



# THE SPECIES AND HABITATS OF THE BALTIC SEA

Baltic Sea school: secondary school

ÖSTERSJÖPROJEKTET  
BALTICSEAPROJECT  
ITÄMERIPROJEKTI



BSAG  
Baltic Sea Action Group

# WELCOME TO GET TO KNOW LIFE IN THE BALTIC SEA!

In this BSAG slide show, you get to know about the interesting life in the Baltic Sea and learn new things about its inhabitants.

Now let's dive into the depths of the Baltic Sea!



Photo: Juuso Haapaniemi, Metsähallitus

# BALTIC SEA: A UNIQUE ECOSYSTEM



Photo: Riikka Alvik

- The Baltic Sea has a unique ecosystem. It is surrounded by a large and densely populated catchment area that exposes it to various problems. Yet despite these issues, the Baltic Sea provides a beautiful and varied home for all kinds of organisms.
- The Baltic Sea is shallow and enclosed compared to oceans. It is an area of low-saline, brackish water. The Baltic Sea's unique characteristics make it extremely sensitive and vulnerable.
- The Baltic Sea is a challenging habitat for many organisms. The water is too fresh for oceanic organisms yet too salty for freshwater organisms. Although the animals, plants and algae in the Baltic Sea have adapted to living in these particular conditions, even small changes in their habitat can have dramatic consequences. Protecting marine nature in the Baltic Sea is, therefore, very important.

# Animals of the Baltic Sea



**Did you know that there are many  
animals living in the Baltic Sea  
that you may have never even  
heard of?**

**Let's get to know a few. Some of  
them can also be found in Finnish  
lakes.**



# BENTHIC ISOPOD CRUSTACEAN *SADURIA ENTOMON* (KILKKI)

- Saduria lives at the bottom of the Baltic Sea. Crawls around the bottom eating dead animals, mussels and prawn
- Can live in both salty and fresh water, but usually in deep and cold water.
- Can grow up to ten centimeters in length!
- A favorite food of many fish.



Photo: Essi Keskinen, Metsähallitus



# BLUE MUSSEL (SINISIMPUKKA)

- Lives on the rocks at the bottom, often in dense communities.
- Filters various micro-organisms and algae from the water for food, and at the same time effectively removes nutrients.
- Empty mussel shells are homes for small animals.
- Important food for e.g. flounder (kampela) and eider (haahka)



Photo: Pekka Lehtonen, Metsähallitus

# FIFTEEN-SPINED STICKLEBACK (VASKIKALA)

- Tall and slim fish with a special appearance.
- Thrives among bladder wrack (rakkohauru) and eelgrass (meriajokas), in high salinity.
- Builds a nest in early summer by tying algae into a ball, and the male stays to guard the nest until the fry are ready to go out into the world.
- Eats plankton and fish fry, which it preys on among the vegetation.



Photo: Visa Hietalahti



# BALTIC SHRIMP (LEVÄKATKARAPU)

- Lives on bottom rocks and stones.
- In winter, it moves to deeper waters.
- Baltic shrimps are almost transparent, so they are good at hiding.
- Eats everything from plants to small fish, including its own species.



Photo: Visa Hietalahti

# THREE-SPINED STICKLEBACK (KOLMIPIIKKI)

- A short fish, a few centimeters long, with three spines on its back.
- In addition to the Baltic Sea, it lives in large lakes in Lapland.
- The male builds a nest in the bottom, where it lures females to by dancing.
- In the same nest, there can be eggs of several different females, which the male fertilizes and remains to guard. The male takes care of the newborn fry until they are ready to fend for themselves.



Photo: Visa Hietalahti



# LUMPSUCKER (RASVAKALA)

- Ball-like shape.
- Has a jelly-like layer of fat beneath the skin.
- The male turns red during spawning.
- Clings to rocks in the bottom with the suction discs on its belly, and stays in place a lot.
- Eats benthic animals and small fish, sometimes even its own species.



