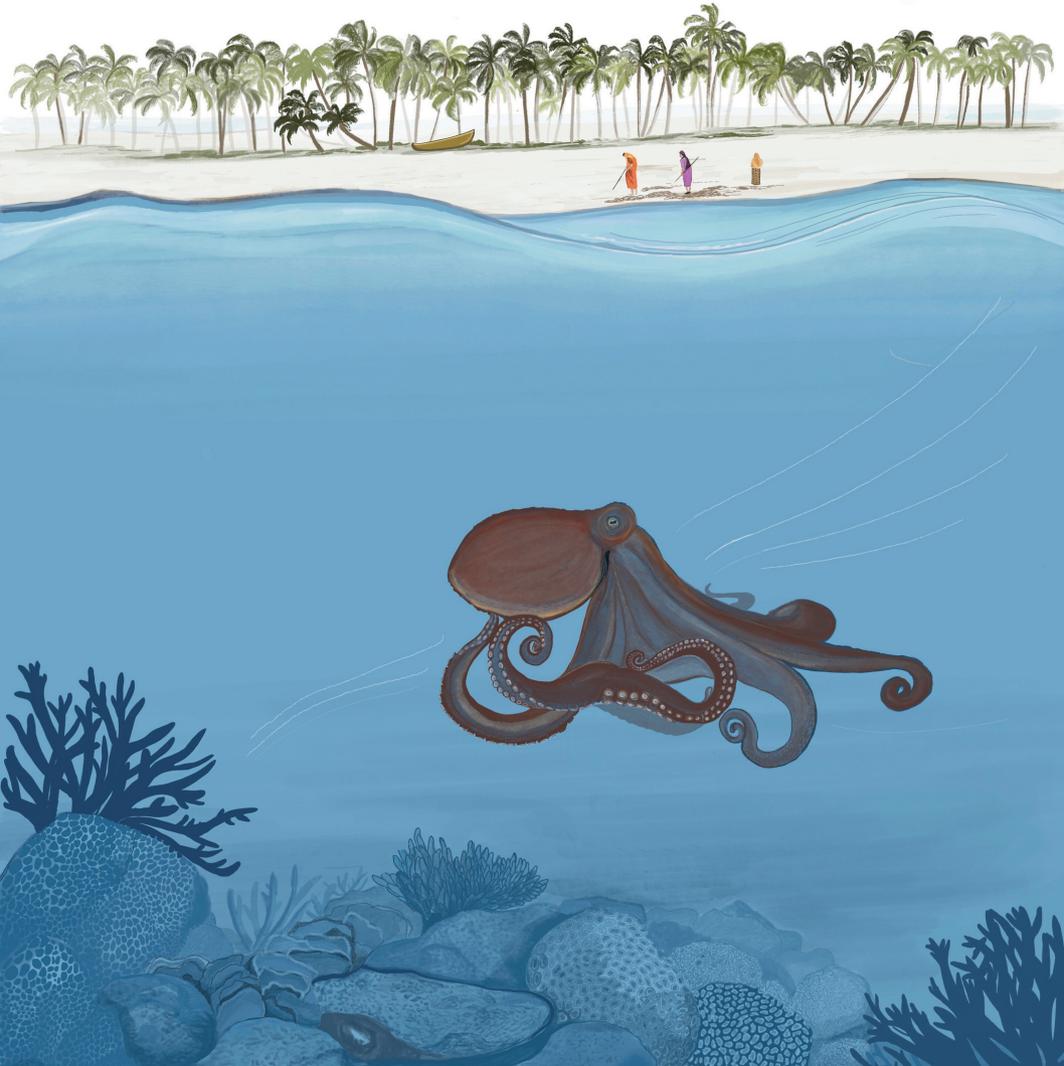
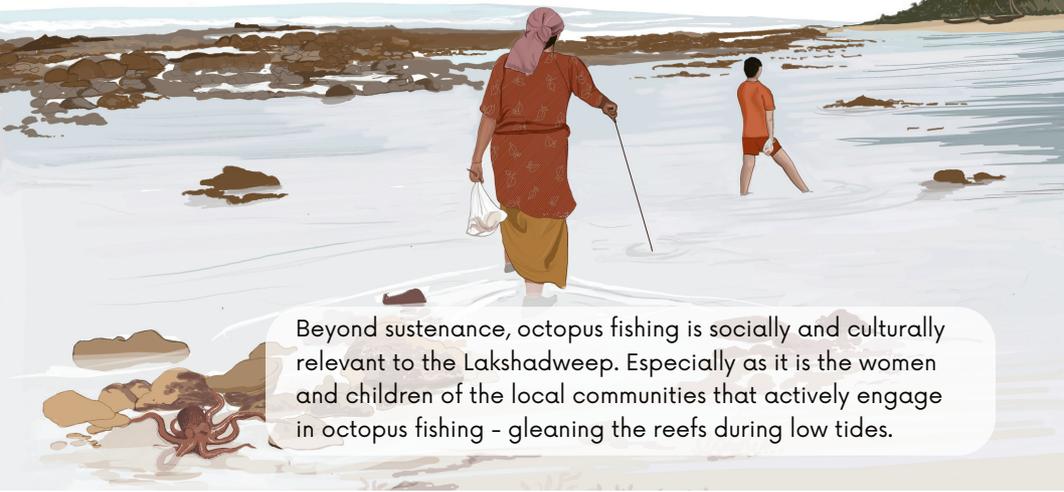


