

BIODIVERSITY TOUR– DÚN LAOGHAIRE RATHDOWN

A brief tour of our biodiversity across the county



Red Squirrel

What is Biodiversity ?

In simple terms “biodiversity” includes all the variety of life on Earth. It is the diversity of nature, of our habitats, plants, and animals (including us) and their interconnections with each other. We are a part of nature and everything in nature is connected.

Think of all the different species and places on our planet as threads in a net, the more threads that intertwine, the stronger the net. The stronger the net, the better nature can provide for us and cope with threats such as climate change.

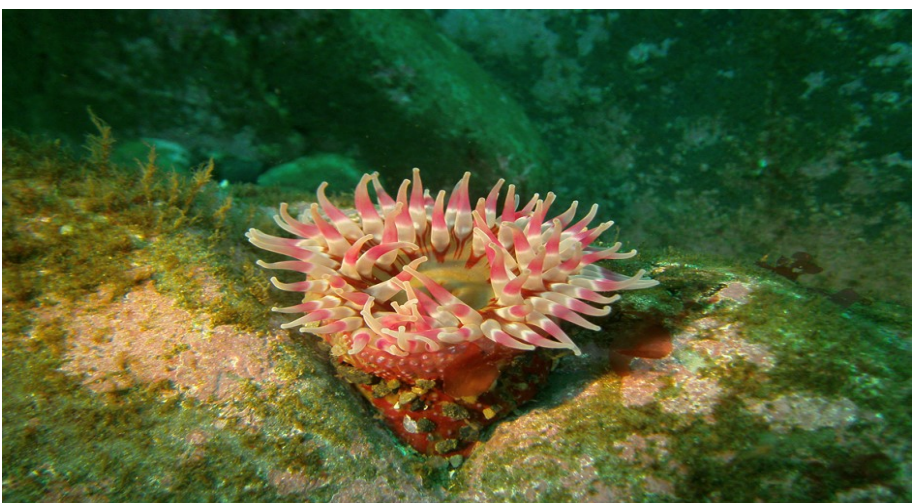
DLR Marine Biodiversity – What treasures are beneath the surface !



We usually don't think of whole different world beneath this shiny veneer of our marine waters, with its own mountains, racing currents, valleys, cliffs and living creatures including, plants and animals. These waters are full of fascinating life that often goes unnoticed to all of us above shore as we pass by on our beach or pier walks and on our boat trips around the bay or as we admire the coastal views from higher ground at Killiney Obelisk and Sorrento Park.

Sea Anemones ‘Flowers of the sea’

Sometimes called the ‘flowers of the sea’, sea anemones are actually beautiful animals, closely related to jellyfish and corals. Many species of anemone are found in our marine waters such as Dead Man’s Fingers and the very feathery like Plumose anemones. Anemones can be found from rockpools to the deepest depths and in all habitats from rocky reefs to soft mud. Although they are related to jellyfish unlike jellyfish they cannot swim, our anemones are found attached to rocks and the seabed. Anemones belong to the group Cnidarians. The name Cnidaria comes from the Latin cnidae which means ‘nettle’. All of the animals within this group have stinging cells which they use for the capture of prey and to protect themselves against predators.



“Dahlia Anemone” by Fintan Keating part of the Dublin Bay Biosphere Underwater Photography Competition)

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Sea Urchin

Is it a hedgehog !!!

No, it is a **Sea urchin** (*Echinus esculentus*) but the word *Echinus* is derived from the Greek 'echinos' meaning 'a hedgehog'. You can understand why, when you see the photograph of a sea urchin with all its spines. It is a species of marine invertebrate and grazer of algae such as seaweed but also eat other creatures. They can attach to rocks and move about the seabed using their tube feet.

Marine Mammals

Marine mammals such as harbour porpoise, common seal and grey seal can be seen around Dalkey Island and in the Dún Laoghaire harbours. Bottlenosed dolphins, minke, fin and killer whales, Risso's and common dolphins have all been recorded in the marine waters around Dún Laoghaire Rathdown.

