

The Jellyfish Garden

Jellyfish are feared and misunderstood creatures. Yet we can immediately recognise one from their distinctive shape, tentacles and transparency. Beyond this simple recognition most people know very little about jellyfish yet they play very important roles in our seas. The Jellyfish Garden aims to take jellyfish out of the sea and place them in a very different environment, a garden, where we can compare them with plants and flowers so that the viewer sees them in a different and positive light and understand them better.



Figure 1: Blarney Castle and jellyfish artwork

Meet the team

Shevaun Doherty is a Botanical and Natural History Artist. Shevaun regularly exhibits in Ireland and abroad, and has won many awards for her work (Gold and Best in Show in Bloom Festival 2022). Shevaun also teaches to share her enthusiasm for nature and art. She runs a very successful online art course ‘Botanical Elements’ and art workshops around the country and abroad. One of her proudest achievements to date has been to design a set of Irish postage stamps featuring native Irish bees.

Adam Whitbourn is Head Gardener and Designer with Blarney Castle & Gardens. Adam has worked at the castle and Gardens for 15 years and designed and built the Poison Garden in 2014 which is one of the most visited spaces in the castle gardens. Adam has also designed and built a pop up garden for the Bloom garden festival in Dublin to showcase Blarney Castle.

Dr Tom Doyle is a marine biologist and lecturer in zoology at University College Cork. Tom’s research focuses on investigating the ecological role of jellyfish in our seas, socio-economic impacts of jellyfish (e.g. aquaculture and fisheries interactions), First Aid for treatment of jellyfish stings and diet and trophic interactions of jellyfish. Tom also works on animal biotelemetry where he uses satellite and acoustic tags to track the movements of sharks and rays, and even jellyfish.



Figure 2: Shevaun Doherty, Adam Whitbourn and Dr Tom Doyle.

The Jellyfish Garden

The Jellyfish Garden is located at the foot of Blarney Castle in an old converted storehouse. Like show gardens at the Bloom Festival and the Chelsea Show, 'The Jellyfish Garden' is a concept garden, where we take a theme and create a beautiful garden to communicate an important message or idea. But of course, show gardens are there to inspire and help you come up with ideas for your garden. We do not expect everyone to have a jellyfish tank in their garden but we do hope that by looking at particular flowers you may be reminded of jellyfish and their symmetry and patterns.

The Jellyfish Garden is located within Blarney Castle and Gardens. The castle was built nearly six hundred years ago by one of Ireland's greatest chieftains, Cormac MacCarthy, and has been attracting attention ever since. Over the last few hundred years, millions of visitors have flocked to Blarney (many to kiss the famous Blarney Stone) that today it is a world landmark and one of Ireland's greatest treasures. The gardens the distant lake make up 60 acres of surprises, delights and mysteries waiting to be discovered. There is a network of paths that lead visitors through various gardens, arboretums, and avenues, which are a constantly changing and evolving environment throughout the seasons. The Jellyfish Garden is located right in the centre at the foot of Blarney castle.



Figure 3: Blarney Castle and Gardens.

Flowers and Plants in the Garden

We have selected a variety of plants to help create a garden that is inspired by jellyfish and the sea. We have looked for plants that are similar in shape or symmetry to jellyfish (i.e. poppies have 4 leaves and most jellyfish have 4 axes of symmetry – so both can be divided in 4). We have chosen plants that look like seaweed (e.g. blue star fern/*Phlebodium*) or have shapes that look like the swimming bells of jellyfish. One plant, Spanish moss/*Tillandsia* actually looks like the tentacles of a jellyfish and when suspended in a basket or sea urchin shell looks like a jellyfish.

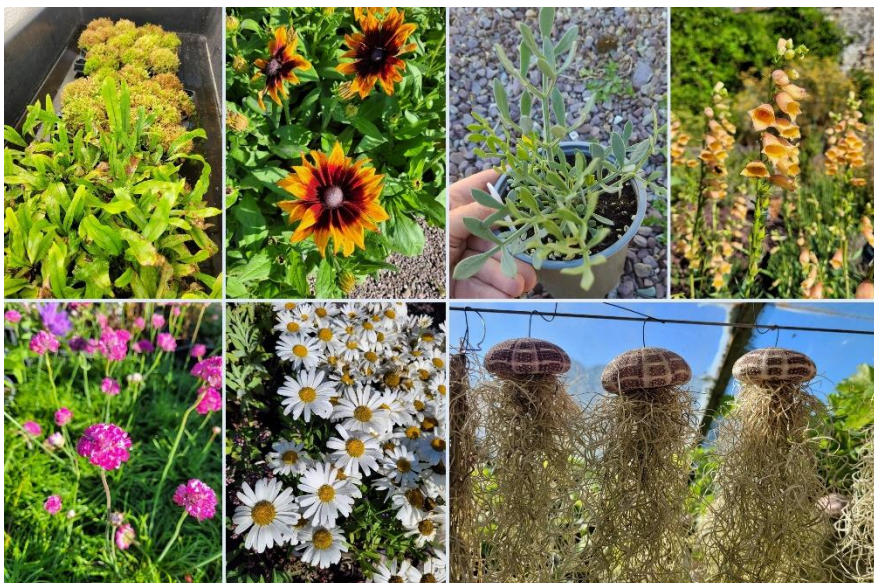


Figure 4: A selection of flowers and plants used in the Jellyfish Garden. From top clockwise they are: blue star fern *Phlebodium*, *Rudbeckia*, sea fennel *Crithmum*, foxglove *Digitalis*, Spanish moss/*Tillandsia*, *Leucanthemum* snow and sea pink *Armeria maritima*.

The Aquarium

The garden aquarium is a very specialised aquarium, called a 'kreisel' tank, that creates a circular flow of water. The name kreisel comes from the German for 'merry go round'. Jellyfish need to be held in such tanks because the circular flow of water keeps them suspended and the tank generates no bubbles which can become trapped in the jellyfish bell (main body). The kreisel tank in the Jellyfish Garden was designed and manufactured Schuran Seawater Equipment from Germany.



Figure 5: A stretched kreisel tank with jellyfish.

Artwork

The Jellyfish Garden has created many large art works (some 2 m x 1 m) for the garden. These include *'The nettle and the sea nettle – the science behind the sting'*. This piece, compares the stinging mechanism of nettles and jellyfish. The artwork illustrates how nettles have tiny barbs (hollow hairs) that break off upon contact with our skin and release a toxin into your skin. In contrast, jellyfish have millions of microscope nematocysts (or stinging capsules) that explosively inject venom into skin upon contact.

Another piece is called *'Planes of symmetry'* is centre piece that is located above the kriesel tank. It shows Leonardo Da Vinci's Vitruvian Man within a half compass jellyfish and half flower circle shape.

The concept presented here is that most animals and plants have symmetry in when both sides are the same if divided by an axis such as the two wings of a butterfly or the left and right side of humans. Most jellyfish and many flowers have radial symmetry which means they can be divided along many different axes and look the same, like a bicycle wheel which you can rotate around a central point and it always looks the same.



Figure 6: The nettle and the sea nettle – the science of the sting.



Figure 7: Planes of symmetry.

Project funding

The Jellyfish Garden Project is funded by Science Foundation Ireland's Discover Programme, which specifically funds projects in the area of public engagement with STEM.