

# Kristianstads Vattenrike Biosphere Reserve Activities 2021

Vattenriket 

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Kristianstads Vattenrike is a Unesco-designated biosphere reserve that serves as a model area for sustainable development. There are some 700 biosphere reserves worldwide, seven of which are in Sweden.

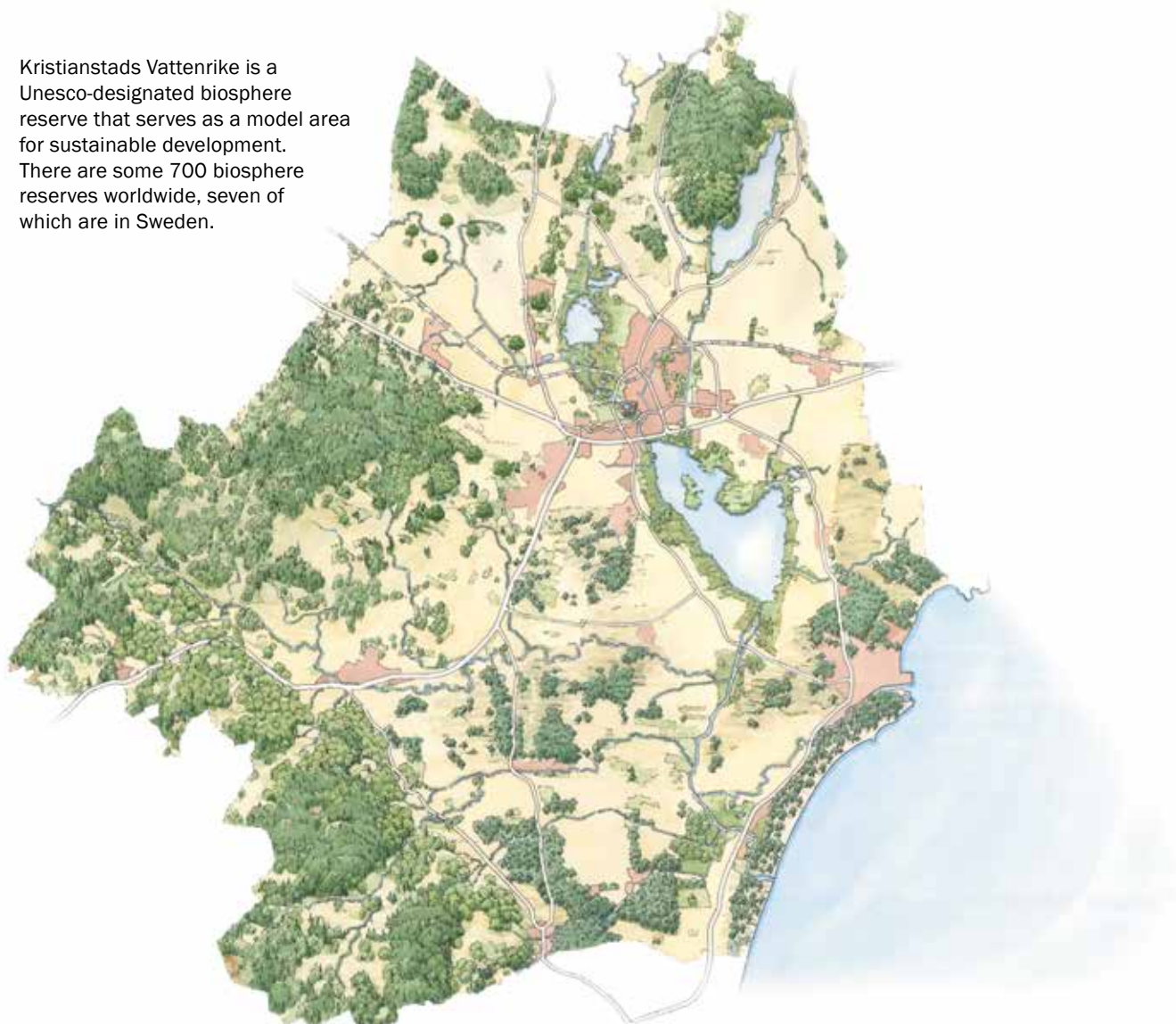


Illustration: Carina Lindkvist Naturcentrum AB

# Kristianstads Vattenrike Biosphere Reserve

**Kristianstads Vattenrike Biosphere Reserve (Vattenriket) occupies most of the municipality of Kristianstad. This rich cultural landscape is endowed with almost every type of natural habitat to be found in Sweden.**

