

Did you know that this plant is an important source of life-giving energy?

The *Posidonia oceanica* meadows act as a mighty aqualung within the Mediterranean Sea. It is calculated that one square metre of *Posidonia oceanica* meadow produces 10 litres of oxygen per day.

This plant is able to increase the habitable surface of the seabed by between 20 and 50 times. This in turn means that over a distance of one square metre on the sea bed the animal and vegetable life there has between 20 and 50 square metres in which to thrive. The *Posidonia oceanica* is of great ecological significance; its leaves and rhizomes give shelter to a wide variety of living organisms, ranging from epiphytic algae, sponges, and fish, seeking protection within the *Posidonia* meadows, which in turn supply the majority of the fish in these coastal waters with essential nutrition. The *Posidonia* plant provides the fish with an endless supply of food, and also nourishes the crustaceans, molluscs, sea urchins and worms living here too. In addition, the seagrass acts as a nursery for other species, whose

young feed on the rhizomes and leaves which simultaneously provide them with a plethora of safe hiding places.

However, the *Posidonia* meadows are now suffering an important setback. They are principally affected by the deposit of muddy sediments which are choking and suffocating the plant meadows, starving them of light. Further causes of danger to the future of *Posidonia oceanica* are the effects of pollution from sewage, the construction of leisure marinas, the construction of artificial beaches, etc.

Appropriate and intelligent management of our coastal environment and of our beaches will prevent this decline. We must therefore take precautionary measures and exercise much care in order to halt any further damage to what is left of the *Posidonia* which we are so privileged to have in our waters and we must not forget that this extraordinary plant helps us in our daily struggle to combat the continual erosion of our precious coastline.



Posidonia *oceanica* (Neptune Grass)

It's possible that you've already seen some *Posidonia*, perhaps when you've been out diving or maybe when you've simply been strolling along the beach here, but you probably don't actually know very much about it.

Posidonia is one of the richest and rarest 'benthic' Mediterranean plant communities. It is found only in the Mediterranean waters all along the Dénia coast, where dense meadows of this seagrass, or Neptune grass as it is sometimes called, flourish, conferring great ecological importance on the marine, coastal and beach environment of our region.



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This is a flowering plant

The *Posidonia* meadows are luxurious undersea prairies of vegetation, and not just plain sea weed, as its Latin name may have led us to believe; this plant is in fact, botanically speaking, a phanerogam (a marine plant) which produces flowers, and has strategically evolved to flourish in a marine environment.

Its green leaves are long and ribbon-like, and can grow to a length of up to 1.5 metres, forming vast meadows on the sea bed, with the shoots able to live for at least 30 years. The plants grow on the sandy sea floor (in the Las Rotas and the Las Marinas areas of Dénia), near the coast, where

they don't have to compete for survival with the seaweed which favours a rougher and more rocky habitat.

The *Posidonia* usually grows in fairly shallow waters, where it can more easily receive the light which it requires to photosynthesise; it can grow at a depth of about 40 metres in our uniquely pure and transparent sea.

The species comprising the *Posidonia* plant family are few in number – in the Mediterranean there are only four species to be found, all very similar in form, having strong rhizomes, adapted to the moving substratum of its habitat, and narrow tape-like leaves

which offer little resistance to the movement of the water, and bear small white flowers.

On our coast, the most flourishing species is classified as *Posidonia oceanica*, and is officially listed as a protected species under Spanish legislation.

You can see these plants when you go diving in our coastal waters; you can see them from your viewpoint on dry land; or you can take a boat and observe them through the clear and transparent sea. When you are strolling along the beach, you can often find clumps or large mounds of dried-out *Posidonia* leaves lying by the water's edge; sometimes you

find balls of reddish fibres formed when the leaves of the plant are compressed by the constant movement of the waves.

This plant, flowering in spring, just like so many of our land-based plants and shedding some of its leaves in autumn, is endemic to the Mediterranean Sea. The large mounds of vegetation found on our beaches and coves are composed of the leaves naturally shed by the plant in winter, although these mounds of leaves are also sometimes left by storms which have uprooted and scattered the plants.