The three species that regularly occur in our marine waters are harbour porpoise, grey seal and bottle-nosed dolphin. Seals are protected species in Ireland under Annex II and V of the EU Habitats Directive and harbour porpoise and dolphin species are protected under Annex II and IV of the same directive. Grey seals regularly haul out in the inter-tidal area around Dalkey Island. Seal tagging was planned for 2020 but will now be postponed until 2021 as part of a Biosphere project across Dublin bay including DLR.



Grey seals hauled up on rocky shoreline

Dalkey Islands

Some interesting habitats occur on Dalkey Island including; dry grassland, rock outcrops, wet grassland, dense bracken, sea cliffs, rocky shores, inter-tidal and submerged zones. All of these habitats contribute to the unique wild and isolated character of the islands that everyone enjoys. A number of rare plants have been recorded from the grassland on the islands in recent decades, including a set of rare species that are specific to the dry, open, coastal heathland habitat.

The islands are also home to interesting bird species including EU protected tern species and so the islands form a designated EU Natura 2000 site called Dalkey Islands Special Protection Area (SPA), which is specifically designated for Roseate Tern, Common Tern and Arctic Tern. The islands are a summer breeding site and a staging site for the terns. DLR work with Birdwatch Ireland to manage and protect the tern populations.

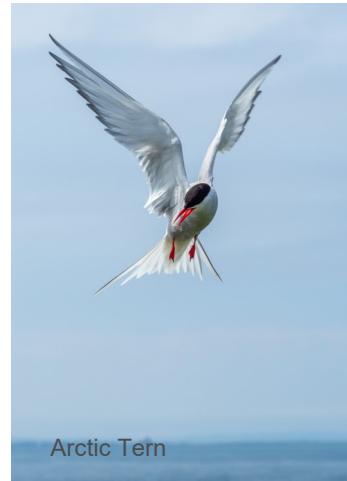
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Arctic Terns nest on Dalkey Island for the first time in 2019

For the first time on record, Arctic Terns have successfully raised chicks on Dalkey island in 2019, giving a boost to the vulnerable colony.

As terns are a ground nesting bird, the pressures of sea rise, increased storminess, flooding along with predators such as rats and gulls have taken their toll on our tern populations on Dalkey islands. There were great concerns for the future of the dwindling Arctic Tern colony.



The efforts of Dún Laoghaire Rathdown staff to manage all aspects of the island and the great work of Birdwatch Ireland has assisted the survival of these chicks. Birdwatch Ireland and their volunteers have managed to remove at least a large proportion of the rat population on Dalkey Islands. Canes were also erected across a portion of Lamb Island to exclude gulls from the tern colony. This work was carried out as part of the Dalkey Tern Conservation Project, which is funded by the EU LIFE Roseate Tern Recovery Project and Dún Laoghaire Rathdown County Council.

Dalkey Islands Conservation Management Plan 2014 – 2024 was developed for the islands and has provided a list of actions to be implemented including those for biodiversity. These biodiversity actions are being currently undertaken.

DLR have commissioned mapping of Dalkey Islands in 2009 with an updated mapping exercise carried out in 2018. We also run a monitoring programme to check the vegetation and a number of monitoring points have been placed on the island.

A rare plant study was carried out in 2009 – 2010 and that has been updated in 2019. Rare plants have been located and will be monitored on a regular basis. Additional rare plants have been noted in 2019 including Spring Vetch and Frog Rush. Other rare species refound that may have benefited from the drought of 2018 include Sea Storks- bill.



Flora Surveys on Dalkey Island

Spring Vetch

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Visiting Dalkey Island

Dalkey Island Visitor Management Plan 2020 – 2025

draft was developed in 2019 to ensure sustainable use of the islands by visitors. A footfall counter was also installed on the island in 2018 to obtain information regarding the number of visitors on the islands including peak times, in order to better manage the islands given the importance of protecting the biodiversity and heritage of the islands.

