both.

fruit or nut

Note:
The needs of animals are greatly simplified in order not to go beyond the scope of this game. Owing to that, only the main food sources of the animals are shown, those that should be present in any case. However, it is important to remember that many animals would take a lot more different food in reality.
For simplicity only symbols can be seen on the cards representing the needs of the species. These allow sometimes food conditions that would not occur like that in nature.

need   is
deciduous tree

need   is
huge animal
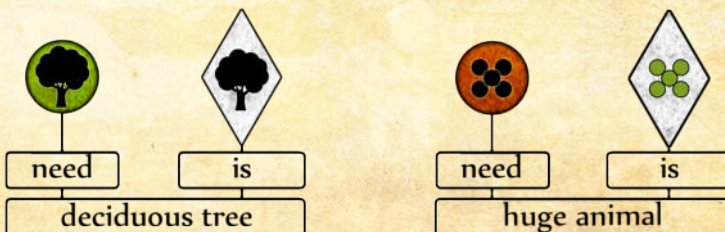
3.6 How to establish animals

Each species is worth victory points. To get these the respective species must be established. You establish a species by fulfilling its needs: finding an organism card which has the matching symbol in its upper part and connect it directly to the animal species to be established.

It does not matter on which side! But do not forget that this organism also requires a habitat. When you establish a species, the organisms that fulfil its needs do **not** have to be established.

If an animal has 3 different needs, then each need requires a different organism card connected to it. (An organism can never fulfil 2 needs at the same time for the same animal)

Example: "Cross spiders" are established as soon as small animals (e.g. "small tortoiseshells") are placed in direct contact. However, "Robins" need two cards to fulfil all their needs. The "small tortoiseshells" are not established yet, because the "vetches" can fulfil only one of their needs, even though they have both symbols the butterfly needs.

established
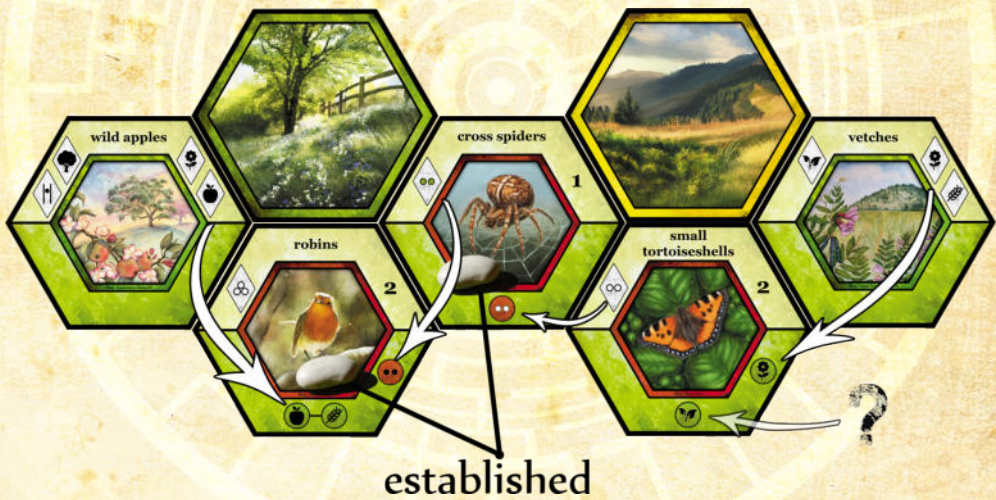
Once all its needs are met by placing the corresponding card(s) touching it, you can put a token on the animal card. This will help you to count the victory points for the final score.

Complex version:
The prey of predatory animals are mostly represented by black dots. This means that it does not matter if the prey moves on the ground or flies. However, if the dots are coloured it refers to only those animals that move accordingly.

3.7 Event cards

When :

The event stack is used only when at least 2 habitat cards are in play. Once this is the case, always draw an event card after every 3 turns, reveal it and follow its instructions immediately!