Photo: Visa Hietalahti



# FLOUNDER (KAMPELA)

- Lives on the muddy and sandy bottoms of the Baltic Sea.
- The favourite food of the flounder are mussels.
- Flounder can endure even fresh water, but spawning is only successful in sufficiently high salinity.
- When young it still looks the same as other fish.
- When it matures, the flounder settles down to lie on the bottom and its eyes wander to the other side.



Photo: Visa Hietalahti

# STRAIGHTNOSE PIPEFISH (SILONEULA)

- Lives on the shores of the Baltic sea hiding among the vegetation.
- Ties its long tail into bladder wrack (rakkohauru) and sways in the water hunting for plankton.
- Is a cousin of the seahorse!
- The male carries the fry in its brood pouch (like kangaroo mothers), from which they are born in late summer.



Photo: Visa Hietalahti



# SEA MAT *ELECTRA* *CRUSTULENTA* (LEVÄRUPI)

- Tiny animal that forms calcium covered colonies.
- The colonies look like lace mats and cover rocks and seashells.
- Catches small organisms using its tentacles.



Photo: Heidi Arponen, Metsähallitus



# PERCH (AHVEN)

- Finland's **national fish**, perch, is common in both lakes and the Baltic Sea.
- The perch lives in flocks, although at night it retreats to its own peace in the shelters of the vegetation.
- Small perches eat plankton, but as the fish grows, it likes to eat benthic animals and small fish.
- Perches can live up to more than 20 years.



Photo: Visa Hietalahti

# FOURHORNED SCULPIN (HÄRKÄSIMPPU)

- Originally a fish of the northern Arctic Ocean
- Likes to live in cold water, both in the Baltic Sea and in large lakes.
- Probably a relict from the **Ice Age**.
- The head is large and has 4 sponge-like bony horns on the top.
- Eats benthic animals and other fish.



Photo: Visa Hietalahti



# EURASIAN RUFFE (KIISKI)

- Small, blunt-nosed and big-eyed fish.
- Lives in fish flocks both in the Baltic Sea and in lakes.
- The favorite food of the ruffe are insect larvae. It also eats animal plankton and fish eggs.
- Lives near the bottom and preys at night.



Photo: Visa Hietalahti



# POLYPS (POLYYPPI)

- Lives both in the Baltic Sea and in fresh water.
- Polyps form colonies, in which some polyps are specialized for predation, some for defense and some for reproduction.



Photo: Essi Keskinen, Metsähallitus

# EELPOUT (KIVINILKKA)

- An elongated, bottom-dwelling fish.
- Enjoys living near bladder wrack (rakkohauru) and rocks where it hunts shrimp and other animals.
- Eelpout's specialties include its green bones!
- Gives birth to live fry instead of spawning.



Photo: Visa Hietalahti

# Plants of the Baltic Sea



An underwater photograph showing a diverse array of seaweed and marine plants growing on a rocky seabed. In the foreground, there are large, yellowish-brown kelp-like plants with broad, leafy fronds. To their right and slightly further back, there are dense patches of bright red seaweed. The background is a deep blue-green, suggesting a clear but slightly hazy underwater environment. The overall scene is vibrant and illustrates the biodiversity of the Baltic Sea's underwater flora.

**Baltic Sea plants serve as food and shelter for animals. Plants also produce oxygen, just like all plants on dry land. Their roots help hold the seabed in place.**



# FENNEL PONDWEED (HAPSIVITA)

- Thrives on sandy bottoms, where they form tassel-like growths.
- The stems of the Fennel Pondweed may reach more than one meter in length.
- Their flowers rise to the surface with the help of gas bubbles.