A Code of Conduct for Visitors

has been developed for the island and this is provided in a sign located on the island, at Coliemore harbour and on our website.

Although we want everyone to enjoy the island, the value of the island is really embedded in its natural and built heritage. In order to protect it we are asking everyone to keep to the rules, including understanding that **no camping or fires are permitted** on the island and **no dogs are permitted on the island**.

We would really appreciate everyone's cooperation in relation for the welfare the goats and also biodiversity. The herd is monitored for the Council by a veterinary surgeon.

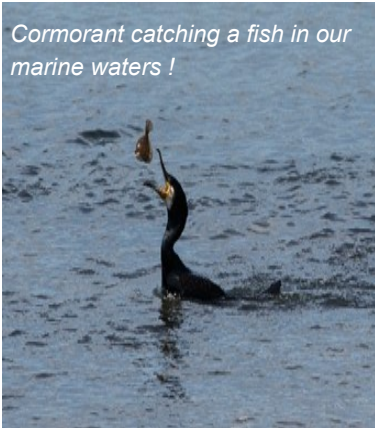


Goats grazing on lichens on Dalkey Island

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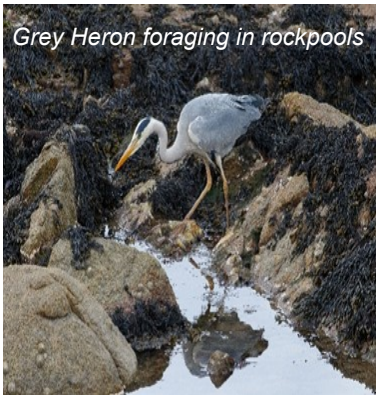
Cormorant catching a fish in our marine waters !



Where do our birds go?

Our varied coastline from Dublin bay, Booterstown Marsh, Dalkey Islands and all the way to Shanganagh Cliffs provide breeding habitats for birds during the summer. Terns, gulls and shelduck breed on Dalkey Island, sand martin on Shanganagh cliffs, black guillemots at the harbour, Kingfisher along our rivers and streams to name a few.

Grey Heron foraging in rockpools



Sand martins nesting at Shanganagh Cliffs



Black Guillemots

In winter coastal areas provide roosting and foraging habitats for large numbers of wintering birds including species such as Light-bellied brent geese, oystercatcher, ringed plover, grey plover, knot, sanderling, dunlin, bar-tailed godwit, redshank, curlew, turnstone, little Egret and heron. Some of the important birds move further inland from the coast to roost and feed, for example, Light-bellied Brent Geese that feed on our parks and pitches.



Light-bellied Brent Geese roosting on marine waters

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Tracking our Brent Geese

Brent geese nest and breed in high arctic Canada in the summer and then migrate to Ireland every winter, a 5,000 km journey passing through Greenland, Iceland and Northern Ireland arriving in Dublin to feed, this is because the arctic vegetation is covered in ice and snow leaving little feeding opportunities. Almost the entire the population winter in Ireland and so this gives an indication of how important Ireland is to these geese. By tagging individual brent geese when they arrive here in Dún Laoghaire Rathdown, we can track where they are going to feed and to rest, over the winter.



Light-bellied Brent Geese journey to Ireland

As most people will know, wild birds in general are easily spooked. This means that our capture method needs to be hidden from the birds view, until they are in a position to be safely caught. To do this we use cannon-nets, to catch the birds. Although it sounds dangerous, it is a commonly used method of catching wading birds for research and the welfare of the brent geese is of the highest priority throughout. The method involves having an experienced team, including a cannon-net licensee (licensed by the National Parks and Wildlife Service) and a lot of specialist equipment.



Light-bellied Brent Geese tagging in Clonkeen College

Take a look at this video about the geese and how we tag them here:

<https://vimeo.com/387265148>

This project was commissioned by Fingal County Council, with cofundign from Dún Loaghaire Rathdown County Council and Dublin City. It is carried out by the University of Exeter Student, Tess Handby, the Irish Brent Geese Project and volunteers. The project runs until 2021 and there will be a series of public information talks next year to provide information on the project results. We would like to thank the public and volunteers for assisting with the project.

