

Love Is In The Air...And Underwater!

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It's February, which means hearts, chocolate, and love songs will soon be flooding stores and social media. In the digital age of dating, finding a partner can be as simple as a swipe, but for creatures of the sea, mating, dating, and procreating can be a challenging and complicated feat.

With the ocean full of competition, predators, and changing conditions, animals have adapted creative ways of finding mates. Some strategies are species-specific to meet the reproductive needs of highly specialized creatures, while others are more generalized and widely adopted to accommodate a variety of organisms. With so many ways to find a partner (or in some cases, several partners), it seemed only fitting to highlight an array of mating strategies used by some of the Ucluelet Aquarium's Pacific Northwest marine life.

Finding a mate in a pinch. Many crab species, including the Dungeness crab, have adopted a mating strategy timed with the female's molt (the process by which crustaceans grow and shed their hard outer layers). When females are ready to molt, they emit a pheromone (chemical signal) attracting nearby males. Interested males engage in an embrace and "hug" the female to prove how strong and suitable they are. This entanglement can last for days. During this time males may carry the females away from predators, and other possible mates, while the female assesses whether her potential mate is worthy. If the pair is a success, the female molts, the pair copulates, and the male guards the female while her new shell hardens. The male will then take off in search of another mate while the female proceeds to fertilize and hatch the eggs on her own.

It's all about the chase. Literally. When ready to find a mate, the Grunt Sculpin female must dominate. Nearby males are chased and cornered by females in a nesting area or an empty barnacle shell. Once the male has been corralled and trapped, the female lays up to 150 eggs and ensures the male remains in the nest to fertilize them. After the eggs are fertilized, the female will flee the nest and the male becomes the primary guard and caregiver of the young. The female may return occasionally to temporarily relieve the male for a protection shift.

How to find a mate when your arms total eight. The giant Pacific Octopus is a solitary, den-dwelling animal with females mating once during their 3-5 year lifespan. Once the female has reached sexual maturity (around the 32-month mark), she likely emits a chemical signal that attracts a male (or multiple males) to her. The successful suitor has a specialized arm for reproduction and will use this to fertilize the female. The female will then find a suitable den and prepare to lay her eggs while males may look for another female to fertilize.

I wanna dance with somebody (who loves me). Male shiner perch waste no time finding a mate as they reach sexual maturity right after birth. The female shiner perch may be inseminated soon after birth, but does not reach sexual maturity until about one year old. Mating for shiner perch is preceded by a courtship dance. Males change from a shiny silver to a dark gray/black colour. During this time, they also develop flashy and fleshy lobes on their anal fin. Once they look the part, males will pursue females and attempt to isolate one from the group to court. The selected partner will then watch a repeated series of wiggles, undulations, and fin flashes that the male displays to get into the proper position for mating. All this pageantry for copulation that lasts less than a second.

No need to date with a lifelong mate! Wolf eels are a type of wolffish named for the combination of their appearance of eels and wolf-like behaviour. They reach sexual maturity around seven years old and the mate they choose often ends up being their lifelong partner. Once they have a mate, they find a den and cohabitate. The females may lay up to 10,000 eggs at a time, and both the male and female will contribute to protecting them once they have been laid and fertilized. They will alternate leaving the den in search of food and equally contribute to caring for the young.

Next time someone tells you there are “plenty of fish in the sea”, you can confidently tell them how they came to be! Happy Valentine’s Day to all you fools in love. May your romantic endeavours be as successful as these sea creatures and infinitely less complicated. If you want to fall in love with some of these animals and more, come check out the Ucluelet Aquarium this season starting March 1st, 2022



A heart crab (*Phyllolithodes papillosus*) surrounded by strawberry anemones (*Corynactis californica*) at the Ucluelet Aquarium. Photo by Veronica Aguiar.