The majestic River Helge å is a central feature. Fed by streams from the ridges and plains, it flows into Lakes Araslövssjön and Hammarsjön before reaching the sea in Hanöbukten Bay. The river is fringed by wetlands and seasonally flooded grasslands, but there are also leafy forests and dry sandy arable lands within the reserve.

Such variety creates numerous natural habitats and the species-rich reserve, less than two tenths of one percent of the area of Sweden, is a refuge for some 20% of the nation's red-listed species.

Kristianstad Municipality is committed to making the biosphere reserve a model area for sustainable development.

Producing and sharing knowledge about the landscape and nature is crucial for an ecologically, economically and socially sustainable society, so we make inventories, publish reports, work with researchers, host conferences and welcome some 100,000 visitors a year to the naturum visitor centre.

We collaborate with local associations, companies and landowners to use and conserve natural values. We create wetlands and restore sandy grasslands. Species diversity and efficient ecosystems help us to cope better with challenges such as

climate change.

Enabling people to experience nature inspires them to help conserve it. The biosphere reserve has some 20 visitor sites with observation towers, marked trails and outdoor museums. The jewel in our crown is the naturum visitor centre with exhibitions, meeting rooms, a restaurant and a wide programme of activities. Here we explain how the biosphere reserve works and encourage visitors to explore the area for themselves.

Results have been positive. At the Pulken visitor site migrating cranes, visitors and farmers co-exist in harmony. Cat-fish have been successfully reintroduced into the river and otters fish close to the naturum. Thanks to a new-found respect for natural values, the wetlands are no longer seen as a problem, but as a valuable resource for Kristianstad.

# 2021 – The year in review

'Fresh air is free!' This motto for the Swedish EPA's Outdoor Recreation Year 2021 was well suited to our own activities during the final year of our theme 'Explore Vattenriket', where there is much to enjoy all year round.

In 2021, work continued to extend the SL6 Skåneleden subtrail north to Arkelstorp, and a splendid, architect-designed shelter, shaped like a gigantic beech nut, was built at Österslöv.

Kavrö, always a popular spot by the water in Vattenriket, got a new fishing jetty, along with a picnic area and information signs. And at Norra Lingenäset, our youngest visitors can now follow the Story Trail to help a grumpy old gnome find his favourite flower – the toothwort. This acclaimed initiative was nominated for the Best Nature Trail of the Year Award by the Swedish Centre for Nature Interpretation.

The naturum visitor centre produced new maps and films to encourage visitors to explore Vattenriket and offered a large and varied programme of outdoor activities – from yoga walks and forest bathing at Äspet and Åbjär, to baking cinnamon buns

on simple primus stoves. Pollination was also in focus during the year, with a new Pollination Corner at the naturum visitor centre and numerous initiatives to help protect local insect species. Verges along some cycle paths were specially managed to encourage wild flowers to grow and, with support from Vattenriket's nature educators and ecologists, pupils at Sånna School learned about pollination and the sandy grasslands.

2021 also marked 50 successful years since the start of UNESCO's Biosphere Programme to conserve and develop biodiversity. Vattenriket is exceptionally rich in species, as confirmed by an inventory that recorded no less than 875 red-listed species in the biosphere reserve.

The UNESCO programme also advocates the development of sustainable innovations, as in our joint project with Kristianstad University and Krinova Incubator & Science Park to reclaim bream's status as a food fish. During the year, a selection of tasty dishes for catering and fine dining were produced along with films and a cookbook.

With the most severe impact of the Covid

pandemic now hopefully behind us, we look forward to an exciting new year of activities. In 2022, our focus turns to the sea and the 'Healthy Baltic Sea' project. In the true biosphere spirit, we will be working not only to improve natural habitats in and around Hanöbukten Bay, but also to spread knowledge and engage public interest in the health of our sea. And you can be sure that, as always, we aim to make a splash!