Appal kuthal

The traditional Octopus fishery of the Lakshadweep Islands



The coral atolls of Lakshadweep are an azure canvas over the Arabian Sea. The islands uphold a diverse but delicate coral reef ecosystem that seamlessly integrates into the lives of the island's people. Among the various ways in which islanders engage with the diverse marine life, octopus fishing, locally called "appal kuthal," stands out.



Beyond sustenance, octopus fishing is socially and culturally relevant to the Lakshadweep. Especially as it is the women and children of the local communities that actively engage in octopus fishing - gleaning the reefs during low tides.

In Lakshadweep, we commonly find

Octopus cyanea
(Day octopus)



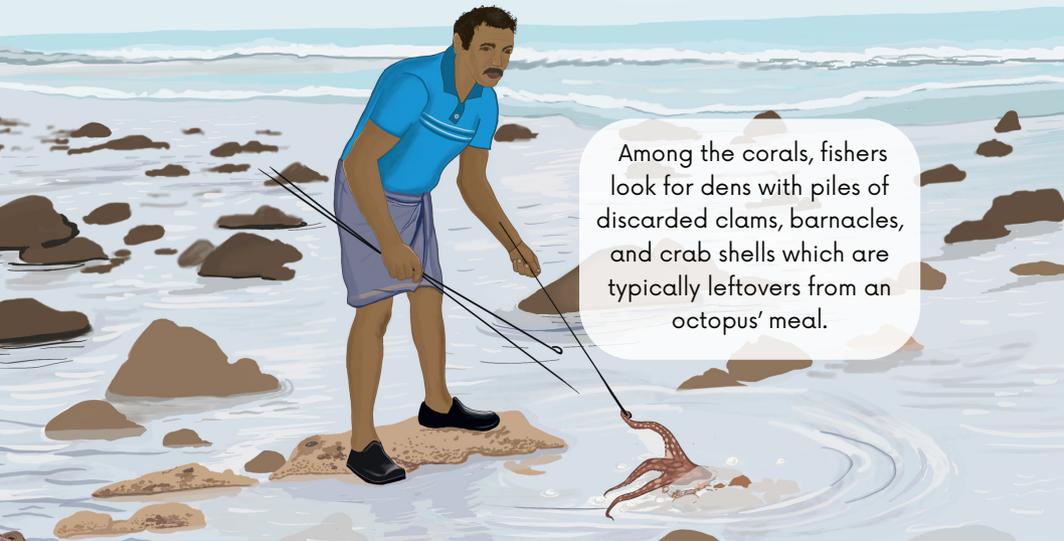
Hunt during the day
Max. 80 cm
Live for ~18 months

Octopus vulgaris
(Common octopus)



Hunt during the night
Max. 130 cm
Live for ~1 year

Traditionally, fishers catch octopuses by gleaning the reef flats during low tides.



Among the corals, fishers look for dens with piles of discarded clams, barnacles, and crab shells which are typically leftovers from an octopus' meal.

To avoid harming the corals, fishers insert iron rods into an octopus den and gently pull the octopus out using a hook. It is then turned inside out to remove the ink gland and washed with seawater.

Men often dive into shallow sea waters to capture octopuses.

But in recent years, octopus catches in Lakshadweep have been reducing significantly.