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European Hedgehog

Land Ahoy !



Biodiversity across our lands

Moving landward and across the county we find important wildlife corridors, important local habitats and other nationally or internationally protected habitats and species that form the basis of our land biodiversity. As an urban county and one of the smallest counties in Ireland, our biodiversity is competing with a lot of land uses. The more we know about our biodiversity, the better we can protect and enhance it, for everyone. The greater benefits we can get from biodiversity (also known as ecosystem services)

Mapping our wildlife corridors, habitats and species

In 2008 DLR mapped the habitats of the county such as woodlands, grasslands, heath, fen, springs, rivers and streams. As time has moved on and changes have occurred over the years we are now reviewing those maps in 2020 to update them and to identify any changes that have occurred. We are also identifying our important local areas for biodiversity to highlight their importance also.

Hedgerows

We are also updating our hedgerow surveys. Hedgerows are an important county feature for wildlife such as birds, small mammals such as hedgehogs, bats, insects and so much more. The associated ditches, banks and verges provide shelter and food for a still wider range of animals. They often form part of our wildlife corridors that link habitat together and allow species to move across the county. This has been identified as very important to the resilience of biodiversity to climate change.



Hedgerow with trees in bloom along field boundary

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Biodiversity across our lands



Dotted across the county are the green spaces and parks that form an important role in the conservation of biodiversity. The dedication of our Parks staff to enhancing biodiversity aspects of our parks is reflected in the number of natural areas within our parks and the variety of species present in our parks.

Shanganagh Park

The meadows of Shanganagh Park are managed by Parks staff to provide a semi-natural grassland habitat which is rare in an urban environment and reflects the importance of our Parks for these declining habitats and associated species. The park also contains an orchard planted with native apple trees and a variety of native tree are planted throughout the park.

Conservation Grazing at Fernhill

In the foothills of the mountains at Stepside, lies Fernhill Park and Gardens which has links to the upland habitats of the Wicklow Mountains. The conservation grazing project was commissioned by DLR's Biodiversity Officer with the help of the Padraig Fuller the secretary of the Droimeann society along with our Parks Staff, to manage the old meadows at Fernhill. The meadows are grazed by a small number (six) of rare breed Droimeann cattle during winter and are chemical free, to help keep these meadows full of wonderful plants and to enhance Biodiversity including for our pollinators. Also, in the face of climate change these meadows have demonstrated great resilience. For more information, see our webpages at:

<https://www.dlrcoco.ie/en/heritage/biodiversity/biodiversity-conservation-fernhill-meadows-droimeann-cattle>



Shanganagh Park meadows, a rare semi-natural grassland habitat in DLR

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Helping our Pollinators... helping us all

DLR are Partners of the All-Ireland Pollinator Plan and we are delighted to support our pollinators in any way we can. For example our DLR Nature Wildlife Areas.



DLR Nature Wildlife Areas

This project aims to manage roadside verges and green spaces in a way that allows us to maintain safe and accessible roadsides but also support pollinators. We aim to alter mowing regimes and reduce pesticide use. These areas can be used to create and enhance the ecological networks and wildlife corridors across the county by increasing connectivity and biodiversity. Watch out for the DLR signs on road verges and in our parks.

Pollinator habitat does not happen overnight and not all locations will be suitable. The development of a more diverse pollinator habitat may take some years to develop and sites will be added over time so please bee-ar with us.