*Carina Wettemark*

Carina Wettemark  
Coordinator, Kristianstads Vattenrike Biosphere Reserve Manager, Department for Biosphere Activities, Municipal Executive Office, Kristianstad Municipality

## The Biosphere Programme celebrates 50 successful years

The vision is to shape a sustainable relationship between mankind and nature.







FRESH AIR IS FREE  
OUTDOOR RECREATION YEAR 2021



The 'Pod' wind shelter in Österslöv

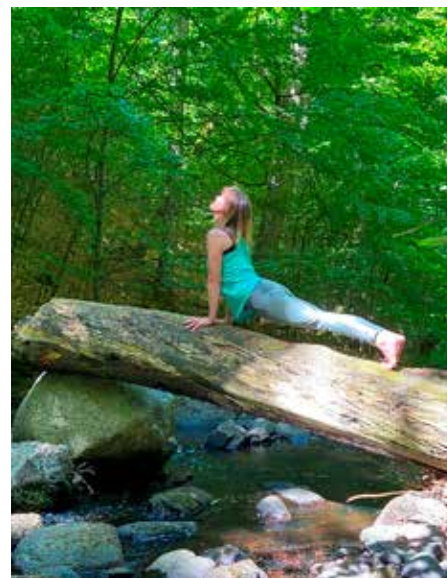




**The Story Trail.** Sculptures and signs let us follow a grumpy old gnome's search for his favourite flower.



**Eating out.** It's fun to bake cinnamon buns and meet and mingle in the great outdoors.



**Yoga walks** with Tin Josefsdotter took participants to both the forest and the seashore.

# Enjoying Vattenriket's great outdoors

In 2021, Outdoor Recreation Year, our five-year 'Explore Vattenriket' theme came to a close, and we opened the Story Trail at Norra Lingenäset, a picnic area by Kavrö Bridge and the 'Pod' wind shelter in Österslöv. We also produced maps for fishing and canoeing on the River Helge å, held yoga courses and baked cinnamon buns in the forest.

It's easy to enjoy Vattenriket's varied natural landscapes. The Biosphere Office has been working for many years to promote outdoor recreation, creating visitor sites with outdoor museums, observation towers and picnic areas, cutting trails, laying boardwalks, building jetties, producing maps and organising activities through the naturum visitor centre.

In 2021, we disseminated information about the experiences awaiting our visitors in Vattenriket in various ways and shared tips on Facebook, Instagram and our homepage about where to go and what to do. We improved the moorings at Kavrö Bridge, erected a new jetty and produced maps to make it simpler to fish and canoe in the area.

In April, as work on the SL6 Vattenriket subtrail of the Skåne Trail extended north to Arkelstorp, we inaugurated the Story Trail at Norra Lingenäset, part of a local nature conservation (LONA) project to develop visitors' sites along the subtrail. Signs and sculptures erected alongside a 600-metre-long path that is suitable for

wheelchairs and buggies make it fun for families with children and pre-school classes to follow a gnome on his quest for his favourite flower, learning about the local fauna and flora as they do so.

ArkNat, a concept that marries architecture with nature, was another subtrail project. Students from different countries designed and built windbreaks and shelters along the route. The shelter at Österslöv, inspired by the surrounding beech forests, resembles a giant beechnut. ArkNat Skåne is a collaboration between Region Skåne, Kristianstad Municipality, Kristianstad's Vattenrike Biosphere Reserve and other organisations and companies.

In 2021, in collaboration with UNESCO's intangible cultural heritage 'Land of Legends' in Ljungby, we added folklore tales to the information at visitor sites at Balsberget, Forsakar and Norra Lingenäset (Näsby) that can be enjoyed via mobile phone or on the website. As part of the 'Fairies and Folklore' theme, the naturum visitor centre arranged folklore tours at Forsakar waterfalls, on the beach at Äspet and in the

forests at Balsberget. Nature guides were stationed at Lillö and Hercules, led yoga walks and showed how to have fun baking cinnamon buns on a primus stove.