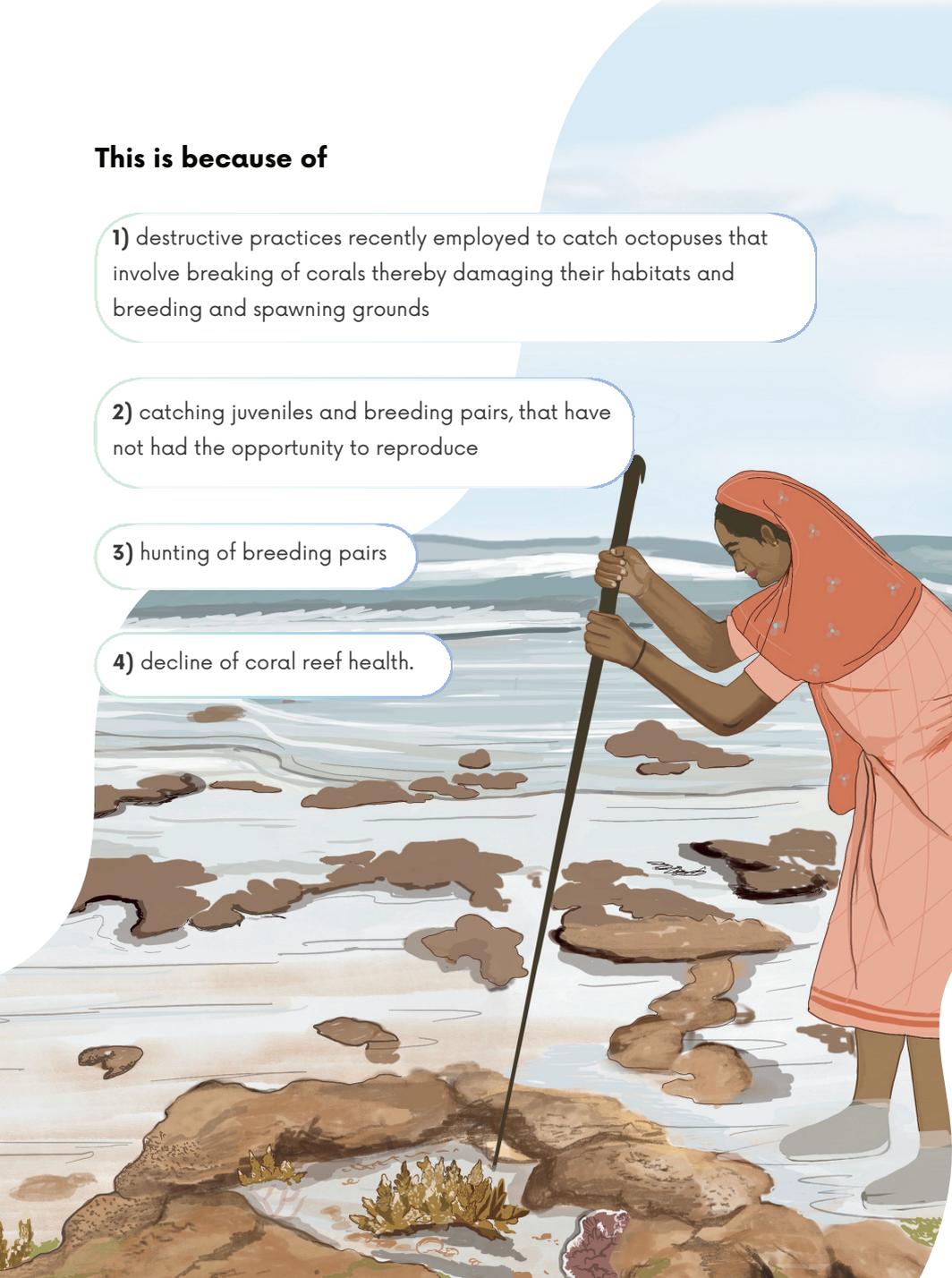
This is because of

1) destructive practices recently employed to catch octopuses that involve breaking of corals thereby damaging their habitats and breeding and spawning grounds

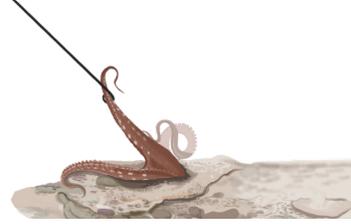
2) catching juveniles and breeding pairs, that have not had the opportunity to reproduce

3) hunting of breeding pairs

4) decline of coral reef health.



What are octopus fishers saying?



— “ —

I see a variation in the size of an octopus. Earlier we would get a bigger sized octopus but now comparatively the size is smaller.

— ” —

— “ —

I don't usually leave without catching an octopus. I wait for some time to see if I can get them easily. If it takes more time, I destroy the den with smaller iron rods that we keep with us when we go hunting.