Photo: Mats Westerborn, Metsähallitus



# EELGRASS (MERIAJOKAS)

- Growing on soft bottoms, the eelgrass needs salty water to thrive.
- At its best, eelgrass forms huge meadows that act as a shelter and home for many animal species.
- Eelgrass sequesters carbon: it captures carbon and stores it. Thus, it helps us to mitigate climate change.



Photo: Metsähallitus

# SPINY NAIAD (MERINÄKINRUOHO)

- It grows in sheltered places right next to the shore.
- There are often spikes along the stem.
- It needs lot of light and thus does not thrive if water clarity is reduced by eutrophication.



Photo: Heidi Arponen, Metsähallitus



# BRACKISH WATER- CROWFOOT (MERISÄTKIN)

- Lives near the shore. Thrives in salty water.
- The presence of brackish water-crowfoot can be recognized by the white flowers that rise above the water surface - and can form even dense meadows.



Photo: Pekka Lehtonen, Metsähallitus

# PERFOLIATE PONDWEED (AHVENVITA)

- Grows in the Baltic Sea and in the lakes and rivers of Finland. Grows in shallow and deep water.
- Can grow huge, up to two and a half meters long.
- Offers good shelter for many fish.



Photo: Essi Keskinen, Metsähallitus



# SPIKED WATERMILFOIL (ÄRVIÄ)

- Grows creeper-like in soft areas of the bottom, such as sand.
- Usually found only in lakes, but some have learned to live in the Baltic Sea as well.



Photo: Petra Pohjola, Metsähallitus

# QUILLWORTS (LAHNARUOHO)

- Grows in shallow rosettes in clear, low-salinity water.




Photo: Jussi-Tapio Roinonen, Metsähallitus



# Algae of the Baltic Sea



An underwater photograph showing sunlight rays filtering through the water surface, illuminating large, rounded rocks covered in vibrant green algae. The foreground is filled with dense, yellowish-green seaweed. The overall scene is serene and highlights the biodiversity of the Baltic Sea.

**A diverse group of different  
algae lives in the different  
depths of the Baltic Sea. They  
give shelter to organisms and  
provide habitats. Let's get to  
know them together!**



# MOSS BALL (AHDINPALLERO)

- Can grow both on the surfaces of stones or as a loose ball of algae.
- In the Baltic Sea there are moss balls about the size of a golf ball, but in other parts of the world the balls can grow much larger.



Photo: Lari Järvinen, Metsähallitus

# STONEWORTS (NÄKINPARTAISET)

- There are more than ten species of stoneworts (also known as charophytes) living on the shores of Finland. Some of them are endangered.
- They can form dense meadows on the seabed, which serve as shelter for fish fry.
- It is not very popular meal for other animals, as it releases a pungent smell that drives away hungry pests.



Photo: Pekka Lehtonen, Metsähallitus



# BLADDERWRACK (RAKKOHAURU)

- Bladderwrack is a key species of the Baltic Sea and familiar to many people.
- It forms dense habitats on rocky shores. The habitats provide shelter and food for many organisms.
- They need lot of light and salty water to thrive.



Photo: Visa Hietalahti



# CRUSTOSE BROWN ALGA *PSEUDOLITHODERMA SP.* (LAIKKURUSKOLEVÄ)

- You might not immediately think of pseudolithoderma as algae, because it covers the surfaces of rocks as a thin, paint-like film.
- A single pseudolithoderma is tiny, but it grows in large colonies.



Photo: Visa Hietalahti



# CLAWED FORK WEED

## *FURCELLARIA*

## *LUMBRICALIS*

### (HAARUKKALEVÄ)

- Clawed fork weed is large-sized and belongs to red algae.
- It lives on rocky shores in deeper water layers.



Photo: Visa Hietalahti

## RED-BEAD ALGA *CERAMIUM TENUICORNE* (HELMILEVÄ)

- Ceramium algae are found in all the seas of the world.
- When viewed up close, the stem of the algae looks like a small necklace with pearls.
- Forms shallow reddish communities.