The Biosphere Office and the naturum visitor centre collaborated with the municipal Culture & Leisure Department in a project to demonstrate Vattenriket's numerous natural values and some of the ways to enjoy them: fishing, birdwatching, forest bathing, etc. When it was Kristianstad's turn to host events for the Outdoor Recreation Year, these included fishing at Kanalhuset, a walk around the Linnérundan trail and a cycle trip to Norra Lingenäset.

Our work to promote outdoor activities was recognised at both regional and national level. At the conference that concluded the Outdoor Recreation Year, the Story Trail was one of the finalists for the Swedish Centre for Nature Interpretation's award, Best Nature Trail of the Year. Håkan Östberg, project leader for the SL6 subtrail, was voted Innovator of the Year by Region Skåne.

# A species-rich area



Vattenriket's many special and well-preserved environments are the basis for a rich and diverse fauna and flora. In 2021 an updated inventory revealed that since 2005 the number of red-listed species in the area had risen from 637 to 875.

Red-listing is an assessment of a species' risk of extinction and a powerful tool for nature conservation. It calls attention to certain species and catalyses action in key areas. In 2021, biologist Örjan Fritz compiled a new red list of species in Vattenriket.

## Exceptionally rich in species

Kristianstad's Vattenrike is exceptionally rich in species. By confirming that almost 20 % of the nation's red-listed species are found here, in just two-tenths of one percent of the area of Sweden, Örjan's study underlines the crucial significance of the biosphere reserve.

Most numerous among Vattenriket's red-listed species are vascular plants and macromycetes. These, together with birds, are over-represented in Vattenriket compared with Sweden as a whole. Most red-listed species are found on dry sandy grassland, but they also inhabit the broadleaf forests at Balsberget and Linderödsåsen, and the wetlands and seasonally flooded grasslands around Lake

Hammarsjön and the River Helge å.

## Threats from invasive species

The new inventory shows an increase in red-listed species from 637 to 875 since 2005, chiefly due to greater knowledge of the species in the area and their distribution. Other factors include changes in habitat and climate. Many birds have been added to the national red list as populations of several common species have dwindled in recent years. The outlook for black-tailed godwit, dunlin and other wading birds is bleak, both nationally and in Vattenriket. Invasive species pose a major threat. The spotted knapweed that crowds out wild thyme and dwarf everlast in Vattenriket's sandy soils threatens not only these native plants, but also the insects that are dependent on them.

## Attracting butterflies and bees to Horna sandar

In 2021, measures were taken to open up the landscape at Horna sandar north of Åhus to improve conditions for rare fungi, flowers and insects that thrive in sandy and

sunny habitats.

In the winter, pines and shrubs were cleared to create some 30 patches of open sand and a 300-metre slope in the meadow grazed by horses in the north of the nature reserve. In time, this will become an eldorado for pollinating insects, predatory wasps, wildflowers and fungi.

A more open sandy landscape has been created in the meadow. Sun-warmed glades of bare sand and dead wood provide food and homes for pollinating insects. Once established, wild thyme will provide nectar, and the surrounding sand is ideal for insects' nesting burrows.

These initiatives were funded by the County Administrative Board in Skåne as part of a government assignment to protect wild pollinators. The Biosphere Office led the project; detailed planning was by Örjan Fritz.



Dwarf everlast. Photo: Patrik Olofsson/N.



Predatory wasp. Photo: Patrik Olofsson/N.



Wild thyme. Photo: Patrik Olofsson/N.



Örjan Fritz



# Roadside flowers please for insects – and cyclists, too!

To help wild flowers to spread, verges along some Vattenriket cycle paths are not mowed until summer is over.

Kristianstad's Public Works Department has helped select some 15 km of cycle paths that are particularly important for wild flowers and insects. Two new additions in 2021 were the cycle paths by Härlövs ängar and between Rinkaby and Horna.

Not mowing the verges until summer is almost over is a win-win situation. The plants have time to spread their seeds, wild pollinators have food throughout the summer, and we can enjoy the roadside flowers while the municipality reduces its landscape management costs.