— ” —

— “ —

...a major change is with youngsters. When they find it difficult to catch an octopus, they will break the corals. This will affect their habitat. My husband wouldn't disturb any coral surrounding them. Destroying the habitat will reduce the number of octopuses for next season.

— ” —

Octopus fisheries around the world not only provide a reliable source of nutrition but also offer sustainable economic benefits to the communities involved.

However, it is crucial to note that these benefits can only be maintained through sustainable fishing practices.



So, what is happening outside Lakshadweep?



Kolforn, Wikimedia Commons

Portugal

Octopus is caught by using multiple pots tied together and immersed in the water. They enter the pots for shelter and get caught. While management is carried out by the government, fishers are showing interest in making their own rules for octopus fishing.



Martin Muir, Blue Ventures

Kenya

Octopus fishery here is facing threats due to overfishing and other destructive practices. Through community engagement by creating Beach Management Units (BMUs) and Locally Managed Marine Areas (LMMAs), they are aiming to make octopus fishing sustainable.



Timur Jack-Kadioglu, Blue Ventures

Tanzania

Amongst the local communities, rules such as catch restrictions and octopus hunting licenses are in place. They also collect data on octopus catch to be able to leverage such information for collaborative decision-making processes.

***You are
here!***

Comoros

Traditionally, octopus were caught by women and children, but the participation of men has grown over time. Locals are actively monitoring their octopus catches and implementing rules, such as capping the catch at 1kg / person, restricting hunting during low tide and using only spears for the process.



Tori Jeffers, Blue Ventures

Madagascar

Here, some octopus fishers have stopped harvesting octopuses during their spawning/egg-laying time as per their customary laws, which has led to an increase in the size and number of octopuses.



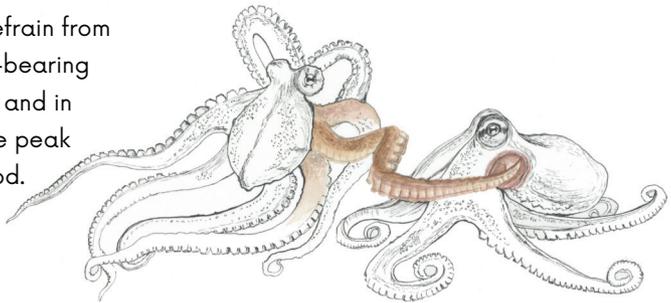
Garth Cripps, Blue Ventures

To ensure sustainable octopus catches in Lakshadweep, we can

1) avoid breaking of corals. Octopus take shelter, lay eggs and feed on crustaceans and small fish living on coral reefs.



2) identify male and female octopuses to refrain from capturing egg-bearing females during and in proximity to the peak spawning period.



Male octopuses are smaller than females. Males also have a specialized arm, called a hectocotylus, that transfers spermatophores to the female.

3) record the quantity of your catch to see if there are plenty of octopuses to catch or if they require protection.

For example, *Octopus cyanea*

Adult female

7-8 months/
1.35kg



Adult male

5-6 months/
0.35kg



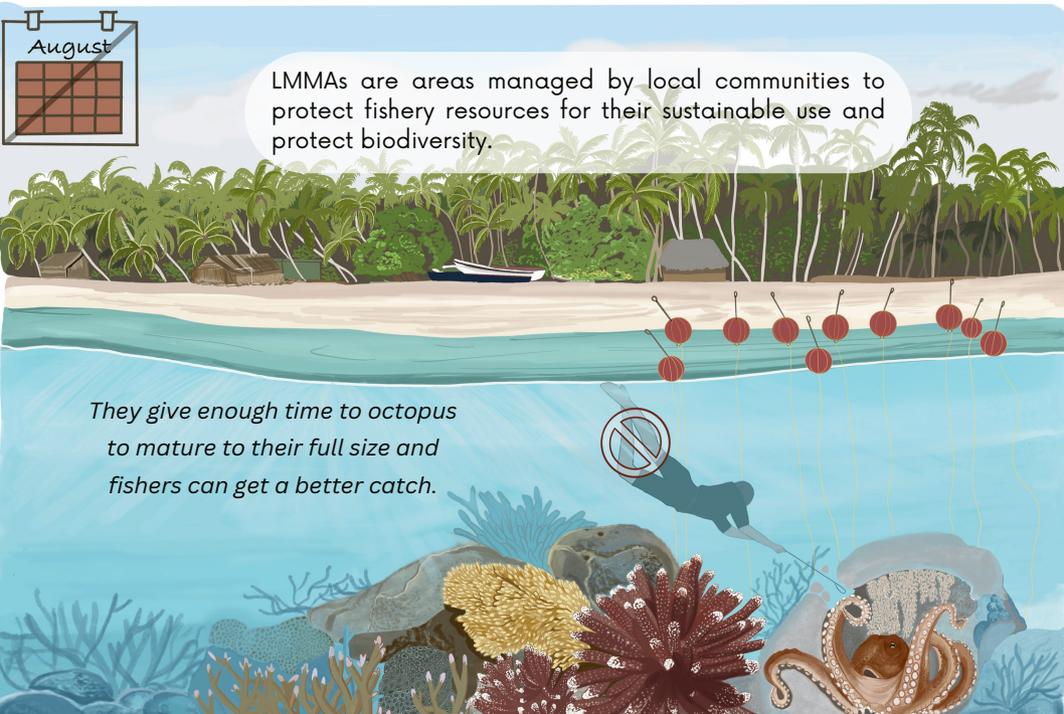
By measuring the weight of octopus, we can see if it has reached its optimal size/age and therefore will fetch a good price.