> Tip (to keep track of the event cards):
> Take 3 nature cards from the stack and lay them face down next to it. When it is time to draw a nature card, take a card from these three instead of the stack. When all three cards are drawn it is time to activate an event card after the turn.

Using an event card :

Read out aloud the event card so all players can hear it, then perform the event described immediately and place the card afterwords on the discard pile. If you cannot perform it, for example because the event card refers to an ecological category which is not in play yet, then place the card face down at the bottom of the event stack and draw another one. If the event card refers to more symbols, but only one is in play then still perform the action and place the card on the discard pile.

How to perform the event :

It may often happen that several cards are the potential target of an event card however only one or two of them are affected. In this case the players as a team have to agree which card(s) will be affected by the event.

If the position of a card is changed or an organism is brought back to the ecosystem, they must be placed in a legal location, where they can stay.

potential targets

3.8 How to remove cards

If you remove a card from the ecosystem, place it on the discard pile. The removal of cards can have far-reaching consequences. It may happen that the removed card fulfilled the need of an animal species, so now without it the animal is no longer established (its needs are not fulfilled any longer) so the token must be removed.

not established anymore

established

> **Example:**
> *If you draw an event card saying "insecticide" then as a result up to two cards must be removed from the play area. In this case (see illustration) we decide to remove both the butterfly and the aphid. The butterfly itself is necessary for establishing the spider which has a token on it. Now with the removal of the butterfly the spider is no longer established, so the token on it has to be removed until a small flying animal is placed adjacent to it again. However the robin remains undisturbed because it feeds on the spider.*

If the above mentioned animal is bordering an additional card with the same symbol, it can automatically switch to it and remains established.

If a habitat is removed or turned face down, it can also have far-reaching consequences. Every organism relying on this habitat can no longer remain there, so they are also taken from the ecosystem.

Not only events can lead to the removal of cards from the ecosystem. When all the free places around an animal are occupied without fulfilling all its needs, then the animal card must be removed.

If the removal of cards leads to the disconnection of some cards from the rest of the ecosystem then it has no further effects. It only leads to the formation of a sub-ecosystem which mostly can be reconnected to the rest later during the game.

3.9 Ending the game

The game ends when the last event card is activated from the stack or no more nature card can be drawn.

> **Tip:**
> If you want a long game, put all the 20 event cards in the stack. If you prefer a short game, reduce the number of event cards to the desired amount. (But not less than 5 event cards)

Who wins?

When the game is over, count all the victory points earned by the established animal species (ones with token on them), these points are your team's final score.

You have created a stable ecosystem, if you have collected at least twice the amount of victory points as the event cards you used in the game. Congratulations that's biological diversity !

If you have fewer victory points, it means your ecosystem is not sufficiently stable. Try again or get some fresh air.

> **Info:**
> Ecosystems live from their network. If you take away one component then another one immediately occupies its role. However, it requires a high biological diversity to respond to the most varied influences.

> **Note:**
> You may wonder why it is possible that animals may already be in play, although none of their needs are there yet. Here is a brief explanation: First of all, it is technically too difficult to do it in any other way. In real-life, you can imagine that a new species appears in the ecosystem. It is merely the habitat that already exists. This species is now in a pioneer status and makes it just to survive. Still it can build a stable population (established) as long as all its respective main needs are met.
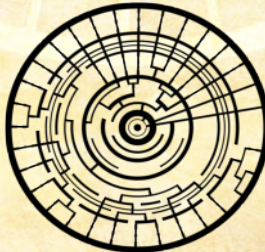
4. Rules (competitive game)

Those who not only want to play with the others, but also to compete , please see the section below.

Here you find the differences compared to the cooperative game rules described in the previous chapters.

4.1 Object

In the competitive game each player tries to establish animal species for their own benefit and get the highest score by the end of the game.

4.2 Setting up the game

The structure of the game is the same but here the cards in hand are face down so the other players can't see them. In addition each player picks a colour and takes the corresponding tokens while setting up the game.

> Tip:
> If there are only two players and loads of event cards, then it may happen that the tokens are not enough for the game. In this case just take some similar looking beans or get some extra beans from an organic grocery store you trust.