In 2021, new stretches were earmarked to create yet more species-rich verges, and existing stretches were monitored to make sure there were no impediments for cyclists.



## Spades, flowers and bees at Sännarna



School pupils learned about pollination and the sandy grasslands' unique species, while giving nature a helping hand by disturbing the sand and planting flowers at Sännarna.

Pupils from Sänna School met the naturum visitor centre's nature educator at Sännarna to learn about the sandy, chalky soils around Åhus and the unique fauna and flora specially adapted to this hot, dry habitat.

The area's rabbit warrens and grazing cattle are clues to how the sand is brought to the surface. Over the centuries cows have been scraping the surface with their hooves, rabbits have been busily burrowing and

humans too have played their part by farming the land.

Pupils collected plants to discover the strategies different species use to survive in this challenging environment. Then they netted insects and butterflies and learned how crucial these pollinators are for the fruit, berries and other foods we eat.

Ecologists from the Biosphere Office helped pupils open up patches of sand for bees and sand pinks. Lichen and moss were scraped away and bird's foot trefoil, greater knapweed, field scabious and spiked speedwell were planted as part of this LONA-funded local nature conservation initiative.







Swedish educational broadcast



Biosphere film

## New films about Vattenriket

Several new films about Vattenriket were made in 2021, including a series of short films for the Swedish educational broadcaster (UR) in which Vattenriket staff spoke about animals, plants, places and activities in the biosphere reserve.

In June, as part of a series of educational films about Swedish fauna and flora in some of Sweden's 32 naturum visitor centres, TV technicians set up cameras and lights in the naturum centre here in Kristianstad.

The films provide a means of reaching a

much wider audience. Nature guides, nature educators, ecologists and other experts shared their knowledge about kingfishers and otters, Lillö Castle and the biodiversity of the sandy grasslands, migratory cranes at Pulken, our biosphere reserve as a model for sustainable development, and much more besides.

Nature photographer Patrik Olofsson also made a new film in 2021, which documented biosphere activities in Vattenriket.

In addition, we made a series of short films to show the breadth of outdoor activities that Vattenriket offers, as well as films about the WWF project to help restore the ailing health of Hanöbukten Bay by planting eelgrass on the seabed and a project to recognise the status of bream as a food fish.

## Eelgrass and sandy soils inspire new works of art

With her exhibition 'Souls in the sea – Songs from the nursery of the deep', Malena Olsson took us below the waves, as she and other artists sought inspiration from the environments and experts of Vattenriket.

Nature has always inspired Malena's work. Returning home to Blekinge after some years in Rome and witnessing the changes that had befallen the Baltic Sea, she chose the sea as the theme for a message she hopes will stir emotions.

Malena often works closely with researchers and sought expertise from the naturum visitor centre and the Biosphere Office

when she chose life in Vattenriket's eelgrass meadows as a major source of inspiration. During the summer, her exhibition 'Souls in the sea – Songs from the nursery of the deep' was hosted at Ryhls Boatyard in Åhus, as well as venues in Stockholm and elsewhere.

This theme complements our work to improve Vattenriket's marine habitats by creating new wetlands and planting eelgrass on the seabed off Åhus. We have always embraced a wide variety of media to bring about changes in attitude that will benefit both nature and people. Art, poetry and literature all help to advance people's understanding and knowledge of nature.

Maria Bajt is another artist inspired by Vattenriket's nature. The new Hjärtebacken pre-school at Näsby has one of her works: 'Fantastic Figures' comprises three sculptures, a relief and a book. The Biosphere Office helped with the text and the selection of the species. Maria hopes her work will inspire children and their teachers to learn more about the plants and animals in Vattenriket. In another project, the sandy grasslands around Sänna School were replicated by mounds of sand in the schoolyard.







# Bream makes a comeback on the table

Selective fishing of cyprinids such as bream has been shown to improve the water quality in Vattenriket's lakes. Today, this fish is converted into biogas, but the 'Bring Back Bream' project has successfully demonstrated bream's potential as a food fish.