4) maintain seasonal closures or LMMAs (Locally Managed Marine Areas)



LMMAs are areas managed by local communities to protect fishery resources for their sustainable use and protect biodiversity.

They give enough time to octopus to mature to their full size and fishers can get a better catch.



5) learn about the octopus life-cycle

Males when they are about 5-6 months old (0.35 kg) approach a female of about 7 to 8 months (1.35 kg) and insert the hectocotylus arm into the female to pass the spermatophores.

Males die a few months after mating

After about 3-4 months, they settle and grow on reefs and the life cycle starts again.

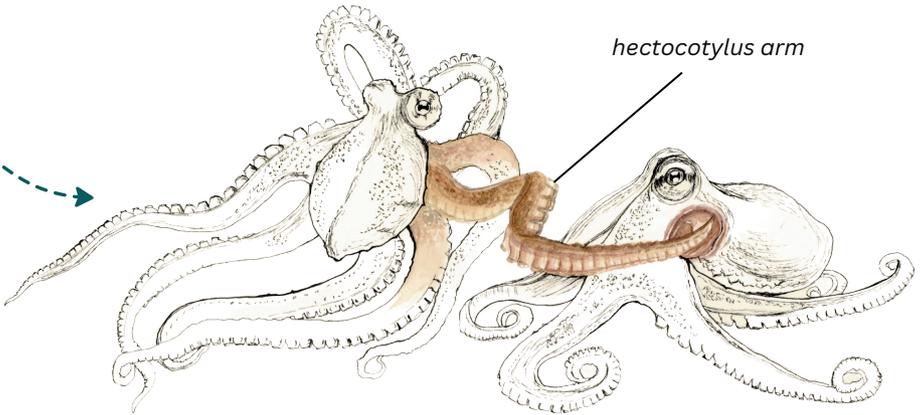
Most octopuses spawn only once in their lifespan.

The octopus eggs hatch in about one month and are dispersed in the ocean.



Female octopuses take care of the eggs by protecting them from potential predators.

The females die after the eggs hatch.



hectocotylus arm

Octopuses spawn throughout the year, but the Day octopus in the Indian Ocean experience a peak during the monsoon season, between May and September.

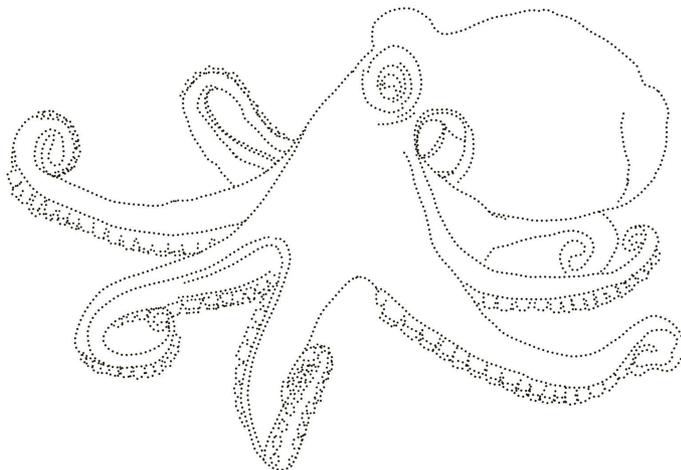


The female octopus stores spermatophores and swims to the deeper parts of the ocean to find a suitable den.

After finding a suitable den, the female fertilizes the eggs. Each female lays strings of approximately 3,00,000 eggs.



Connect the dots and add colors!



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