We will be monitoring a number of pilot areas this year to check their development as nature wildlife areas . We look forward to providing a workshop to the public later in 2021 for those who wish to become involved in the monitoring scheme. The new updated list of areas for 2020 will be given on our website:

<https://www.dlrcoco.ie/en/heritage/biodiversity/nature-wildlife-areas>

Other pollinator friendly actions DLR carry out include:

- * Bumble Bee Monitoring Talks and Workshops with NBDC
- * Working with local communities to plant for pollinators
- * Changes to landscape management to create Pollinator Areas across the county
- * DLR Slow to Mow Campaign
- * Pollinator planting in New Developments including green roofs and for example a living wall in the new Cherrywood Town Centre
- * Conservation Grazing in Fernhill meadows
- * Reducing chemical weed-control across the county
- * DLR Wildlife Corridor Plan encourages Pollinator areas



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Important Species

Red Squirrel

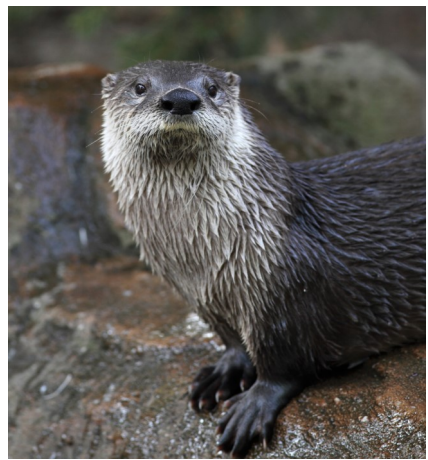
Some important species occur in our county and one familiar creature to those who visit Killiney Hill Park may catch a glimpse of one of our vulnerable declining species that is gradually making a comeback in the west and midlands of Ireland – the red squirrel.

The Killiney Hill Park holds the last remaining viable population in Dublin and this is down to the great work of our Parks staff there.

DLR have been managing and monitoring the population annually and working with National Parks and Wildlife Services to assist in the survival of this population. This includes the management of grey squirrel as they pose a risk to the red squirrel by directly competing for food. Grey squirrel also carry a disease which does not appear to affect their health but often kills red squirrels. When red squirrels are put under pressure they will not breed as often. So please do not encourage grey squirrel to feed in your gardens and do not feed them if you see them in our parks.

Otter

Another shy creature that may elude us as we walk through our valleys and along our watercourses, is the otter. The otter is a protected species that occurs across the county. The otter tends to forage under the cover of nightfall especially in urban areas. DLR commissioned a study of our otter countywide and this commenced in 2019 and will be completed in 2020. The study will provide an indicator of the important areas for otter across the county and vital information for managing our wildlife areas including our watercourses. It will assist the understanding and management of lands to ensure the protection of otter.



A wide range of species occur in the county including badger, deer, hedgehog, pine marten, bat species, frogs, newts, to name a few. All our native species are important components of the biodiversity of our county.



From left to right: Hedgehog, Badger, Fox and Frog

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The nature of our Uplands



In the western parts of the county, as the land slopes up towards the mountains of Three Rock and Two Rock, there is a change to more rural agricultural lands and Coillte forestry in areas such as Stepside, Kiltiernan and Glencullen River Valley. The habitats reflect the more upland and rural characteristics, comprising areas of bog, wet grassland, wet woodland, freshwater marsh, fen, wet and dry heath, scrub and meadows. All of these habitats contribute to carbon sequestration and help us to be more resilient to climate change.

Habitats have been identified which display the characteristics of important European (Annex I) habitats including Alkaline Fens, European Dry heath, North Atlantic Wet heath, and Priority habitats - Petrifying Springs with Tufa Formation (tufa springs), Blanket Bogs and Species-rich grasslands.

Examples include the old Roadstone Quarry in Kingston which has been identified as a very important area with rare habitats such as species rich grassland, fen and tufa springs that are recognised and protected.



Species-rich grassland at Kingston

There is so much more to discover and learn about our county's biodiversity. It is through dedicated surveys we can establish where our important habitats and species occur in order to understand how we can protect and enhance them. We can also give biodiversity a fighting chance against climate change and in turn biodiversity can help us to become more resilient to climate change, but only if we look after it.

For further information please contact DLR Biodiversity Officer annemurray@dlrcoco.ie