Bream is eaten in many parts of the world and was once widely fished for food in Sweden. The 'Bring Back Bream' project, a joint initiative from Kristianstad's Vattenrike Biosphere Reserve, the Culinary Arts programme at Kristianstad University and the Krinova Incubator & Science Park, has investigated the potential for reclaiming bream's status as a food fish and turning what today is a problem into tomorrow's sustainable resource.

The project included sensory testing, a 'food jam' to demonstrate the scope for

preparing tasty bream-based dishes for catering, fast food and fine dining and a conference where entrepreneurs, chefs, researchers and students explored how to utilise the local and eco-friendly values of bream in ways that would link the entire chain, from selective fishing and food preparation to the table.

Several ideas were proposed at the conference to make bream better known and more easily available to, for example, restaurants and catering firms, but also to the growing numbers of people interested in the culinary arts and in eating sustainably. Project participants were united in their conviction that bream is an underused food fish with great potential.



## Corona year 2021

2021 was another coronavirus year, forcing friends and families to socialise outdoors and the naturum visitor centre to adapt activities to the pandemic.

Fresh air makes us healthier and fitter, so it is encouraging that many people chose to explore Vattenriket and learn the importance of treating nature with respect. The Kanalhuset boardwalk welcomed some 50,000 visitors in 2021.

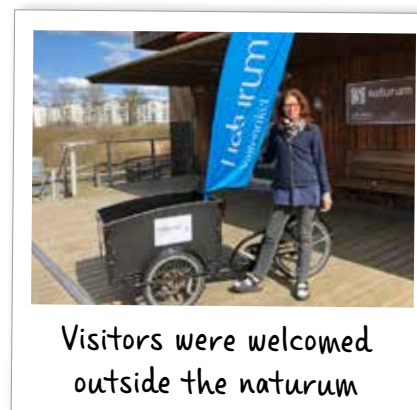
Coronavirus restrictions kept the naturum visitor centre closed until 13 April, after which visitor numbers and programme activities gradually increased as infections declined. While the visitor centre was closed, we launched a series of fun challenges in the vicinity of the naturum visitor centre for families to solve: Emmy the marsh tit in search of her seeds, a nature treasure hunt at Easter and Emmy and the sunshine song. In the spring school break, we provided craft kits with items from nature to keep

children entertained.

The cargo bike outside the naturum visitor centre was a popular initiative. Displaying a sign saying 'Naturum is closed, but nature is always open', it was packed with maps, brochures, tips for excursions and lots of fun ideas.

We welcomed our migrating cranes with the motto 'Coexistence at a distance' – a reminder about social distancing at the visitor site and new, improved opportunities to follow the birds via web cameras, live broadcasts and 'slow TV'. There was also an app-based crane quiz.

In April, a live broadcast of the opening of the Story Trail at Norra Lingenäset was followed by three Sundays of guided tours and broadcasts from other visitor sites on the 'Fairies and Folklore' theme in partnership with Ljungby's Museum of Legends. In May, nature interpreters were on site to meet visitors at Ekenabben, Norra Lingenäset and Lillö.



As restrictions eased in the summer, we resumed scheduled activities and, after all restrictions ended on 29 September, many visitors flocked to our organised yoga walks, forest bathing and three 'Fairies and Folklore' activities. School autumn break activities, the Biosphere Conference and our Christmas programme were all conducted as planned, before restrictions limiting visitor numbers were re-introduced towards the end of the year.





## The year in review



Photo: Adobe Stock.

### More eelgrass meadows in Hanöbukten Bay

One of the projects undertaken as part of the extensive WWF project to restore the health of the Baltic Sea, is the planting of new eelgrass meadows. Eelgrass fulfils several key functions and is often called the nursery of the sea. The root system stabilises the seabed and reduces erosion, the leaves consume carbon dioxide during photosynthesis, and eelgrass meadows provide a place where young fish can hide from predators while they themselves feed on the wealth of invertebrates that live on the grass. Divers have begun to test-plant eelgrass between Snickarhaken and Revhaken. The technique is not dissimilar to the way we thin out plants and transplant them in our gardens at home. Since it needs sunlight to survive, eelgrass thrives best in relatively shallow water at depths of 2 to 6 metres on sandy bottoms that are not too exposed to hydrodynamic forces.



