



Cauliflower Soft Coral

Cauliflower Soft Coral (*Dendronephthya australis*)
is a soft coral in the octocoral family

Intro about the project:

- The Cauliflower Coral Project is a coral-conservation project at Sea Life Sydney associated with the NSW Department of Primary Industries (DPI) Fisheries Research.
- The program's funding is supported by the Environment Restoration fund – a grant program supporting activities that encourage species rehabilitation.
- The project aims to establish a recovery program for the Cauliflower Soft Coral through species re-introduction in areas where this species would previously be thriving.

Reasons why this project is important:

- The Cauliflower Soft Coral is one of Australia's most fragile species and is one of the most critical endemic species found only along the East Coast of Australia.
- Cauliflower Soft Coral is one of the 100 priority species for the Australian Government's Threatened Species Strategy in 2021.
- The main reason that these corals are so special is that they provide a natural habitat for the White's seahorse and other important juvenile fish species.

Threats:

The most significant threat to the Cauliflower Soft Coral species is the process of sedimentation. The driving force behind this process is humans, causing changes to sediment fluctuation through coastal development. By disrupting the natural placement of sediment in our waterways, coastal development can lead to the smothering of Cauliflower Soft Coral species by displaced sediment. This mostly impacts coral recruitment, growth and mortality, and indirectly impacts the surrounding ecosystem.





How do Cauliflower Soft Coral breed:

Coral breeding in human care is most often through asexual reproduction or fragmentation. A smaller piece of the colony is cut and set aside to heal and regrow. Sexual reproduction of corals can occur in mass spawning events like on the GBR or other times of the year when temperatures are higher, usually matching lunar cycles due to tidal changes. Sexual reproduction in human care is occurring more readily with advancing technology and stable water parameters. We hope to see this happen in the Cauliflower Soft Coral species in time!

Key elements needed to ensure successful breeding habitat – overall it is crucial to ensure that water quality is optimised and they are receiving quality nutrition:

- These corals are non-photosynthetic, therefore they don't require light to grow. Hence they obtain all of their energy by feeding on phytoplankton and zooplankton. Aquarists feed throughout the day with the aim of always having food flowing past the coral polyps so they can capture their prey. Some food is a mix of algae species that are produced for shellfish farms or special formulations designed to float in the water columns.
- The Cauliflower corals retract when touched or moved so we try to limit this and clean around them as any retraction can compromise feeding efficiency. All tanks are cleaned daily through siphoning of settled waste and gentle scrubbing to remove excess bacteria build-up.
- Cauliflower coral systems will run mostly on flow-through or natural harbour water. In the event of heavy rains, the system can be closed where UV and Protein Skimmers will be used to remove excess waste and keep nutrients from building up.
- The systems are kept at 18°C.



Recent Project Success

The partners have been working to establish a recovery program for one of Australia's most fragile species - the Cauliflower Soft Coral. This follows the selection of the coral as one of the 100 priority species for the Australian Government's Threatened Species Strategy in 2021.



The project, supported by the Commonwealth Environment Restoration Fund and NSW Environmental Trust, has achieved significant scientific discoveries within its first year, as the team proved the long-term viability of cloned coral in an aquarium setting.

The development of aquarium rearing methods has led to the species' re-introduction, with 200 cuttings returned to the waters of Port Stephens and Sydney Harbour at the end of March.

This week, divers from SEA LIFE Sydney Aquarium conducted a health-check on the corals placed in Sydney Harbour and determined an 82% success rate for the re-planted coral - with 65% found to be very healthy and a further 17% found to be alive, but in need of some extra care.

To watch this release view video here <https://www.visitsealife.com/sydney/conservation/local-conservation-projects/cauliflower-coral-conservation-project/>

Threats:

- Donate to Sea Life Trust at [**https://www.visitsealife.com/sydney/conservation/local-conservation-projects/cauliflower-coral-conservation-project/**](https://www.visitsealife.com/sydney/conservation/local-conservation-projects/cauliflower-coral-conservation-project/) to support this program.
- Attend a Behind the Scenes tour at SEA LIFE Sydney for \$10 on top of general admission, to be further educated about the significance of this species.