



Jess Williams, PhD candidate from the James Cook University in Australia, discusses the lengthy and lively courting of the sea turtle – a surprisingly voracious creature.

Despite the common perception that turtles are tranquil and serene creatures, when it comes to reproduction these reptiles mean business. The mating process can be aggressive, energetic and indiscriminate.

Sea turtles are long-lived, slow-growing and highly migratory ocean wanderers. Once sexual maturity is reached – which is generally accepted to be between 15 and 25 years of age for all species – both males and females migrate from foraging grounds to mating and nesting areas, using impressive navigational skills and swimming endurance to travel long distances of up to 10 000km, easily crossing entire ocean basins. Whilst turtles spend most of their lives in the ocean, females return to the region of coast on which they were born to lay their eggs – a concept known as natal homing.

This migration is no easy feat, and for the duration of the mating season, which lasts for around 100 days, the turtles rely on stored energy supplies. The high energy expenditure associated with the mating process dictates how frequently breeding events occur. Generally, mating occurs in cycles of two to four years.

On arrival at the mating grounds, the female sea turtle is approached by a large number of eager potential mates. Male sea turtles are frisky, aggressive and enthusiastic and will attempt to mate with as many female sea turtles as possible. The male will approach a female from above and behind and, if she is receptive to his attempts, he will latch onto her, using claws in his front flippers and his tail to hook onto the edge of her carapace (shell). In addition, he may also bite into the back of her neck, head and flippers.

Mating can continue for up to 12 hours and paired mating turtles sometimes wash into shallows and shores whilst copulating. The pairing of the couple can also attract the attention of other eager males, and often numerous male turtles will chase behind the mating pair and attempt to latch onto them. As such, multiple mating events are common throughout the

nesting season.

Like many other reptiles, female sea turtles have the ability to store sperm from numerous males within tubules in their oviduct, and apart from the indirect benefits of maximising genetic diversity of the clutch, there are no perceived direct benefits from incurring numerous mating encounters. Consequently, females have developed a number of tactics to avoid multiple breeding events. They can swim with their hind flippers clamped together to prevent access to the cloaca, circle sharply to face the male or aggressively bite. Sometimes, females will even attempt to breach in order to escape the male's pursuit. However, there is a risk of stranding and heat stress with this tactic.

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Male turtles, ever enthusiastic, will attempt to mount any turtle, male or female, turtle-shaped objects and even the occasional unfortunate diver. Fishermen in Brazil, the Caribbean and Polynesia have all developed fishing tactics that take advantage of the indiscriminate mating behaviour of male turtles, and lure them in using wooden decoys, thus enabling easy spearing and capture.

Furthermore, the male sea turtle's reputation for stamina, endurance and enthusiasm has led to demand for turtle products in markets across the globe. Sea turtle eggs eaten raw are falsely considered to be an aphrodisiac, and the dried, shaved penis of green sea turtles added to alcohol is thought to act like a potent version of Viagra. It is the trade in these items which have no proven medical basis that is significantly contributing towards the global decline of all sea turtle species. **S**

Above:
Two green sea
turtles caught in
the act. Image
by David Obura.