Photo: Adobe Stock.

### Newly discovered species named for Vattenriket's founder

Seven years ago Ingemar Jönsson, Professor of Theoretical and Evolutionary Ecology at Kristianstad University, began research into tardigrades or 'water bears' as they are also known. Together with colleagues from Italy, he discovered four new species in Vattenriket, one of which he named *Itaquascon magnussoni* after Sven-Erik Magnusson, who has played such a key role in the development of Vattenriket and work to conserve the area's biodiversity. Another tardigrade was named for the climate activist, Greta Thunberg. Professor Jönsson says he chose these new scientific names in order to highlight the role of visionaries in the field of sustainability and to emphasise the need to change our relationship to our natural surroundings in order to create societies that are resilient and sustainable.



### New restaurateur at Bistro Årum

At the beginning of May, Benny Nordlund took over as restaurateur at Bistro Årum, with the ambition of serving a seasonal menu with the emphasis on organic, locally grown ingredients. Benny, who has previously managed a summer restaurant in the Swedish west-coast resort of Grebbestad, has long looked forward to contributing to the restaurant scene in Kristianstad, which in his words is 'a pleasant city of just the right size'. He rates the view from the naturum visitor centre, a mere 5-minute walk from the city centre, as both awesome and tranquil: 'It's a unique place with great potential!' As soon as Benny heard about the 'Bring Back Bream' project, it captured his imagination. Having found a supplier of minced bream, Benny was able to serve bream-burgers at Bistro Årum throughout the summer – an exciting addition to the menu that soon proved to be a popular choice among the restaurant's many guests.



### Seeing the big picture in the smallest of things

The exhibition in the naturum visitor centre gained a new addition in 2021 – the Makroliten super magnifier that lets visitors see the big picture in even the tiniest things. With a magnification of up to 140 times, the Makroliten can zoom in on flowers, bees, butterfly wings and all sorts of other things, revealing secret worlds on a screen that many can view simultaneously. There is one Makroliten in the auditorium and one in the naturum visitor centre's Pollination Corner, paid for with government LONA funds specially allocated to local nature conservation activities. During the year, a number of thematic exhibitions were linked to these magnifiers, enabling visitors to see fungi, spiders and the pollination process up close. We also used them in connection with family activities to show how tiny creatures like lice (isopods), spiders, etc. are able to adapt their behaviour to their surroundings.



## The year in review

### Vattenriket projects that create a buzz

Pollination plays a crucial role in our food supply chain. To support this essential ecosystem service the naturum visitor centre handed out packets of mixed seeds as part of the 'Let Sweden Blossom' project to spread wild flowers along the edges of fields and on fallow land. Lacy phacelia, buckwheat, ribbed melilot, bird's foot trefoil and clover seeds sown on a patch of ground outside the naturum centre in mid-May later flowered to provide plenty of food for the bees and pleasure for passers-by. Also, a pollination display was built in the naturum using local nature conservation funding specially earmarked for pollination activities. In another initiative, a Biosphere Classroom was set up at the Sånna outdoor museum, where the naturum visitor centre's nature educators hosted numerous visiting school classes. Pupils and teachers not only learned about the sandy grasslands and their special fauna and flora, but also lent nature a helping hand by unearthing the sand and planting sand-loving plants.



### Vattenriket inspires local school's environmental profile

It was Kristianstad's Vattenrike Biosphere Reserve that inspired Söderport Upper Secondary School to develop the environmental profile of its science programme. On an excursion to the River Vramsån in Gärds Köpinge, students were able to see for themselves the varied, species-rich landscape and witness sustainable development work in progress. Theory was integrated with practice, as students learned how to 'read' a watercourse, studied the surroundings under the guidance of a nature educator from the naturum visitor centre and analysed the river's ecological status using Vattenriket's specially developed pedagogic tools. At the bathing site, the Biosphere Office's limnologist informed students about current biosphere projects. Meeting people who work with nature conservation and sustainable development outside the classroom gives students greater insights into the processes involved. Students see the school's environmental profile as important and feel it makes their studies more interesting and fulfilling.