Photo: Julia Scheinin, Metsähallitus



# MERMAID'S HAIR

## *CLADOPHORA*

### *GLOMERATA*

#### (VIHERAHDINPARTA)

- If you have spent time on the shores of Baltic Sea, you most likely know this hair-like algae.
- Bright green in colour, it sways in the waves right by the shoreline, attached to stones and rocks.

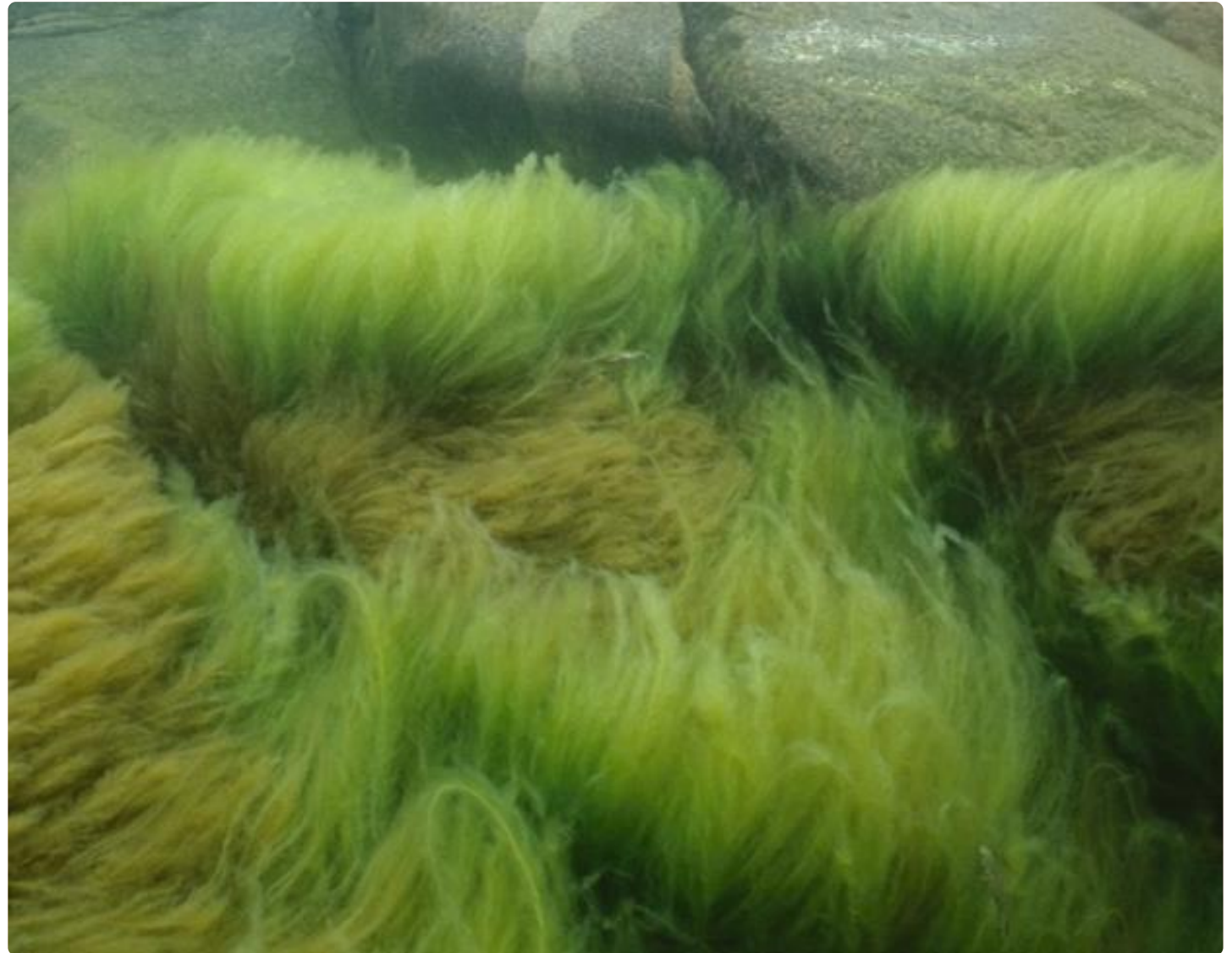



Photo: Visa Hietalahti

# Habitats of the Baltic Sea



An underwater photograph showing a healthy seagrass bed. Several stalks of green seagrass with oval-shaped leaves are visible, growing from a rocky and shell-covered seabed. The water is clear, and the lighting is bright, highlighting the vibrant green of the plants and the brownish tones of the algae and rocks.

Let's get to know the three most important habitats of the Baltic Sea: **lagoons, sand banks and reefs**. There are huge number of habitats in the Baltic Sea that have different kinds of species living in them.



# LAGOONS

- The lagoons of the Baltic Sea are sheltered sea bays, where the water circulates slowly and warms up quickly in the spring.
- They are home to a wide variety of vegetation.
- Lagoons are important spawning grounds for fish, as the young fish get shelter and food from the lush vegetation.
- The abundant flora also attracts many kinds of waterfowl.
- In the lagoons you can find e.g. perch (ahven), pike (hauki) and waders (kahlaajia).



Photo: [https://en.wikipedia.org/wiki/Vistula\\_Lagoon#/media/File:Vistula\\_Lagoon.jpg](https://en.wikipedia.org/wiki/Vistula_Lagoon#/media/File:Vistula_Lagoon.jpg)



**This is what a lagoon can look  
like underwater**




# SAND BANKS

- Sand banks are bottoms rising from the sand, e.g. made of gravel, sand and silt.
- The sandy bottom is a difficult environment for many organisms, because the waves constantly move it.
- In this environment, species adapted to it live, such as aquatic plants with strong roots, which anchor the sand in place.
- Species of sand banks include e.g. eelgrass (meriajokas), flounder (kampela) and mussels (simpukoita).