4.3 Turn overview

The sequence of turns is the same as in the cooperative game. However the event cards are not always activated after 3 turns.(See section 4.5 Event Cards)

If at the end of the turn the player still has more than 3 cards in his hand, then the player must play a card. If it is not possible, because there is no more space where he can lay his card then he must place it on the discard pile.

> Note:
> Ecogon is designed in a way that you can use the cards as a basis for all sorts of rules. Be creative and think of something new. You can find some suggestions on www.ecogon.de. For example: Not only individual players but also teams can play against each other in the competitive game.

Establishing animals follows the same rules as in the cooperative game, but here only that person may place his tokens on the animal card who has fulfilled its last missing need.

Example: It does not matter if the other players have already laid down other cards to fulfil the needs of an animal, the only thing that counts is who fulfils the last missing need of that animal. Only this player places his token on it and wins the points.

If an animal is established as a result of an event card, you lay a neutral token on it. These points do not count to any of the players.

4.5 Event cards

When?
In the competitive game the event cards are activated after different numbers of turns depending on the number of players.

Number of players	2 Players	3 Players	4 Players	5 Players	6 Players
Number of turns after which an event card is activated	3	4	3	4	5

Of course you have the freedom to vary the number of turns until the next event card is activated. But remember that it should not correspond to the number of players, otherwise the event card is always activated after the same person and this can be an advantage for the next player. The larger the spacing, the easier the game will be, but the longer it takes as well.

Who is allowed to perform the event ?
Just like in the cooperative game you must continue to try to make a decision together with the other players. However, if there is a vote tie, the person who has the fewest points has two voices (but only in a tie).

4.6 Ending the game
The game ends when the last event card in the stack is played or no more nature cards can be drawn. Depending on the start player, everyone can play one more turn to have the same amount of turns in total. When the game is over, each player counts the victory points they earned. If a player's token is on an animal card then the player wins the victory points of that animal. The winner is the player with the most victory points.

Complex version:
For an added challenge, use this rule:
A player can only win if all players together reach at least twice as many victory points as the number of event cards you used in the game.

5. FAQ's

Who performs the event when the points are equal?
The player with the fewest cards in their hand. If this is also equal, toss up for it.

What happens when an event card cannot be used?
If at least one of the actions can be performed, do it and then place the card on the discard pile. However, if nothing can be performed, the card goes to the bottom of the event stack and you draw a new one.

What does „change the position" on the event cards mean?
It means that the selected card may not remain in its current position. Here you can also swap cards if more than one is affected.

Is it necessary to have the needs already in play in order to play an animal card?
No, there must be only a habitat.

Why do some species need only a green circle?
These animals only need a plant that is adjacent to it.

What do the different coloured dots mean on the animal cards?
The colour indicates how the animals move. (See section 3.5 Complex version)

Can a plant fulfil two needs for one animal?
No.

Can you create multiple habitats next to each other?
Yes, as long as the meadow is not next to a forest.

You discover that a card was not laid correctly, what now?
When a card is in a place where it is not supposed to be then it is immediately removed and placed on the discard pile.

Note:
If you want to make the game more personal, you can collect your own game tokens from nature. Pebbles, seeds, shells or similar objects are perfect.

Hello!

You did a great choice with ECOGON and we are sure that you'll enjoy it. The best of ECOGON is that these animals are all around you. How many animals have you spotted this week?

None - except for the neighbour's cat

One or more - Nice!
But surely you can find even more.

So why don't you go out and have a look around.

Take your time! What is the first animal that you find? A ladybird? A grasshopper? Or a lizard by any chance?

Draw it in the empty hex tile.