### Project to introduce Vattenriket to new target groups

The Swedish Outdoor Council allocated 250,000 kronor to the Municipality of Kristianstad to promote activities among residents unaccustomed to spending leisure time outdoors. In a joint project with the municipal Culture & Leisure Department, the Biosphere Office and the naturum visitor centre offered outings and activities in Vattenriket's urban nature for this target group – children and young people from socioeconomically disadvantaged areas, their families and recent immigrants – in order to spread awareness, increase knowledge and stimulate interest in outdoor recreation. Experiences ranged from fishing led by the naturum visitor centre, birdwatching and forest bathing outings to activities linked to the new Story Trail at Norra Lingenäset. The Biosphere Office and the naturum centre are no strangers to this type of outreach activity and this latest project has provided an opportunity to move things up a gear, while also meeting the increased interest in nature that has been fuelled by the coronavirus crisis.



### Meeting ecologists and making films at summer camp

The naturum visitor centre organised two summer camps for schoolchildren in 2021: the Biosphere Camp, to experience Vattenriket's rich and varied nature and meet people who work in the area, and a nature photography Film Camp. Over three days, ten youngsters visited places with unique natural values and met ecologists working to protect Vattenriket's threatened species. There were also opportunities to learn how to make a video reportage – from planning to filming and editing. Projects were filmed, interviews were conducted, and ecologists explained their role and demonstrated how watercourses and sandy grasslands can be managed in ways that benefit both nature and people. The Film Camp was a collaboration between the naturum visitor centre Vattenriket and Safari Sweden, an organisation that teaches young people the techniques of making nature films. The films were later published on the Safari Sweden website.







### New fishing and canoeing jetty at Kavrö

The picnic site at Kavrö Bridge was upgraded in 2021, with a new jetty, barbecue facilities and a safer entrance. The improvements were all part of a project to make it easier and safer to enjoy Vattenriket from the water. Kristianstad's Municipal Executive Committee has invested 3.1 million kronor in the project, and the Lower Helge å Fishery Conservation Area has contributed 100,000 kronor. Other initiatives to promote outdoor activities on and in the water included new maps for canoeists and anglers, a GPS course across Lake Hammarsjön and a new picnic site at Franckes udde on Näsby fält. The work at Kavrö Bridge was undertaken in collaboration with the municipal Public Works Department.



### Udden's history revealed and restored

There was once a ferry between Kristianstad and the dance pavilion at Ekenabben that called at a jetty at a place known as Udden, on the north-eastern shore of Lake Hammarsjön. When the steamboat Thor ran the service from 1903 to 1909, a ticket cost just 10 öre (1 euro cent!). In 2021, trees and bushes were cleared to reveal the old jetty. Over the years, the ancient oaks overlooking the jetty have been subjected to stiff competition from other trees and bushes. Today, they stand proud once more and can look forward to many more years of good health. It was Bengt Hellberg's idea to reclaim the area around the old jetty. He recalls how, in the 1950s and 60s when he was just a youngster, there was a path that led down to the best spot for fishing in all of Lake Hammarsjön. Now the path has been cleared and, when the water is low, it is once again possible to fish in the fast-flowing waters off Udden.



### Vattenriket features in thesis on ecosystem services

Towards the end of the year Katja Malmberg published her doctoral thesis 'How on Earth?', which investigates how the concept of ecosystem services can be used to promote sustainable landscape management. The thesis is built around workshops and interviews with officials, landowners and others engaged in stewardship practices. Katja's mapping and analysis of ecosystem services in the lower drainage basin of the river Helge å led her to conclude that these services are fairly well balanced in Kristianstad's Vattenrike Biosphere Reserve. Her thesis also compares different research methods and demonstrates that results are better when participants understand what is expected of them. Researchers need to create long-term relations with organisations such as the Stockholm Resilience Centre and Kristianstad's Vattenrike.

Kristianstad's Vattenrike Biosphere Reserve  
– benefiting nature and people

Read more on our homepage, where you will also find contact details  
[vattenriket.kristianstad.se](http://vattenriket.kristianstad.se)