An underwater photograph showing a sand bank with patches of green seagrass. Sunlight rays stream down from the surface, creating a bright, hazy atmosphere. The sand is light-colored and textured, with some small rocks and debris visible. The seagrass is vibrant green and grows in clumps. The overall scene is serene and natural.

**This is what a sand bank  
can look like underwater**



# REEFS

- Reefs in the Baltic Sea refer to hard rock and stone bottoms under water.
- Many types of algae live on them.
- Filamentous algae that need lot of light live right near the surface. Below it is a zone of wracks, and deeper (with less penetrating light) red algae grow. Below them, blue mussels and polyps thrive.
- Different vegetation zones provide habitats and food for many animals, and thus reefs are rich in underwater biodiversity.
- On the reefs live e.g. bladderwrack (rakkohauru), blue mussel (sinisimpukka) and clawed fork weed (haarukkalevä).




Photo: Mats Westerborn, Metsähallitus



This is what a reef can look  
like underwater





An underwater photograph showing several jellyfish swimming in clear, greenish-blue water. The seabed is covered with dark, greenish-brown seaweed and other marine plants. The jellyfish are translucent with visible internal organs, and some have long, thin tentacles. The lighting is natural, coming from above, creating a serene and slightly mysterious atmosphere.

**The Baltic Sea is important, and it is especially important to get to know it better. You have now gained a lot of new information and hopefully learned many things about the life in the Baltic Sea.**

**If you want to learn more, you can visit:  
[bsag.fi/en/the-baltic-sea/](https://bsag.fi/en/the-baltic-sea/)**

**With sunny wishes  
BSAG**

**Sources and images: [www.marinefinland.fi/en-US](https://www.marinefinland.fi/en-US)  
& [www.bsag.fi/en/](https://www.bsag.fi/en/)**



# Thank you for the journey to the depths of the Baltic Sea!

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