Can you recall from the game what it eats? And what feeds on it? (Tip: take the cards and check it) Now write or draw them around the tile.
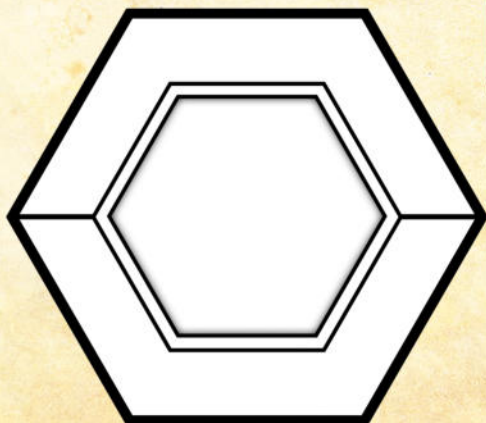
ELENA
Experiential Learning
and Education for
Nature Awareness

Just like detectives, go out, spot an animal and guess who else is around. One single animal leads you to a whole web of plants and animals. Isn't it exiting?

But what do these animals do in there private hours? Imagine watching a butterfly hatching from its cocoon. What a wonderful experience!

WHAT if you can do this in YOUR OWN CLASSROOM?!

ELENA activities are just here for you! ELENA is fun, it's first-hand experience with living animals and the best part is that you can do them at school!

Do you want to hold a little chick while cracking out of its egg? Have you ever wondered what the ants are doing underground ? How do earthworms clean up the leaves from the ground?

If your answer is YES then check out the ELENA website and and show it to your teacher:

www.elena-project.eu

6. List of species

Because there is a bunch of different names around the globe for one and the same species, it is helpful to use the scientific names to make sure that there is no misunderstanding.
The following list includes all the species used in Ecogon.

common name	scientific name	common name	scientific name
aphid	Aphididae	tree aphid	Lachnidae
banded snail	Cepaea hortensis	viper	Vipera berus
bark beetle	Cryphalus piceae	wasp	Vespula vulgaris
blackbird	Turdus merula	wild boar	Sus scrofa
blue tit	Cyanistes caeruleus	wolf	Canis lupus
buzzard	Buteo buteo	woodlouse	Porcellio scaber
cross spider	Araneus diadematus		
dormouse	Glis glis	beech	Fagus sylvatica
emperor moth	Saturnia pavonia	blackthorn	Prunus spinosa
field mouse	Microtus arvalis	couch grass	Elymus repens
fox	Vulpes vulpes	dandelion	Taraxacum sect. Ruderalia
garden ant	Lasius niger	elder	Sambucus nigra
grasshopper	Chorthippus parallelus	fir	Abies alba
green bottle fly	Lucilia sericata	foxglove	Digitalis purpurea
harvestmen	Phalangium opilio	ground elder	Aegopodium podagraria
hedgehog	Erinaceus europaeus	hazel	Corylus avellana
honeybee	Apis mellifera	holly	Ilex aquifolium
jay	Garrulus glandarius	linden	Tilia cordata
jumping plant louse	Trioza apicalis	oak	Quercus robur
ladybird	Coccinella septempunctata	orchard grass	Dactylis glomerata
millipede	Tachypodoiulus niger	pine	Pinus sylvestris
pipistrel	Pipistrellus pipistrellus	ryegrass	Lolium perenne
rabbit	Oryctolagus cuniculus	stinging nettle	Urtica dioica
red earthworm	Lumbricus rubellus	vetch	Vicia sepium
robin	Erithacus rubecula	violet	Viola odorata
sand lizard	Lacerta agilis	wild apple	Malus sylvestris
small tortoiseshell	Aglais urticae	wild carrot	Daucus carota
small white	Pieris rapae	wild pear	Pyrus pyraster
squirrel	Sciurus vulgaris	wood anemone	Anemone nemorosa
stag beetle	Lucanus cervus	wood garlic	Allium ursinum
tawny owl	Strix aluco	yew	Taxus baccata

Credits

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ecological category

victory points

wild apples

honeybees

3

what it **is**

what it **needs**

plant

animal

needs

tiny animal

small animal

midsize animal

big animal

huge animal

herbaceous plant

grass

deciduous tree

bush

coniferous tree

flower

fruit

nut

seed

tree hole

plant

sample: **flying animal**

sample: **ground animal**